



Development of Cross-border E-commerce through Parcel Delivery

Study for the European Commission,
Directorate-General for Internal Market, Industry,
Entrepreneurship and SMEs

Final Report

Written by
Alex Kalevi Dieke
Dr René Arnold
Dr Christian Bender
Annette Hillebrand
Antonia Niederprüm
Serpil Taş
Sonja Thiele
Julia Wielgosch

February 2019

wik 
CONSULT

EUROPEAN COMMISSION

EUROPEAN COMMISSION

Directorate-General for Internal Market, Industry, Entrepreneurship and SMEs
Directorate E — Modernisation of the Single Market
Unit GROW E2 — Public Interest Services

Contact: Raphaël Goulet

E-mail: GROW-E2@ec.europa.eu

*European Commission
B-1049 Brussels*

Development of Cross-border E-commerce through Parcel Delivery

Study for the European Commission,
Directorate-General for Internal Market, Industry,
Entrepreneurship and SMEs

Final Report

***Europe Direct is a service to help you find answers
to your questions about the European Union.***

Freephone number (*):

00 800 6 7 8 9 10 11

(*) The information given is free, as are most calls (though some operators, phone boxes or hotels may charge you).

LEGAL NOTICE

This document has been prepared for the European Commission however it reflects the views only of the authors, and the Commission cannot be held responsible for any use which may be made of the information contained therein.

More information on the European Union is available on the Internet (<http://www.europa.eu>).

Luxembourg: Publications Office of the European Union, 2019

ISBN 978-92-76-01469-0
doi: 10.2873/931558

© European Union, 2019
Reproduction is authorised provided the source is acknowledged.

ABSTRACT

Efficient and demand-oriented parcel delivery services are an important factor for the dynamic development of cross-border e-commerce in Europe. This study by WIK-Consult explores developments and trends in the supply of and demand for delivery solutions in the context of cross-border e-commerce. It particularly emphasises the needs of e-retailers and consumers, and includes regulatory aspects as well as employment and environmental topics. The assessment is based on extensive desk research and intensive stakeholder interaction. WIK-Consult conducted a consumer survey among online shoppers, in all EU and EEA Member States, about their expectations and experiences with delivery of cross-border purchases.

The study concludes that the delivery industry has made significant progress since 2013 and is on the right track. While the dynamic growth in e-commerce has greatly improved the supply of appropriate delivery services, the performance of national delivery markets varies significantly among Member States. For the future, parcel carriers, e-commerce intermediaries and associations should work on much needed improvements in returns solutions for cross-border e-commerce.

RÉSUMÉ

Des services de livraison de colis efficaces et axés sur la demande sont un facteur important pour le développement du commerce électronique transfrontalier en Europe. Cette étude, réalisée par WIK-Consult, examine les évolutions et les tendances concernant l'offre et la demande en termes de solutions de livraison dans le contexte du commerce électronique transfrontalier. Elle met tout particulièrement en avant les besoins des détaillants en ligne et des consommateurs, et inclut des aspects réglementaires ainsi que des aspects liés à l'emploi et à l'environnement. L'évaluation repose sur une recherche documentaire approfondie et sur une interaction intensive avec les parties prenantes. WIK-Consult a mené une enquête auprès de consommateurs parmi les acheteurs en ligne, au sein de l'ensemble des Etats Membres de l'UE et de l'EEE, centrée sur leurs attentes et leurs expériences en termes de livraison d'achats transfrontaliers.

L'étude conclut que le secteur de la livraison a réalisé d'importants progrès depuis 2013 et est sur la bonne voie. Alors que la croissance dynamique du commerce électronique a permis d'améliorer fortement l'offre de services de livraison, la performance des marchés nationaux de livraison varie significativement d'un Etat Membre à l'autre. A l'avenir, les transporteurs de colis, les intermédiaires du commerce électronique et les organisations devraient s'atteler à mettre en place les améliorations attendues quant aux solutions de retour pour le commerce électronique transfrontalier.

Contents

List of figures.....	III
List of tables	VII
List of case studies	VIII
Country abbreviations and regional classification.....	X
Terms and abbreviations.....	XI
Executive Summary	XIII
Résumé.....	XXXIII
1 Introduction	1
1.1 Background and objective of the study	1
1.2 Outline of the study.....	4
1.3 Major definitions and methodology of the study	6
2 E-commerce in Europe	18
2.1 Online sales.....	18
2.2 Cross-border online sales.....	26
2.3 Opportunities and challenges in cross-border e-commerce.....	29
2.4 Conclusions	40
3 Delivery services in Europe	42
3.1 Introduction	42
3.2 Delivery markets in Europe	44
3.3 Carriers and services in the European B2C delivery markets.....	62
3.4 Future trends in B2C delivery services.....	98
3.5 Conclusions	120
4 Consumers' experiences.....	126
4.1 Introduction	126
4.2 Online shopping intensity and preferences across Europe	128
4.3 Service quality of cross-border and domestic deliveries	141
4.4 Complaints handling and dispute resolution.....	164
4.5 Conclusions	167
5 E-retailers' experiences	171
5.1 E-retailers' experiences in cross-border sales	171
5.2 Managing cross-border deliveries	173
5.3 Managing cross-border returns	181
5.4 E-retailers face different choices for delivery in different Member States	186

5.5	Conclusions	197
6	E-commerce with non-EU countries.....	200
6.1	The rise of postal imports from Asia	200
6.2	The role of postal service providers for extra-EU imports	202
6.3	Universal Postal Union	205
6.4	Terminal dues	209
6.5	Prospects for reform of the UPU	216
6.6	Customs and taxes	229
6.7	Conclusions	234
7	Developments of employment in the delivery sector	238
7.1	Overall sector employment	238
7.2	Development of employment relationships.....	246
7.3	Future trends in labour markets.....	262
7.4	The role of social partners and social dialogue in the parcel sector	265
7.5	Conclusions	270
8	Environmental aspects of delivery services	273
8.1	Negative environmental effects of parcel delivery services.....	273
8.2	Last-mile delivery contributes to congestion and air pollution	276
8.3	Carbon offsetting	283
8.4	Conclusions	284
9	Overall conclusions and recommendations.....	287
9.1	E-commerce, delivery services and the Single Market: A Success Story	287
9.2	There is much variation in the state of e-commerce and delivery markets among Member States	288
9.3	Emerging co-operation among carriers and e-retailers	293
9.4	Service improvements and more transparency in cross-border delivery markets	295
9.5	Effective management of returns remains a common challenge for e-retailers and carriers in the EU	297
9.6	Parcel operators face different postal regulatory frameworks in different Member States	298
9.7	EU and Member States should ensure a level playing field for e-commerce imports.....	301
9.8	Subcontracting is an issue in the delivery industry.....	303
9.9	Environmental regulation increasingly affects the provision of delivery services.....	304

List of figures

Figure 1	An e-retailer's stylized supply chain	9
Figure 2	E-commerce fulfilment: Inbound and outbound logistics	11
Figure 3	E-commerce fulfilment: Reverse logistics (returns)	12
Figure 4	Methodology: Seven pillars of research.....	13
Figure 5	Trends in global e-commerce revenues.....	18
Figure 6	State and developments in the European e-commerce markets.....	20
Figure 7	Web sales of enterprises (2017)	21
Figure 8	B2C web sales of enterprises in retail trade (2018)	22
Figure 9	Enterprises with web sales: Company size and B2C web sales (EU-28, 2017).....	23
Figure 10	Enterprises with B2C web sales and the use of online marketplaces (EU-28, 2017).....	24
Figure 11	Enterprises with cross-border web sales	26
Figure 12	Share of enterprises with web sales to other countries (2017).....	27
Figure 13	Share of revenues from cross-border sales to other EU MS (EU-28, 2016)	29
Figure 14	Barriers for developing cross-border sales to other EU MS (EU-28, 2014 and 2016).....	31
Figure 15	E-retailers' capacity and competencies in online sales	34
Figure 16	China e-retailers' share of European Amazon marketplaces (2018)	39
Figure 17	Cross-border outbound logistics (exports)	42
Figure 18	Annual revenues in the European parcel market.....	45
Figure 19	Structure of the European parcel and express market by country (2017)	46
Figure 20	Parcels per capita (2017) and average growth rates	47
Figure 21	Number of operators contributing to NRA funding per country	59
Figure 22	Number of carriers contributing to compensation fund other than USP	60
Figure 23	Stylized segmentation of cross-border parcel delivery services and developments	62
Figure 24	Revenues per parcel and list prices for single-piece parcels (2017)	64
Figure 25	Example: Volume discounts for domestic and cross-border parcels (Deutsche Post, 2019)	65
Figure 26	Revenues per parcel (index, 2015=100).....	66
Figure 27	USPs' list prices for cross-border letter and parcel products (2017)	67

Figure 28	Carriers delivering the most recent domestic online purchase	69
Figure 29	Carriers delivering the most recent cross-border online purchase	70
Figure 30	Relevance of imports from China for USPs	70
Figure 31	Importance of USPs in B2C delivery services	72
Figure 32	The pan-European parcel delivery network of Geopost / La Poste (DPDgroup including the brands SEUR and Chronopost, 2018)	79
Figure 33	The pan-European parcel delivery network of Deutsche Post DHL (2018)	82
Figure 34	The pan-European parcel delivery network of General Logistics Systems B.V. (GLS, 2018)	84
Figure 35	The pan-European parcel delivery network of Hermes (2018)	86
Figure 36	Emergence of regional clusters in e-commerce and delivery	89
Figure 37	Stylized delivery value chain	100
Figure 38	From hub & spoke to point-to-point transport (web structure)	100
Figure 39	Elements of the WIK Consumer Survey.....	127
Figure 40	Share of individuals using internet in the last 12 months by age and population density of the residential area (EU-28, 2017).....	129
Figure 41	Share of individuals using internet and buying online goods and services in the last 12 months (EU-28, 2017)	130
Figure 42	Share of individuals buying online goods and services (EU-28).....	131
Figure 43	Relationship between ordering goods and services online and level of confidence (2016).....	132
Figure 44	Reasons for not shopping online (EU-28)	133
Figure 45	Share of individuals purchasing online from abroad (EU-28)	134
Figure 46	Share of consumers purchasing cross-border within the last 12 month	135
Figure 47	Share of most recent cross-border purchases from EU MS by country	137
Figure 48	EU/EEA and China ratio – Most recent cross-border purchase	138
Figure 49	Reasons for refraining from cross-border purchase	139
Figure 50	Favourite product categories (EU/EEA average).....	140
Figure 51	Shopping frequency (EU/EEA average).....	141
Figure 52	The conceptual design of the ServQual model in the WIK consumer survey....	142
Figure 53	Importance of each dimension (EU/EEA average)	144
Figure 54	Overall service quality scores indices by country	146
Figure 55	Service quality score indices by service dimension (EU/EEA average)	148

Figure 56	Standard delivery location (EU/EEA average)	149
Figure 57	Service quality score indices for the dimension 'Information on the delivery and return conditions before purchase' by item (EU/EEA average)	151
Figure 58	Delivery charges for the most recent domestic and cross-border online purchases	153
Figure 59	Expectations of online shoppers on delivery and return charges (EU/EEA average)	153
Figure 60	Service quality score indices for the most recent domestic and cross-border online purchase for the dimension 'Delivery time' by country	156
Figure 61	Service quality score indices for the most recent online purchase for the dimension 'Management of returns' by country	158
Figure 62	Service quality score indices for the carriers' delivery quality of the most recent online purchases by country	160
Figure 63	Carrier of the most recent domestic and cross-border online purchase (EU/EEA average)	161
Figure 64	Service quality score indices for the carriers' delivery quality of USPs compared to other carriers of the most recent online purchase (domestic and cross-border purchases combined) by country	162
Figure 65	Service quality score indices for the carriers' delivery quality of USPs compared to other carriers of the most recent cross-border online purchase by country	162
Figure 66	Carrier of the most recent cross-border online purchase	163
Figure 67	Perceived delivery service quality score between urban and suburban/rural areas	164
Figure 68	Problems that occurred in the last 12 months (EU/EEA average)	165
Figure 69	Addressees of potential complaints (EU/EEA average)	166
Figure 70	Complaints procedure applied by online shoppers (EU/EEA average)	167
Figure 71	Difficulties faced by enterprises with web sales to other EU MS by country size (2017, EU-28)	171
Figure 72	Difficulties faced by retailers with web sales to other EU MS (2017, EU-28)	172
Figure 73	Function of a delivery management tool	175
Figure 74	Fulfilment service provider (3PL)	177
Figure 75	Reverse logistics services	183
Figure 76	Total number of stakeholders involved per category	187
Figure 77	E-commerce in the workshop countries (% of individuals with online purchases in the last 12 months, 2017)	188

Figure 78	Domestic and cross-border purchases (2017)	188
Figure 79	Cross-border delivery services and e-commerce exports.....	192
Figure 80	Trends in global letter mail streams (UPU)	200
Figure 81	Location of the seller from the most recent cross-border purchase.....	201
Figure 82	Cross-border deliveries by type of operator	202
Figure 83	Terminal dues and domestic postage for small packets from China (2018).....	212
Figure 84	Low-value items imported to the EU from non-EU countries (millions)	230
Figure 85	Development of employment by USP (2013-2017)	240
Figure 86	Percentage of delivery staff at USPs (2016)	242
Figure 87	Share of postal and courier sector employment by country (2017, EU-28)	242
Figure 88	Development of employment in postal and courier activities (CAGR 2013-2017)	244
Figure 89	Payments for agency workers in the postal and courier sector in million Euro (2012-2016)	248
Figure 90	Postal and courier activities: Wages and salaries in million Euro	249
Figure 91	Examples of remuneration schemes in parcel delivery.....	250
Figure 92	Monthly minimum wage by country (EU-28, 2016)	253
Figure 93	Share of part-time workers at USPs (2016)	255
Figure 94	Segments of flexibility in parcel delivery	256
Figure 95	Stylized subcontracting chain in the parcels industry	260
Figure 96	Platform functions as intermediary - E-retailer and deliverer have no contract .	263
Figure 97	Collective bargaining coverage and unionisation in EU-28/EEA	266
Figure 98	Level of collective bargaining in EU-28/EEA.....	267
Figure 99	WIK Delivery Performance Index – Criteria and indicators.....	290
Figure 100	WIK Delivery Performance Index: Total index score by country.....	291

List of tables

Table 1	TOP 3 countries retailers sell to (2014)	35
Table 2	TOP 3 e-commerce websites.....	37
Table 3	Country of origin of the most recent cross-border purchase.....	50
Table 4	Weight limits for cross-border parcels within USO	54
Table 5	Tracking as a feature of universal service parcels.....	54
Table 6	Overview on changes of collection and delivery frequency	55
Table 7	Criteria used to distinguish express delivery services from universal services	56
Table 8	Regulation of complaint handling procedures in the MS	57
Table 9	Authorisation for cross-border parcel service providers	58
Table 10	Parcel delivery providers contributing to NRA funding	59
Table 11	Compensation funds	60
Table 12	‘Open networks’ for delivery solutions: Pros and cons	117
Table 13	Sample sizes by country	128
Table 14	WIK Consumer Survey: Who purchases where?	136
Table 15	Service quality dimensions and delivery elements	143
Table 16	E-retailers’ access to (cross-border) delivery services	180
Table 17	Equivalent domestic postage v. terminal dues - documents, 2018.....	214
Table 18	Equivalent domestic postage v. terminal dues - small packets, 2018	215
Table 19	Overview on import duties for low-value consignments 2018 and 2021	231
Table 20	Overview on customs declaration procedures for low-value consignments 2018 and 2021	233
Table 21	Customs clearance of items under VAT de-minimis for non-USPs	233
Table 22	Development of employment by USP (2013-2017)	239
Table 23	Development of employment in postal and courier activities (2013-2017)	243
Table 24	Nominal levels of statutory minimum wage applicable in the EU MS in 2018 – Ranking	252
Table 25	Collective bargaining coverage, unionisation, principal level of collective bargaining – overview per country	267
Table 26	Local, regional and global effects of delivery air pollutants	274
Table 27	WIK Delivery Performance Index: Detailed results by country	292

List of case studies

Case study 1:	Amazon marketplaces in Europe and the role of Chinese e-retailers.....	39
Case study 2:	Contribution to compensation fund by express carriers in Italy	61
Case study 3:	IPC Interconnect programme	74
Case study 4:	Delivery location in foreign countries to facilitate e-commerce imports	95
Case study 5:	Amazon Logistics in the United States.....	103
Case study 6:	Picnic – An innovative start-up to deliver groceries	109
Case study 7:	DHL Express cooperates with You2You in Paris.....	110
Case study 8:	DHL eCommerce & DHL Parcel Metro	111
Case study 9:	Amazon Logistics & Amazon Flex & Amazon Delivery Service Partner Initiative	112
Case study 10:	UPS' usage of Artificial Intelligence and Big Data	115
Case study 11:	Delivery management platforms for domestic and international deliveries: Examples Packlink (ES), Boxtal (FR), Shipcloud (DE), SendCloud (NL), Sendit (PL), ParcelHero (UK)	176
Case study 12:	Ebay Germany launches Ebay Fulfilment and Ebay Shipping service for sellers.....	178
Case study 13:	Fulfilment and delivery services by online marketplaces: Pan-European FBA by Amazon (Fulfilment by Amazon)	179
Case study 14:	Requirements on return policies of online marketplaces for cross-border e-commerce (Amazon marketplace)	182
Case study 15:	Examples for a shipping platform for international returns: ReBound Returns and ZigZag	185
Case study 16:	Fulfilment house fraud.....	231
Case study 17:	Electronic customs procedures under the UCC	234
Case study 18:	Two-tiered system in Germany	247
Case study 19:	Remuneration of parcel deliverers in the Netherlands.....	251
Case study 20:	Full flexibility by zero-hour contracts in the UK	257
Case study 21:	Subcontracted self-employed deliverers in the gig economy – Deliveroo	259
Case study 22:	Special case of limited subcontracting in France.....	262
Case study 23:	Parcify (former: Bringr) – Delivery app by Bpost.....	265
Case study 24:	Stuart.com – “The responsible platform”	265
Case study 25:	StreetScooter (DPDHL).....	278

Case study 26: VEDUR (CTT)	278
Case study 27: Txita (Donostia-San Sebastián, Spain)	280
Case study 28: Urban Micro Hubs (UPS)	281
Case study 29: Eco-Driving (bpost)	282
Case study 30: Correio Verde (CTT)	284

Country abbreviations and regional classification

Abbreviation	Country	EU region
AT	Austria	Western Europe
BE	Belgium	Western Europe
BG	Bulgaria	Eastern Europe
CY	Cyprus	Southern Europe
CZ	Czech Republic	Eastern Europe
DE	Germany	Western Europe
DK	Denmark	Northern Europe
EE	Estonia	Eastern Europe
EL	Greece	Southern Europe
ES	Spain	Southern Europe
FI	Finland	Northern Europe
FR	France	Western Europe
HR	Croatia	Southern Europe
HU	Hungary	Eastern Europe
IE	Ireland	Western Europe
IS	Iceland	Northern Europe
IT	Italy	Southern Europe
LI	Liechtenstein	Western Europe
LT	Lithuania	Eastern Europe
LU	Luxembourg	Western Europe
LV	Latvia	Eastern Europe
MT	Malta	Southern Europe
NL	Netherlands	Western Europe
NO	Norway	Northern Europe
PL	Poland	Eastern Europe
PT	Portugal	Southern Europe
RO	Romania	Eastern Europe
SE	Sweden	Northern Europe
SI	Slovenia	Southern Europe
SK	Slovakia	Eastern Europe
UK	United Kingdom	Western Europe

Terms and abbreviations

ACM	The Netherlands Authority for Consumers & Markets,
ANACOM	Autoridade Nacional de Comunicações - National Communications Authority of Portugal
API	Application programming interface
ARCEP	L'Autorité de régulation des communications électroniques et des postes - Regulation Authority for Electronic Communications and Posts in France
B2B	Business-to-business
B2C	Business-to-consumer
BIEK	Bundesverband Internationaler Express- und Kurierdienste e.V. - German association
BNetzA	Bundesnetzagentur (Federal Network Agency for Electricity, Gas, Telecommunications, Post and Railway, Germany)
BVOH	Bundesverband Onlinehandel
C2X	Consumer-to-consumer/business
CAGR	Compound average growth rate
CAR	Carrier
CEN	Comité Européen de Normalisation - European Committee for Standardization
CEP	Courier, express and parcels
CEP Research	Online information platform for the worldwide Courier, Express and Postal industry
CLA	Collective labour agreement
CNMC	Comisión Nacional de los Mercados y la Competencia - National Commission on Markets and Competition (Spain)
EEA	European Economic Area
EETT	Στοιχεία Επικοινωνίας - Hellenic Telecommunications and Post Commission (Greece)
EHI	EHI Retail Institute
EMOTA	European eCommerce & Omni-Channel Trade Association
ERGP	European Regulators Group for Postal Services
ETUI	European Trade Union Institute
EU	European Union
EU Cross-border Parcel Regulation	Regulation (EU) 2018/644 of the European Parliament and of the Council of 18 April 2018 on cross-border parcel delivery services, OJEU L112/19 of 2.5.2018
EU-28	The European Union after 1 July 2013, with 28 Member States
EUR	Euro
Eurostat	Statistical Office of the European Communities
FBA	Fulfilment by Amazon

Fevad	Fédération du e-commerce et de la vente à distance French e-commerce association
GDP	Gross domestic product
GfK	Gesellschaft für Konsumforschung, Market research institute
GLS	General Logistics Systems B.V. European parcel and express carrier (owned by Royal Mail)
IFH	Institut für Handelsforschung
IPC	International Post Corporation
MS	Member State(s)
NA	No answer/not available
NACE	Nomenclature des Activités Économiques dans la Communauté Européenne - a European industry standard classification system
NGHC	No guaranteed hours contract
NRA	National regulatory authority
Postal Directive	Directive 97/67/EC of the European Parliament and of the Council as amended by Directive 2002/39/EC and Directive 2008/6/EC
PostEurop	Trade association presenting European public postal operators (universal service providers)
PPS	Purchasing power standard
PUDO	Pick-up drop-off
SDC	Social Dialogue Committee
SME	Small and medium sized enterprises
TDI	Time definite international
TNS	International market research institute
TOP x	x most important
UNI Europa	European services workers union
UPU	Universal Postal Union
USA	United States of America
USD	United States Dollar
USO	Universal service obligation
USP	Universal service provider
VAT	Value added tax
WIK	WIK Wissenschaftliches Institut für Infrastruktur und Kommunikationsdienste GmbH
WTO	World Trade Organisation

Executive Summary

E-commerce, delivery services and the Single Market: A Success Story

B2C e-commerce has grown substantially and significantly contributed to the development of the Digital Single Market. It has facilitated the way by which consumers are able to purchase from abroad, and enabled enterprises to sell across borders. These developments have encouraged domestic and cross-border B2C delivery services which have also greatly improved since the start of discussions about an integrated delivery market to boost e-commerce in Europe in late 2012.

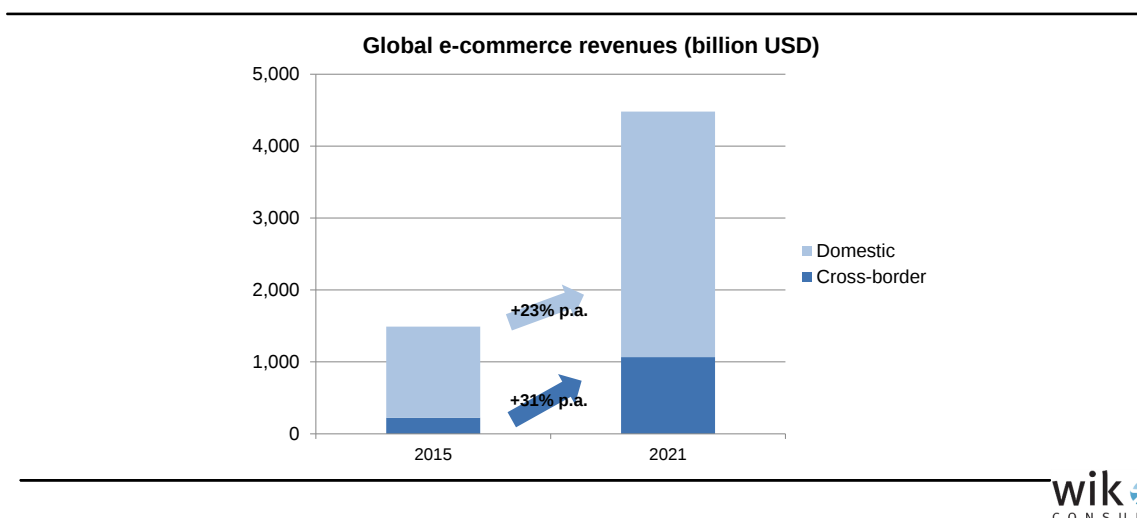
Overall, parcel delivery markets in the EU are developing well. Integrators, European parcel delivery networks, and more cooperation between national postal operators and new players in the delivery industry have been developing customised delivery services for e-commerce retailers and consumers.

Regulation (EU) 2018/644 on cross-border parcel delivery services will be fully implemented in 2019. Regulators will be engaged in monitoring delivery markets more effectively and offer transparency about products, market data, prices, and quality of services to e-retailers and consumers. Its implementation will therefore help to improve the transparency regarding cross-border delivery services, particularly for small and medium sized enterprises (SME) and consumers.

Delivery services are a critical element of the e-commerce customer experience. Affordable and high-quality delivery services, both domestically and internationally, are a prerequisite for successful e-commerce sales. This study describes the state-of-play, past developments and future trends in the B2C e-commerce delivery industry within the Member States of the European Union and of the European Economic Area. It analyses how domestic and cross-border delivery services have evolved in light of consumers' and e-retailers' needs. It considers regulatory aspects for intra-community trade (in the Single Market) and e-commerce trade with other parts of the world, and addresses developments in employment and working conditions as well as environmental aspects of the delivery industry. For each Member State, a country fact sheet surrounding e-commerce and delivery markets is provided in an appendix to this study.

Global e-commerce sales in the business-to-consumer segment (B2C) are estimated at around EUR 2 trillion (USD 2.3 trillion) in 2017. Cross-border e-commerce has gathered pace and growth rates for cross-border e-commerce are outperforming growth rates in domestic e-commerce (see Figure 1).

Figure 1 Trends in global e-commerce sales



Source: WIK-Consult based on IPC (2018), Cross-border E-commerce, presentation of 8 June 2018.

For example, IPC estimates that global revenues in cross-border e-commerce accounted for 15 per cent of total e-commerce in 2015, and that this share will increase to nearly one quarter by 2021 (to more than USD 1 trillion, more than quadrupled compared to 2015). Growth in global e-commerce markets unlocks potentials for retailers, consumers and the overall EU economy, and promotes the establishment of a digital single market.

Methodology: This study was carried out between January 2018 and January 2019. It is based on extensive and in-depth desk research regarding e-commerce and delivery markets in all Member States. For consumer research, WIK commissioned a representative online survey among online shoppers in all Member States (WIK Consumer Survey), with technical and organisational support of the market research company Lightspeed. The fieldwork was carried out from June to August 2018 and the survey collected responses of more than 17,000 consumers regarding their expectations and experiences in relation to the quality of delivery and returns of online orders. For this study, WIK interacted extensively with stakeholders including

- six national stakeholder workshops with organisational support of the market research company Efficienc3 (in Belgium, Bulgaria, Germany, Poland, Portugal and Sweden) that took place in June and September 2018,
- a survey of national regulatory authorities in Autumn 2018,
- three expert panels on 'Impact of technology on delivery services and future trends', 'Employment and working conditions', and 'Customs and VAT in cross-border e-commerce' organised in November 2018.
- presentation and discussion of interim results and conclusions at two public workshops in September 2018 and January 2019, and at a stakeholder forum organised by the European Regulators Group for Postal Services (ERGP) in November 2018, and a meeting of the Postal Directive Committee in December 2018.
- Meetings, telephone calls, and email exchange with numerous stakeholders, government officials, academics, and sector experts from across the EU.

B2C e-commerce markets are dynamically growing across Europe

Overall, B2C e-commerce has grown at significant rates in all Member States. WIK estimates that the e-commerce markets in the EU and EEA Member States¹ have increased its revenues from around EUR 200 billion in 2013 to EUR 480 billion in 2017. Average growth rates were 14 per cent per year, and stakeholders expect continued robust growth for the foreseeable future. The main drivers for this growth include an increasing share of consumers' online purchases (domestically and across borders), more frequent online purchases, and the expansion of online purchases to new product categories like groceries and furniture. The B2C e-commerce market in the European Union is dominated by the three largest markets, namely the UK, Germany and France (ordered by e-commerce market size). They account for approximately two thirds of total e-commerce revenues, and comprise the key ecommerce exporters within the EU.

Dynamic growth in cross-border e-commerce was mainly facilitated by technological developments, harmonisation efforts within the European Union (e.g. harmonised consumers rights), quickly growing e-commerce intermediaries (including international platforms), shopping software in different languages, international online payment services, fulfilment service providers, and, the efforts, dedication and investments of parcel carriers in the European Union.

Today, consumers have improved access to a wider choice of goods and services offered by international e-retailers than ever before. The borderless opportunities for online shoppers drive the demand for cross-border e-commerce. Since 2013, the share of online shoppers that purchase items from abroad has gone up by ten percentage points to 42 per cent in 2017. Furthermore, one third of online shoppers purchased from e-retailers in other EU Member States (up from a quarter in 2013).

At the same time, an increasing number of enterprises has grasped the opportunities of cross-border e-commerce. Results show that 44 per cent of enterprises with web sales also sell to other countries, a share that is steadily increasing. As many e-retailers sell items across borders more frequently, some have launched customised web shops while many others use international online marketplaces to expand their cross-border online sales. Expanding to other geographic markets offers an opportunity for e-retailers to reach more potential customers and to reduce the dependency on domestic (e-)retail markets.

E-commerce markets in most Northern and Western EU Member States are more advanced than in most Southern and Eastern EU Member States

The share of online shoppers in most Northern and Western EU Member States is significantly larger than in most Eastern and Southern EU Member States. These more modest shares are partly due to technical barriers (broadband access) and more limited

¹ References to EU Member States should be understood as also including EEA Member States.

internet usage. Additionally, local preferences, language and cultural factors as well as security concerns influence the number of consumers purchasing online.

Consequently, e-commerce markets in most Northern and Western EU Member States are more advanced and mature than in many Southern and Eastern EU Member States for various reasons. First, Member States with more advanced e-commerce markets often have a long tradition in distance selling. Second, these countries encompass large e-retailers as well as having successfully established national and international online marketplaces which drive the national e-commerce ecosystem. Third, relatively wealthy Member States with high income per capita present attractive target markets for e-retailers. Fourth, these countries generally have more developed digital skills and logistical availability.

Opportunities for SME and micro e-retailers increase with the size and development of national e-commerce markets

National e-commerce markets are often characterised by a small number of large and very large e-retailers and a huge number of SME and micro e-retailers. Most enterprises selling items online reach e-commerce revenues of less than 100,000 Euro per year. For SME and micro e-retailers, national and international online marketplaces provide an important sales channel that allow them to reach a high number of potential customers and benefit from support services provided by the platforms.

Opportunities for micro and SME e-retailers for domestic and cross-border online sales improve with more developed e-commerce ecosystems. These ecosystems include e-commerce intermediaries that facilitate different aspects of the e-commerce business (e.g. building attractive websites and online shops, developing and implementing online sales strategies, online payment services, as well as warehousing and delivery logistics). Nevertheless, large e-retailers and online marketplaces play an important role in the development of domestic e-commerce markets by setting standards that help to improve consumers' trust in online shopping, and encourage improved quality of delivery services.

For micro, small and medium-sized e-retailers, it is relatively more difficult to set up successful cross-border e-commerce sales, especially if they reside in Member States with less developed e-commerce ecosystems, where they lack the operational, technological and legal capacities to adequately tackle each of the requirements. For this group of e-retailers, inconsistencies in regulations and tax laws as well as cultural differences and language issues, present more pertinent barriers for cross-border sales than the management of cross-border logistics.

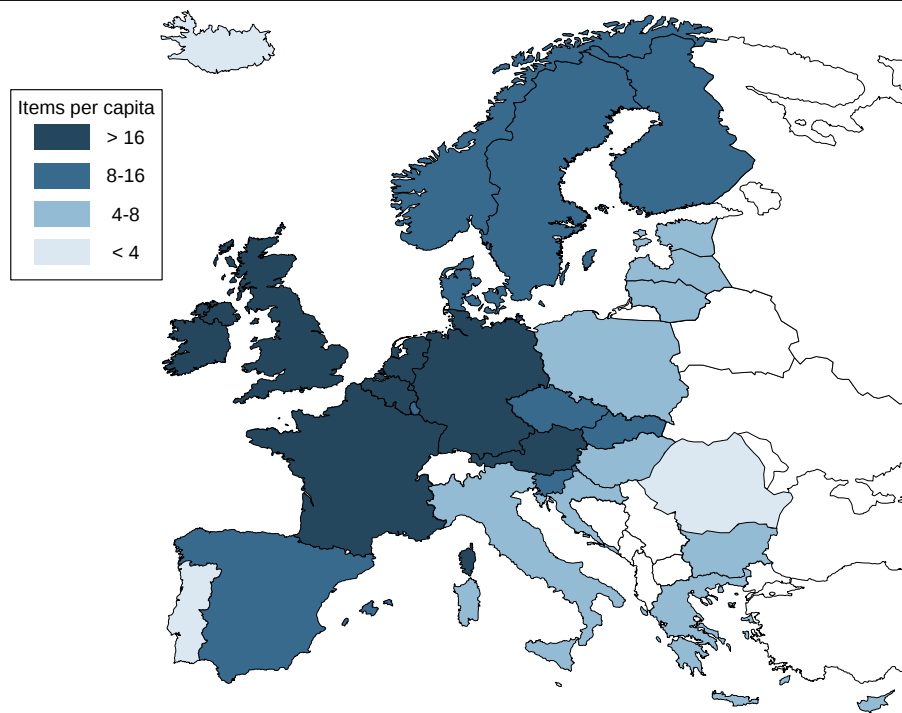
Growth in European parcel markets is driven by B2C e-commerce

WIK estimates that around 9.4 billion parcels, and at least 1.7 billion small packets, were delivered in Europe in 2017. Since 2013, total revenue increased by 4.3 per cent per

annum, reaching nearly 65 billion Euro in 2017, and are expected to amount to around 73 billion Euro in 2020 (Apex Insight).

Time-series data on total parcel revenues and volumes as well as indicators for parcel volume per weight class are rather incomplete at Member State level. Available data indicate that growth in parcel volumes has usually outpaced growth in revenues, resulting in declining average revenues per parcel (e.g. in Germany, Poland, Spain and the UK).

Figure 2 Size of parcel markets in the EU Member States (2017)



Source: WIK-Consult.

Within the European Union, national parcel markets are very different in size, as illustrated by the number of parcels per capita. Figure 2 shows that the Western and Northern EU Member States have delivery markets with higher volumes per capita than most Eastern and Southern EU Member States. Moreover, country data suggest that the share of B2C parcels is generally lower in the Southern and Eastern EU Member States. However, the domestic parcel markets with lower volumes generally exhibit higher growth rates than more mature markets.

Currently, accurate statistics on cross-border parcels within the European Union and between the European Union and the rest of the world are not available. Published data on cross-border parcels usually underestimate the actual cross-border volume by definition: it usually excludes parcels that are transported to the destination country by the sender (known as direct injection) as well as small packets delivered via the letter post stream.

Consumer and e-retailer surveys suggest that the major intra-EU flows of cross-border e-commerce small packets and parcels are generally either between large e-commerce export markets (the UK and Germany) and other Member States, or between neighbouring Member States with close economic and cultural/language relations, e.g. the Nordic countries (Denmark, Finland, Iceland, Norway, and Sweden). Major import flows from outside the EU mainly originate in Asia (notably China) and the USA.

The landscape for parcel delivery services is competitive ...

To date, national and cross-border parcel delivery markets are already characterised by a significant number of different players.

Most national and international parcel and express carriers started out in B2B delivery services, i.e. providing competitive solutions to best manage the logistics among manufacturers, between manufacturers and wholesalers, and between wholesalers and retailers, both nationally and internationally. With emerging B2C e-commerce, they have expanded their B2B capabilities with tailored elements necessary to support individual consumer needs and e-retailer value-added requirements, e.g. the establishment of parcel shops and the introduction of Saturday deliveries. Moreover, growing parcel volumes (due to e-commerce) have been driving past and present investments in sorting and delivery capacities. Some parcel carriers have emanated from distance selling or mail order business with their main focus on B2C delivery services (e.g. Hermes in Germany, Mondial Relay in France, or Yodel in the UK).

Universal service providers have a first-mover advantage in domestic B2C deliveries due to their nationwide dense delivery infrastructure for letters and parcels, and their dense networks of postal outlets. Most universal service providers have recognised that expansion in delivery of B2C e-commerce items provides an opportunity to offset declining revenues due to declining letter post volumes. Universal service providers, especially in Western and Northern EU Member States, play a significant role in domestic parcel delivery services. Conversely, many parcel delivery services in the Southern and Eastern EU Member States are lagging behind in B2C parcel delivery services and struggle to catch up with growing B2C e-commerce in their respective countries.

Successful universal service providers are partners in cooperation with one or more of the European parcel networks, or have created such networks of their own (e.g. La Poste, Deutsche Post DHL, Royal Mail). Universal service providers hold particularly high market shares in cross-border deliveries of small packets and they are continuously improving these services through international cooperation. Dispatching merchandise by small packets presents a low cost alternative to conventional cross-border parcel delivery services, particularly for micro and small e-retailers and consumers that want to return goods.

... and it evolves towards an integrated European delivery market

Regional delivery clusters and a handful of carriers with Europe-wide activities continue to develop, and together they are creating a single market for delivery services.

- International integrators like UPS and DHL Express increasingly target e-retailers to facilitate cross-border deliveries for time-critical, high-value e-commerce purchases (intra-EU as well as between Member States and the rest of the world).
- European road-based B2B parcel networks are expanding into domestic and cross-border B2C e-commerce deliveries. La Poste-owned Geopost launched a dedicated strategy for B2C cross-border deliveries under the international brand DPDgroup. Royal Mail-owned GLS follows a similar, although more cautious, expansion strategy. These networks have their own operations in most European countries or they cooperate with local delivery partners, typically universal service providers, otherwise.
- Dedicated European B2C parcel networks have emerged. Deutsche Post DHL launched a separate network, DHL Parcel, that focusses on cross-border B2C e-commerce delivery services. Hermes Europe, a subsidiary of one of the largest e-retailers in Europe, traditionally delivers to many EU Member States.
- Under the umbrella of the International Post Corporation (IPC), universal service providers are working on initiatives to improve the integration of their local delivery services, to develop more flexible and visible cross-border parcel delivery services, and to improve return services.
- Local B2B carriers are expanding in B2C deliveries. Furthermore, they have spread their activities into neighbouring Member States resulting in regional (cross-border) delivery networks. With growth in cross-border e-commerce, regional delivery clusters and carriers with Europe-wide delivery services will continue to develop into a single market for delivery services.
- Finally, international fulfilment service providers (e.g. Amazon) have started to facilitate cross-border e-commerce logistics by offering warehouse capacities in several Member States (mainly in large and/or centrally located Member States).

Postal legislation and national regulation is evolving in response to e-commerce

The Postal Services Directive² leaves significant leeway for Member States to define the scope of universal postal services, and determine how to regulate parcel and express carriers. Generally, national regulatory authorities regulate parcel delivery services less intensively than letter post services.

² Postal Services Directive 97/67/EC amended by Directives 2002/39/EC and 2008/6/EC.

Among the different Member States, there is still little harmonisation and limited transparency as regards the classification of delivery services (parcel, express and emerging new delivery services). An important issue is whether those services are considered as *postal services* or *services within the scope of universal service* or *universal services*. As quality levels of delivery services improve, the boundaries between deferred and express services will become even more blurred in the future.

Classification matters because it determines the scope of regulation. Regulation faced by parcel carriers can include authorisation procedures, reporting requirements, rules for complaints handling, possibly financial contributions to net costs of the universal service obligation (in very few Member States) and to the funding of the national regulatory authority (in around two thirds of the Member States).

B2C e-commerce and competition have created greater incentives for universal service providers than the existence of a universal service obligation

Universal service providers play an important role in domestic and particularly cross-border e-commerce deliveries. However, this does not necessarily mean that the existence of a universal service obligation is the cause for this important role in e-commerce. For intra-EU parcels, we conclude that delivery markets have developed well without much regulation, and that the role of universal service obligations therefore has not been significant for the development of parcel markets. Indeed, carriers usually provide appropriate services in excess of the USO requirements, i.e. they offer better service, and generally lower prices to e-retailers and consumers than they are obliged to offer under their national postal legislation. Universal service providers are enhancing service levels of universal service products not in response to regulation but as a reaction to market demand. Moreover, the scope of the USO is very different in the Member States regarding the services included and defined service levels, e.g. routing time targets for parcels. However, while universal service products are rarely used by e-retailers (that generally have business accounts), they may play a more significant role for consumers in case of returns.

A significant proportion of EU imports of e-commerce items are sent as small packets and letters (often as registered items) that are usually delivered by universal service providers in their role as (UPU) 'designated operators' at (UPU) terminal dues rates. The delivery of these items is generally considered as a universal service. Particularly for imports from Asia, terminal dues rates are significantly lower than domestic postage for similar items for almost all Member States. For some (high-cost) Member States, terminal dues are only 20-30 per cent of the domestic postage of similar items. Consequently, many universal service providers are delivering imported packages below cost. As these imports have quickly grown, losses from incoming small packets may add to USO net costs.

Choice and quality of delivery services for B2C e-commerce have greatly improved

The supply of delivery services has significantly improved in many Member States. These improvements include efforts by national and international carriers to make domestic and cross-border delivery services more flexible and recipient-friendly (for example, by launching and expanding the network of pick-up and drop-off points), and introducing tools and applications for consumers to track and redirect their deliveries. Investments in more recipient-centric delivery services help carriers limit the cost of delivery because it improves the likelihood that parcels are being delivered at the first attempt.

In particular, European parcel and express carriers, like UPS, DPD, DHL Parcel and GLS, seek to customise cross-border delivery solutions that provide recipient-friendly delivery options, based on the preferences of local e-shoppers in the destination country. Furthermore, universal service providers have developed new products that target a significant share of light-weight (cross-border) e-commerce items. These products provide a low cost alternative to similar sized parcel products for domestic and cross-border deliveries, and include (light) tracking options.

However, there remain considerable differences among Member States, reflecting the different stages of development of their respective national e-commerce markets.

Member States with a long tradition in distance sales usually have domestic B2C parcel delivery services that have already been in place for decades. Ever expanding and more customer-centric B2C e-commerce (compared to the traditional distance selling business) has driven all carriers, including universal service providers as well as parcel and express carriers, to improve and expand their domestic and cross-border delivery services.

In contrast, countries without a tradition of long-distance trade did not have comparably developed B2C delivery infrastructure, but it is beginning to emerge in line with growing e-commerce (like in many Eastern and Southern EU Member States). Consequently, universal service providers and/or local carriers that traditionally served B2B markets within these countries, are beginning to expand into domestic B2C e-commerce delivery services, and some local e-retailers have launched their own delivery services.

Small e-retailers are recognised as target customers and benefit from discounts

National and international carriers not only seek to attract large e-retailers, but also focus increasingly on small and micro e-retailers by facilitating access to their services. These carriers developed web portals to provide e-retailers with better access to their services and cooperate with delivery management platforms and parcel brokers. Additionally, some carriers provide detailed information and research papers to support e-retailers with broadening their offers (and advertising their delivery solutions), while many have also developed new products and introduced new services tailored for e-retailers' needs.

Furthermore, small and medium-sized e-retailers are increasingly eligible for business accounts that entail lower shipping rates. These discounts usually vary with the size of the

e-retailers and their annual volumes. The little information available on these discounts indicates that even small to medium e-retailers, at least in the more advanced e-commerce markets, are offered services at significantly reduced prices compared to publicly listed prices for single-piece items.

Steady growth in B2C e-commerce transforms the delivery value chain

B2C e-commerce with its customer-centric approach presents considerable challenges for parcels carriers: growing demand, significant seasonal fluctuations and increasing costs in the last mile. This has driven constant innovation in the delivery industry:

- Carriers are heavily investing in more sorting, transport and delivery capacities and in a more flexible delivery value chain. This results in an increasing number of local delivery depots primarily located near densely populated areas with high delivery volumes.
- Most technology and organisational innovations are expected for the last mile, i.e. the final delivery of e-commerce orders to consumers. Carriers and emerging new players seek ways to find a balance between cost-effective deliveries and recipients' convenience, and to better deal with the growing fluctuation in demand and resulting bottlenecks in operational capacity.
- Increasing competition in the last mile will expand the variety of delivery solutions to better match consumers' needs and specific requirements of single e-commerce product categories (e.g. groceries). Delivery platforms that orchestrate the different players in the delivery supply chain are considered as an important element for the future of e-commerce deliveries, generally and particularly in urban areas.

Significant progress made in the development of technical standards has improved the visibility and facilitated the handling of cross-border parcels. The European standardisation body CEN has successfully developed a technical specification for a harmonised parcel label that is open to all carriers and e-retailers to improve the traceability of parcels in the e-commerce supply chain (including delivery) and facilitate future co-operations among universal service providers, parcel and express carriers, e-commerce intermediaries and e-retailers.

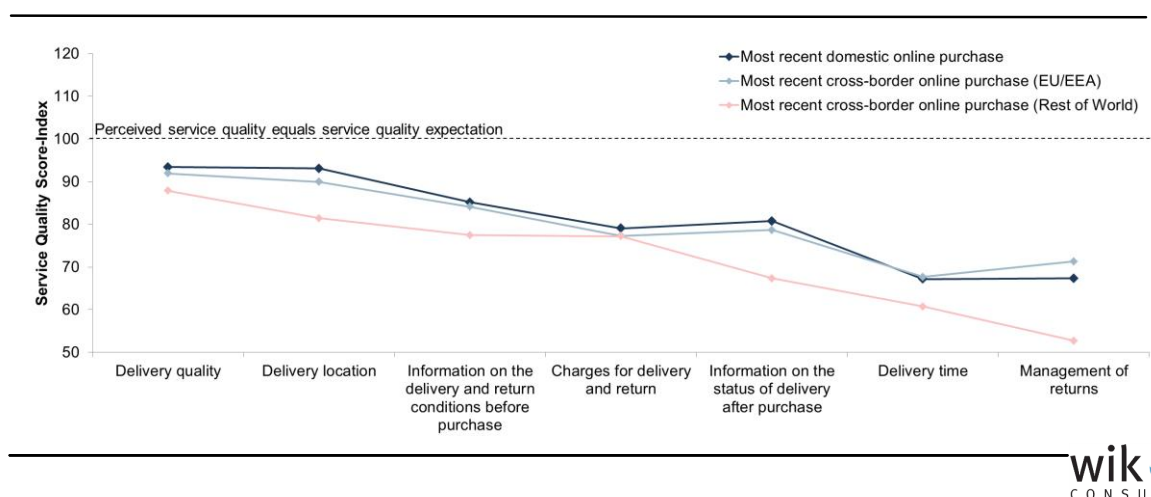
Similar service quality perceived for domestic and intra-EU/EEA online purchases

The WIK consumer survey contains, inter alia, expectations of online buyers compared with the perceived experience of their most recent (domestic and cross-border) online purchase. The expectations and experiences were solicited for seven categories of service quality, all related to delivery and return aspects of online orders. The WIK Service Quality Score Index shows to which extent consumers' expectations meet their experiences. A value of 100 indicates that expectations have been fully met by the experiences whereas a lower value indicates a gap in the perceived service quality compared to the expectations.

A high score on the service quality index depends on the actions of both the e-retailer and the carrier(s) involved. In other words, only if consumers experience outstanding performance across all delivery-related service categories including information provision before and after purchase, delivery quality, delivery location and time as well as returns management, their experience fully reflects their expectations as regards service quality. The survey reveals that the respondents value each dimension as equally important.

Figure 3 presents the service quality levels for domestic purchases, intra-EU cross-border purchases, and cross-border purchases from the rest of the world separately. Overall, service quality experiences regarding domestic and intra-EU cross-border purchases closely resemble consumers' expectations. Generally, online shoppers do not perceive a significant difference between the service quality of national purchases and of cross-border purchases from other EU Member States. However, they do perceive a significantly lower level of service quality for cross-border purchases from other parts of the world (mostly from Asia).

Figure 3 WIK Service Quality Score Index by service category (EU/EEA average)



Source: WIK consumer survey.

Of all considered service dimensions, the perceived service levels of 'delivery quality' best match consumers' expectations, followed by 'delivery location' for domestic and cross-border online purchases. This suggests that online shoppers are widely satisfied with the carriers' performance (in combination with the e-retailers' offer) in terms of punctuality, correct delivery location and integrity of the e-commerce item and its packaging.

Consumers are happy with information provided by e-retailers on delivery cost and arrangements

The more information that e-retailers provide prior to purchase might lead to consumers trusting more in online shopping. The Consumer Rights Directive defines the duties of e-retailers in relation to information provision before the contract is closed (i.e. before

purchase). This includes information on the cost of delivery (including returns) as well as on delivery arrangements. The EU Regulation on cross-border parcel delivery services refers to this specific aspect in its Article 7 and requires that e-retailers disclose information about cross-border delivery options and charges payable by consumers for the cross-border parcel delivery before the contract is finalised. The WIK consumer survey shows that online shoppers are very satisfied with information provided by e-retailers prior to purchase in relation to delivery options, delivery time, and charges for domestic and intra-EU online purchases. This outcome indicates that the requirements of the Consumer Rights Directive and of the EU Regulation on cross-border parcel delivery services are generally adhered to regarding the pre-contractual provision of delivery-related information by e-retailers in the EU Member States.

Consumers expect more choice in delivery time options

In contrast, the survey reveals that there remains substantial scope for improvements regarding 'delivery time' and 'management of returns' according to the perceptions of online shoppers. The first category includes consumers' expectations regarding time- and day-specific deliveries as well as having the option for express delivery. The weak performance in this category suggests that expectations of online shoppers are relatively high, and e-retailers often appear to only provide standard delivery options, i.e. no options to choose a specific delivery time or express delivery which online shoppers increasingly expect.

Many e-retailers do not pay enough attention to their return policy

'Management of returns' refers to how e-retailers facilitate the return process for online buyers. The WIK consumer survey revealed that managing returns is still a major concern for consumers regarding intra-EU e-commerce items (including domestic purchases) as well as online purchases from the rest of the world. The concerns relate to all aspects of returns: provision of information about return costs prior to purchase, return charges, and management of returns. Consequently, it inhibits the growth of e-commerce in general as well as cross-border e-commerce. In particular, uncertainty in the handling of returns and the related costs are some of the major reasons why online shoppers avoid cross-border purchases, according to various consumer surveys, including the WIK consumer survey. Despite returns being an inherent feature of e-commerce, it appears that many e-retailers do not pay enough attention to this important element.

Online shoppers living in rural / suburban and urban areas are often equally happy with the carriers' delivery quality

The quality of delivery service experienced does generally not depend on the residential area of the consumer. In most EU Member States, consumers do not perceive differences in delivery service quality between densely or sparsely populated areas. In only one third of the Member States, consumers living in urban areas perceive a slightly different quality in delivery services than consumers living in suburban/rural areas. In the United Kingdom,

Portugal and Cyprus, consumers living in urban areas perceive a statistically higher service quality than consumers living in rural or suburban areas, while in eight Member States, consumers living in rural/suburban areas perceive a higher service quality than consumers in urban areas.

Cross-border delivery services are not a significant barrier for growth of e-commerce exports

Nearly half of enterprises with web sales also have cross-border sales, at least occasionally. For this group of e-retailers, managing cross-border delivery services is not considered as a significant barrier for growth of e-commerce exports. However, because delivery costs are input costs for e-retailers, they seek to minimise these costs as much as possible.

In advanced e-commerce markets, i.e. in many Western and Northern EU Member States, cross-border parcel logistics are considered as a manageable challenge that is increasingly dealt with by innovative solutions and emerging intermediaries in these countries. Parcel brokers and delivery management platforms have emerged to increase transparency on available services, to facilitate the processing of domestic and cross-border delivery and returns, and to reduce delivery costs, especially in the case of micro and small e-retailers.

The situation is different in Member States with less advanced e-commerce markets and relatively few exported e-commerce items, for example, Bulgaria, Greece and Portugal. In such countries, e-retailers have less capacities for international growth due to a lack of available e-commerce intermediaries. Additionally, they have to deal with more basic impediments, like limited access to broadband (e.g. Bulgaria and Greece), and little trust in e-commerce purchases in general. Furthermore, e-retailers in less developed e-commerce markets have fewer appropriate alternative delivery service providers. Consequently, the high costs involved with delivering or returning e-commerce items across borders remain an issue for SME e-retailers in these Member States.

More efforts needed by the e-commerce and the delivery industry to deal with the (cross-border) return challenge

Discussions at the six national stakeholder workshops in Bulgaria, Belgium, Germany, Poland, Portugal, and Sweden, and expert interviews revealed that the management and cost of cross-border returns are a greater concern than the management of cross-border deliveries. The WIK consumer survey showed that returns handling and cost are also a major concern for online shoppers. With growing domestic and cross-border e-commerce there is an increasing need for manageable return solutions. The development of appropriate cross-border return solutions by carriers and e-commerce intermediaries has gained momentum, but there is still a significant gap in appropriate and low-cost return services in the opinion of e-retailers and consumers.

E-commerce imports to the EU increase substantially, creating challenges for universal service providers and customs authorities

The WIK consumer survey shows, in line with other surveys, a wide use of cross-border e-commerce purchases by online shoppers. Half of these purchases from abroad are from online shops outside the EU. For one third of all consumers in the survey, their last cross-border purchase came from Chinese e-retailers. More than half of the Chinese imports are delivered by universal service providers.

E-commerce imports into the EU from non-EU countries have increased massively, a substantial share of these items is coming from China. Typically, e-commerce items from Asian e-retailers are sent as small packets in the mail stream, often as registered letters. About 40 per cent of worldwide international mail flows are sent as small packets, mostly containing e-commerce items. According to figures published by the Universal Postal Union (UPU), the volumes of international parcels grew by 12 per cent in 2015 compared to 2014, while the tonnage increased even more by 16.6 per cent.

E-commerce imports from China and other Asian countries are often a loss-making service for universal service providers. UPU terminal dues remain below local delivery cost as the UPU struggles to reform its system of remuneration (called terminal dues). The recent reform of the terminal dues system for e-commerce packets has not closed the gap between revenues and costs for most universal service providers in Europe. They are still significantly lower than the local delivery costs. Therefore, the current terminal dues regime continues to challenge the financial viability of universal service providers particularly in small European countries that face high import volumes (e.g. Iceland and other Nordic countries).

Despite attempts to reform the UPU terminal dues system for many years, terminal dues rates remain well below local delivery costs in many Member States. This has negative effects for many EU universal service providers, and is giving foreign e-retailers a competitive advantage over e-retailers based in the EU (by granting them preferential delivery rates). In autumn 2018, the USA announced plans to leave the UPU, and apply “self-declared rates” instead of UPU terminal dues rates if the UPU cannot agree on substantial commitments to align terminal dues with delivery cost better.

In 2021, the current de minimis rule that exempts low-value imports by postal service from import VAT will be abolished. Imports will become more expensive after VAT is added. This is likely to reduce the amount of e-commerce imports by postal service directly from Asia, particularly from China. Responding to this change, Chinese e-retailers are expected to switch from direct delivery from China by China Post to fulfilment providers that operate warehouses located within the European Union (e.g. logistics services provided by Amazon, Alibaba, UPS, Spring, DHL or independent fulfilment service providers). As a consequence, goods will be imported in containers under normal customs procedures, and not as individual packets sent by post, and exchanged in the UPU system.

Full application of VAT on all postal imports raises major operational challenges for universal service providers as well as for competent (customs) authorities in the Member States: First, non-EU e-retailers and platforms will have to cope with the regulations. Second, postal operators will have to present millions of additional items to customs in 2021, while digitised customs solutions might not be ready to facilitate efficient processing. Third, customs authorities also will have to cope with additional volumes.

Parcel delivery creates new jobs, mostly in the low-wage segment

The overall employment in the postal and courier sector was 1,8 million in 2017, and annually increased by 0.4% on average between 2013 and 2017. This growth results from increasing demand in e-commerce, and related parcel deliveries. In the largest parcel markets, carriers are finding it increasingly hard to recruit qualified drivers. For universal service providers, growth in parcel delivery provides an opportunity to compensate employment declines in letter operations by increasing employment in parcel operations (or by extending combined letter and parcel operations in delivery). While overall sector employment increases, only few USPs are increasing employment, and most reduce staff overall.

Working conditions are often based on minimum national wages and working standards, which are very diverse among Member States. One of the key challenges for carriers consists of dealing with peak demand in e-commerce deliveries. The significant fluctuations in demand levels require more flexible employment arrangements. This has already resulted in a two-tiered labour market consisting, in one part, of company or sectoral collective labour agreements and the other part of non-standard contractual arrangements (including part-time work, self-employed drivers, and seasonal work).

Subcontracting is a common practice in parcel delivery, and is traditionally applied to create the flexibility needed to cope with changes in demand. Experts interviewed for this study expect that it will remain important in future developments. Labour regulations regarding subcontracting appear to differ substantially among Member States while also lacking in transparency.

Environmental challenges increasingly affect the delivery industry

The transport sector is one of the largest contributors to greenhouse gas emissions, accounting for one quarter of total European greenhouse gas emissions in 2017. The mode of transport is a key determinant for the environmental impact of parcel deliveries. For example, air transport causes the highest emissions per item. As terminal dues for import (air) parcels are relatively low, this leads to increasing air transportation and has negative environmental effects.

Pollution, climate change, and increasing regulation to protect the environment affect all sectors, including parcel delivery, and parcel delivery services are a major contributor to emissions of greenhouse gas and particulate matter. While it is not clear whether e-commerce and parcels delivery cause more or less pollution than traditional brick-and-

mortar retail, including logistics and consumer transport, it is clear that emissions created by parcel delivery increase with e-commerce volumes. In addition, cities are becoming more affected by high traffic volumes, noise and rising pollution. As an important polluter, particularly in inner city areas, carriers are increasingly acting to reduce their environmental impact. Such initiatives include electric delivery vehicles, micro-hubs and delivery by e-cargo bikes. Furthermore, local restrictions and cooperation with local governments play an important role in driving green delivery concepts.

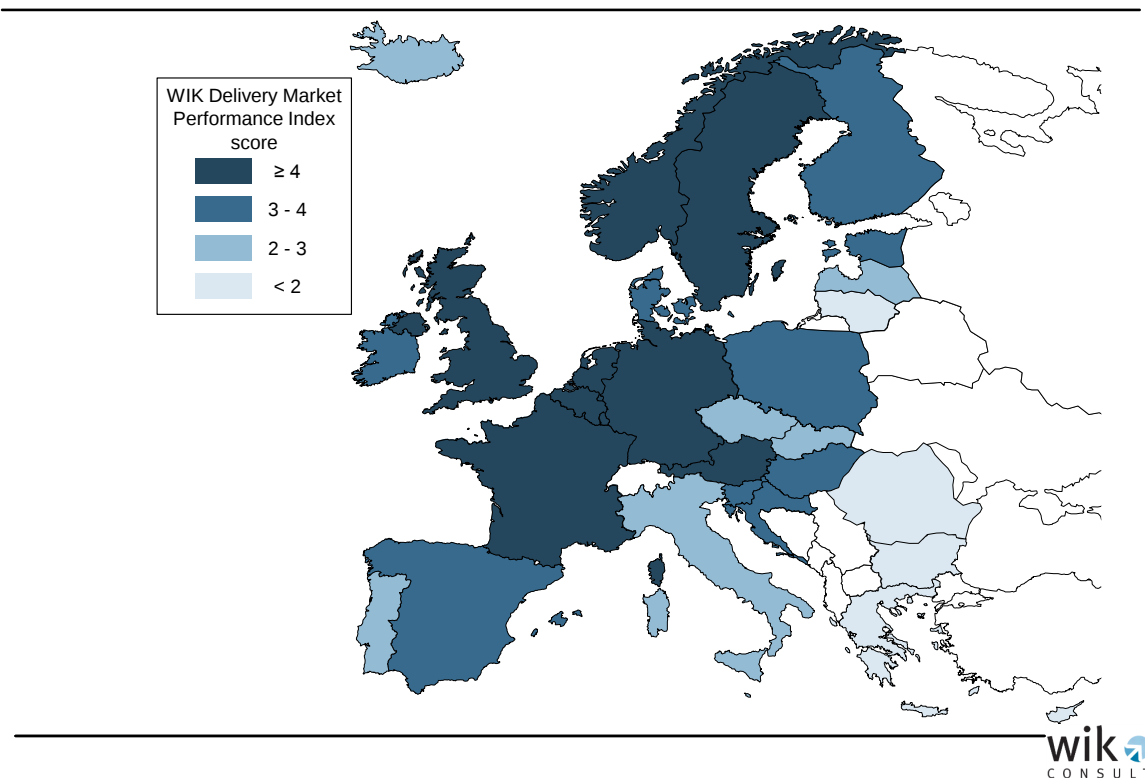
Sustainability reports by parcel carriers demonstrate the environmental awareness of the industry. Carriers are increasingly acting to control or reduce their environmental impact by implementing alternative fuels and vehicles as well as improving fuel and network efficiency. Furthermore, measures that contribute to raising efficiency are important drivers of environmental improvements due to their cost saving potentials.

B2C e-commerce drives the performance of the delivery markets

While the supply of domestic and cross-border delivery services for e-commerce items has broadly improved over the last five years, there are still considerable differences in the performance of national delivery markets among Member States, reflecting different stages in development of the national e-commerce markets.

WIK developed a Delivery Market Performance Index consisting of four equally weighted criteria: (1) Delivery quality, (2) competitive landscape in B2C delivery services, (3) performance of the universal service provider and (4) the state of e-commerce. The assessment is based on in-depth research on national and cross-border delivery services as well as e-commerce markets and expert assessments.

Figure 4 WIK Delivery Market Performance Index



Source: WIK-Consult.

Figure 4 presents the results of the assessment and shows diverging levels of performance.

The delivery markets in the Western and Northern EU Member States show relatively high levels of performance with the Netherlands having the best developed delivery market. These countries are characterised by a long tradition in distance selling. Therefore, domestic B2C delivery services have been successfully established in the past. In these countries the universal service providers and other local carriers were well prepared and have successfully expanded into more recipient-centric B2C delivery services.

Some Southern and Eastern EU Member States neither had such a tradition in distance selling nor did the universal service providers play a significant role in B2B parcel deliveries. Local parcel and express carriers have started later, expanding into B2C deliveries and in some cases large local e-retailers filled the gap by launching their own delivery services. Overall, delivery markets in these countries have started to adapt their service provision in order to close the gap between e-retailers' and consumers' needs and increase the number of currently available B2C delivery services.

There is scope for improvement in all Member States, particularly in Bulgaria, Greece, Lithuania and Romania. These countries are characterised by less-advanced e-commerce markets, low-performing universal service providers, and delivery markets that have only

recently started to support local e-retailers with dedicated domestic and cross-border delivery services.

Recommendations for further improvements

Overall, increasing competition and emerging e-commerce intermediaries have resulted in enhanced transparency in delivery markets for e-retailers about products and service levels. However, this has not occurred in all Member States and not necessarily for SME e-retailers (particularly in less advanced e-commerce markets). Regulation (EU) 2018/644 on cross-border parcel delivery services shall be fully implemented in 2019. Its implementation will help to continue improving the transparency regarding cross-border delivery services, particularly for small and medium sized enterprises and individual users. Postal regulators will be engaged in monitoring delivery markets more effectively and offer transparency about products, market data, and prices to e-retailers and consumers.

1. Given the progress made towards higher quality parcel delivery, further EU and Member State level action on prices, transparency and quality of service would not be appropriate at this stage. Instead, the European Commission and national regulatory authorities should ensure the correct implementation of Regulation (EU) 2018/644 on cross-border parcel delivery services, and closely monitor the developments in the European e-commerce and delivery markets in order to assess the impact of this regulation.

The management and handling of returns, as well as the cost of returns, are major concerns for online shoppers and e-retailers. Cross-border return solutions are slowly developing. Therefore, we recommend that

2. Universal service providers, parcel and express carriers, and e-commerce intermediaries should continue to develop appropriate return services particularly for SME e-retailers.
3. Carriers, e-commerce intermediaries and e-commerce associations should intensify their efforts to provide e-retailers with easily accessible and comprehensive information, including guidelines for return management and handling both domestically and across borders. E-commerce associations could provide more guidance for e-retailers to more effectively and transparently inform domestic and foreign consumers regarding their return policy.
4. E-retailers, e-commerce associations, e-commerce intermediaries and carriers could consider promoting the option of using local return addresses for cross-border returns.

There is a need for further clarification as regards the application of postal regulation to parcel carriers in the Member States.

5. National regulatory authorities should be clear about the criteria applied to determine whether a delivery service is considered as a universal service in the Member States.³ Given the different definitions for universal service in the Member States, and the different regulation of providers offering universal services, NRAs should clarify whether or not alternative delivery models and new services are considered as universal services under current legislation, and thus offer planning and regulatory certainty for e-commerce and delivery companies.
6. Increasing demand by SMEs and large e-retailers as well as competition and innovation in delivery markets have resulted in more choice and better quality for domestic and international parcel delivery services. While there clearly remain opportunity for further improvements, considerable progress has been made in the past five years. For intra-EU parcels, therefore, we do not recommend that new quality standards for universal service parcels are necessary, or should be established to enhance performance of e-commerce delivery.
7. In order to enhance choice and service quality for e-retailers and consumers, some Member States should review whether authorisation procedures could be simplified. For example, authorisation procedures and related administrative burden imposed on all parcel service providers, including the smallest providers, appear disproportionate in Cyprus, Hungary and Greece.

EU institutions and Member States should ensure a level playing field for e-commerce imports.

8. For e-commerce items imported as individual (postal) packets, the ambition must be to ensure that the cost of delivering import packages is covered by remuneration, as for delivery of domestic packets. Current discussions at the UPU (accelerated by the USA acts) present an important opportunity for the EU. We recommend that EU Member States, with support by the European Commission, should work with other UPU delegations and the USA to achieve tangible results in 2019, and achieve more cost-reflective terminal dues rates for import packets.
9. In parallel, the European Commission should seek to negotiate alternative e-commerce trade agreements that include principles for remuneration and operations for import packets, ideally as part of a free trade agreement that covers substantially all forms of trade, in line with WTO rules. At a minimum, principles

³ Some (but not all) Member States use the terms “in the scope of the USO” or “interchangeable services compared to universal services” to distinguish between mandatory universal services (provided by the USP under a universal service obligation) on the one hand, and similar service provided by other providers than the USP.

should be agreed, in some form, with the USA as a contingency measure to prepare for the event that the USA will leave the UPU.

10. At present, universal service providers and customs authorities do not appear to be sufficiently prepared for the electronic transmission of data and/or the clearing of big volumes of low-value imports prepared for electronic notification and/or controls on all low-value imports. We recommend that Member States should carefully assess whether it will be necessary to upgrade their human resources at customs and, possibly, at tax authorities to prepare for this increase in workload in 2021.
11. In order to avoid disruption in international e-commerce sent by UPU designated operators, EU universal service providers should put in place electronic notification systems quickly and collaborate with their foreign counterparts (most importantly: China Post) to avoid massive stoppage at customs borders and mail centres in 2021.

Growth in e-commerce and parcel deliveries creates challenges, and may involve risks, for labour markets.

12. In order to ensure effective protection of workers' rights, we recommend that Member States should monitor subcontracting chains in the delivery industry, where necessary, through taking appropriate measures in accordance with national laws and/or practice and in compliance with EU laws, and after consulting the relevant social partners.
13. Member States should ensure that the existing national labour legislation is effectively enforced particularly in low-wage sectors that face a significant risk of precarious working conditions.

Carriers are making significant efforts to reduce their environmental impact, and are increasingly affected by environmental regulation.

14. To support more sustainable delivery, local authorities could improve the transparency of local environmental regulations and define clear responsibilities for carriers. Moreover, local authorities, including city planners, should encourage and support innovative organisational and technological solutions of carriers for the last mile (e.g. by providing an appropriate charging infrastructure for electric vehicles, locations for micro-hubs and parking and driving rights for electric vehicles).

Résumé

Le commerce électronique, les services de livraison et le Marché Unique: une belle réussite

Le commerce électronique B2C (entreprise à consommateur) a connu une croissance importante et a grandement contribué au développement du Marché Unique Numérique. Grâce à lui, les consommateurs disposent de moyens supplémentaires pour acheter des produits depuis l'étranger et les entreprises peuvent vendre leurs produits au-delà des frontières. De telles évolutions ont stimulé les services de livraison intérieure et transfrontière B2C qui se sont parallèlement fortement améliorés depuis le début des débats fin 2012 pour la mise en place d'un espace intégré de livraison en vue de dynamiser le commerce électronique en Europe.

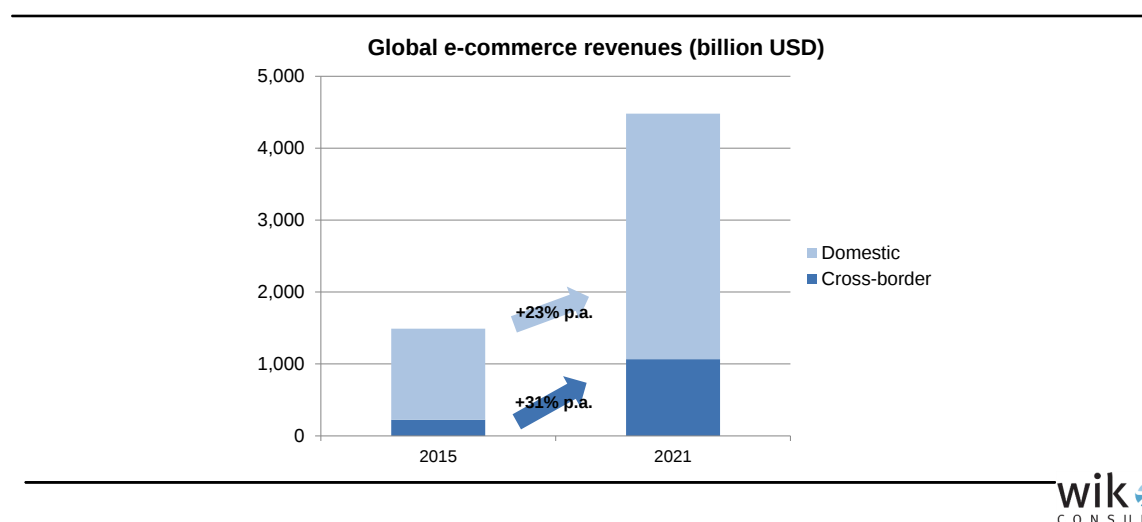
Globalement, les marchés de la livraison de colis au sein de l'UE se développent bien. Les intégrateurs, les réseaux européens de livraison de colis, et une coopération accrue entre les opérateurs postaux nationaux et les nouveaux entrants au sein du secteur de la livraison, ont permis le développement de services de livraison personnalisée au bénéfice des détaillants et des consommateurs du commerce électronique.

Le règlement (UE) 2018/644 relatif aux services de livraison transfrontière de colis sera pleinement mis en œuvre en 2019. Les régulateurs pourront contrôler de façon plus efficace les marchés de la livraison et contribuer à la transparence quant aux produits, données de marché, prix, et qualité du service pour les détaillants et les consommateurs du secteur du commerce électronique. Sa mise en œuvre permettra donc d'améliorer la transparence relative aux services de livraison transfrontière, et plus particulièrement pour les petites et moyennes entreprises (PME), et pour les consommateurs.

Les services de livraison constituent une composante essentielle de l'expérience client en matière de commerce électronique. Des services de livraison abordables et de qualité, que ce soit à l'échelle nationale ou internationale, constituent une condition préalable au succès du commerce électronique. Cette étude dépeint l'état des lieux, les évolutions constatées et les futures tendances du secteur de la livraison B2C via le commerce électronique au sein des Etats Membres de l'Union Européenne et de l'Espace économique européen. Elle analyse la façon dont les services de livraison intérieure et transfrontière ont évolué au regard des besoins des détaillants et des consommateurs du commerce électronique. Elle examine les aspects réglementaires relatifs au commerce intra-communautaire (au sein du Marché Unique), analyse le marché du commerce électronique vis-à-vis des autres régions du monde, et elle aborde les évolutions en termes d'emploi, de conditions de travail, ainsi que les aspects environnementaux du secteur de la livraison. Pour chaque Etat Membre, on trouvera dans les annexes de l'étude une fiche d'informations relatives aux secteurs du commerce électronique et de la livraison.

Les ventes mondiales du commerce électronique sur le segment B2C (entreprise au consommateur) sont estimées à environ 2 000 milliards d'euros (2 300 milliards de dollars) en 2017. Le commerce électronique transfrontière s'est accéléré et son taux de croissance est supérieur à celui du commerce électronique intérieur (voir Figure 1 ci-dessous).

Figure 1 Tendances des ventes du commerce électronique



Source: WIK-Consult à partir de l'IPC (2018), commerce électronique transfrontalier, présentation du 8 Juin 2018.

Ainsi, l'IPC estime que la part du chiffre d'affaires mondial généré par le commerce électronique transfrontière a atteint 15 pour cent du chiffre d'affaires total du commerce électronique en 2015, et que cette part de marché atteindra presque 25 pour cent en 2021 (soit plus de 1 000 milliards de dollars, plus du quadruple depuis 2015). La croissance du marché mondial du commerce électronique libère des potentialités de développement pour les détaillants, les consommateurs et pour l'économie européenne au sens large. Elle favorise également la mise en œuvre d'un marché numérique unique.

Méthodologie: La présente étude a été réalisée entre janvier 2018 et janvier 2019. Elle repose sur une recherche documentaire extensive et approfondie sur les marchés du commerce électronique et de la livraison au sein de l'ensemble des Etats Membres. En ce qui concerne la recherche ayant trait aux consommateurs, WIK a commandé une enquête représentative en ligne auprès des acheteurs en ligne au sein de l'ensemble des Etats Membres (Enquête Consommateurs WIK), avec le support technique et organisationnel de la société d'études de marché Lightspeed. Le travail sur le terrain a été réalisé de juin à août 2018 et l'enquête a recueilli les réponses de plus de 17 000 consommateurs relatives à leurs attentes et expériences en termes de qualité de service et de retours d'articles commandés en ligne. Pour réaliser cette étude, WIK a été en contact étroit avec différentes parties prenantes, et notamment via :

- six ateliers rassemblant des parties prenantes à l'échelle nationale en utilisant le support organisationnel de la société d'études de marché Efficiencia³ (en Belgique, Bulgarie, Allemagne, Pologne, Portugal et Suède) qui ont eu lieu en juin et en septembre 2018,
- une enquête auprès des autorités réglementaires nationales durant l'automne 2018,

- trois panels d'experts sur 'L'impact de la technologie sur les services de la livraison et les futures tendances', 'L'emploi et les conditions de travail', et sur 'Les douanes et la TVA au sein du commerce électronique transfrontalier' organisés en novembre 2018.
- La présentation de et les discussions relatives aux résultats et aux conclusions intermédiaires lors de deux ateliers publics en septembre 2018 et en janvier 2019, et d'un forum des parties prenantes organisé par le Groupe des Régulateurs Européens dans le domaine des Services Postaux (GREP) en novembre 2018 ; ainsi qu'une réunion du Comité de la Directive Postale en décembre 2018.
- Diverses réunions, discussions téléphoniques, échanges de courriels avec de nombreuses parties prenantes, représentants gouvernementaux, universitaires, et experts du secteur dans l'ensemble de l'Union Européenne.

Les marchés B2C du commerce électronique ont une croissance dynamique dans toute l'Europe

De façon globale, le commerce électronique B2C a connu un taux de croissance important au sein de chaque Etat Membre. WIK estime que le chiffre d'affaires des marchés du commerce électronique dans les Etats Membres de l'UE et de l'EEE⁴ est passé de 200 milliards d'euros en 2013 à 480 milliards d'euros en 2017. Les taux de croissance annuels moyens ont atteint 14 pour cent, et les parties prenantes s'attendent à une solide croissance dans un proche avenir. Les principaux vecteurs d'une telle croissance sont, entre autres, une part de plus en plus importante des achats en ligne des consommateurs (dans les marchés intérieurs et entre les pays), des achats en ligne plus fréquents, et l'élargissement des achats en ligne à de nouvelles catégories de produits comme les produits alimentaires et le mobilier. Trois grands marchés dominent le marché B2C du commerce électronique : le Royaume-Uni, l'Allemagne et la France (dans cet ordre en fonction de l'importance du marché du commerce électronique). Ils représentent environ deux tiers du chiffre d'affaires total du commerce électronique, et englobent les principaux exportateurs du commerce électronique au sein de l'UE.

La croissance dynamique du commerce électronique transfrontière a été en grande partie facilitée par des évolutions technologiques, des efforts d'harmonisation au sein de l'Union Européenne (par exemple les droits des consommateurs harmonisés), le développement rapide des intermédiaires du commerce électronique (y compris les plateformes internationales), des logiciels d'achat disponibles en différentes langues, des services de paiement international en ligne, les prestataires de services de gestion de stocks et de préparation des commandes; et les efforts, la détermination et les investissements des transporteurs de colis au sein de l'Union Européenne.

Aujourd'hui, les consommateurs disposent d'un accès amélioré à un choix élargi de biens et de services proposés par les détaillants en ligne internationaux du commerce électronique, choix bien plus important qu'auparavant. Les opportunités transnationales dont disposent les acheteurs en ligne stimulent la demande pour ce commerce

⁴ Les références aux Etats Membres doivent être prises comme incluant également les Etats Membres de l'EEE.

électronique transfrontière. Depuis 2013, la part des acheteurs en ligne qui achètent des articles à l'étranger a augmenté de dix points pour atteindre 42 pour cent en 2017. De plus, un tiers des acheteurs en ligne a acheté des articles auprès de détaillants en ligne d'autres Etats Membres (par rapport à un quart en 2013).

Parallèlement, un nombre croissant d'entreprises a saisi les opportunités que représente le commerce électronique transfrontière. Les résultats montrent que 44 pour cent des entreprises disposant d'un service de vente en ligne vendent également à d'autres pays, un pourcentage qui augmente de façon continue. Dès lors que de nombreux détaillants en ligne vendent de plus en plus fréquemment des articles à destination d'autres pays, certains ont lancé des boutiques web personnalisées alors que beaucoup d'autres utilisent des marchés en ligne internationaux afin d'augmenter leurs ventes transfrontières en ligne. L'accroissement des ventes vers d'autres marchés géographiques offre aux détaillants en ligne la possibilité de toucher une cible plus importante de consommateurs potentiels et de réduire leur dépendance par rapport aux marchés intérieurs de la distribution via le commerce électronique.

Les marchés du commerce électronique de la plupart des Etats Membres de l'UE de l'Ouest et du Nord sont plus développés que ceux de la plupart des Etats Membres de l'UE du Sud et de l'Est

La part des acheteurs en ligne au sein de la plupart des Etats Membres de l'UE de l'Ouest et du Nord est nettement supérieure à celle de la plupart des Etats Membres de l'UE du Sud et de l'Est. Ces parts plus modestes sont en partie dues à des barrières technologiques (accès au haut débit) et à une utilisation plus limitée d'internet. De plus, les préférences locales, la langue, ainsi que des facteurs d'ordre culturel, affectent le nombre de consommateurs qui achètent en ligne.

Par conséquent, les marchés du commerce électronique au sein de la plupart des Etats Membres de l'UE du Nord et de l'Ouest sont plus développés et plus matures que ceux de beaucoup des Etats Membres de l'UE du Sud et de l'Est, et ce pour des raisons diverses. Premièrement, les Etats Membres qui disposent de marchés du commerce électronique plus développés ont souvent une tradition bien établie de la vente à distance. Deuxièmement, ces pays englobent des détaillants en ligne de grande taille et disposent également de marchés en ligne nationaux et internationaux qui stimulent l'écosystème du commerce électronique national. Troisièmement, les Etats Membres relativement prospères avec des revenus par habitant élevés représentent des marchés cibles attrayants pour les détaillants en ligne. Quatrièmement, ces pays ont en général des aptitudes au numérique ainsi que des disponibilités logistiques plus développées.

Les opportunités pour les petits détaillants en ligne (PME et micro-distributeurs) augmentent avec la taille et le développement des marchés nationaux du commerce électronique

Les marchés nationaux du commerce électronique se singularisent souvent par un petit nombre de détaillants en ligne de grande et très grande taille et par un nombre considérable de petits détaillants en ligne (PME et micro-détaillants). La plupart des entreprises qui vendent des articles en ligne ont un chiffre d'affaires annuel généré par le commerce électronique inférieur à 100 000 euros. Pour les PME et les micro-détaillants du commerce électronique, les marchés en ligne nationaux et internationaux représentent un important circuit de vente qui leur permet d'atteindre un nombre conséquent de consommateurs potentiels et de bénéficier des services d'assistance fournis par les plates-formes.

Les opportunités à la disposition des détaillants en ligne (PME et micro-détaillants en ligne) pour des ventes en ligne intérieures et transfrontières s'améliorent grâce à des écosystèmes du commerce électronique plus évolués. Ces écosystèmes comprennent les intermédiaires du commerce électronique qui facilitent différentes facettes du commerce électronique (par exemple la mise en œuvre de sites web attractifs et de boutiques en ligne, le développement et la mise en œuvre de stratégies de vente en ligne, des services de paiement en ligne, ainsi que la logistique (entrepôts et livraison)). Cependant, les détaillants de grande taille et les marchés en ligne ont un rôle éminent dans le développement des marchés nationaux du commerce électronique car ce sont eux qui fixent les normes qui permettent d'améliorer la confiance des consommateurs vis-à-vis de l'achat en ligne, et qui stimulent l'amélioration de la qualité des services de livraison.

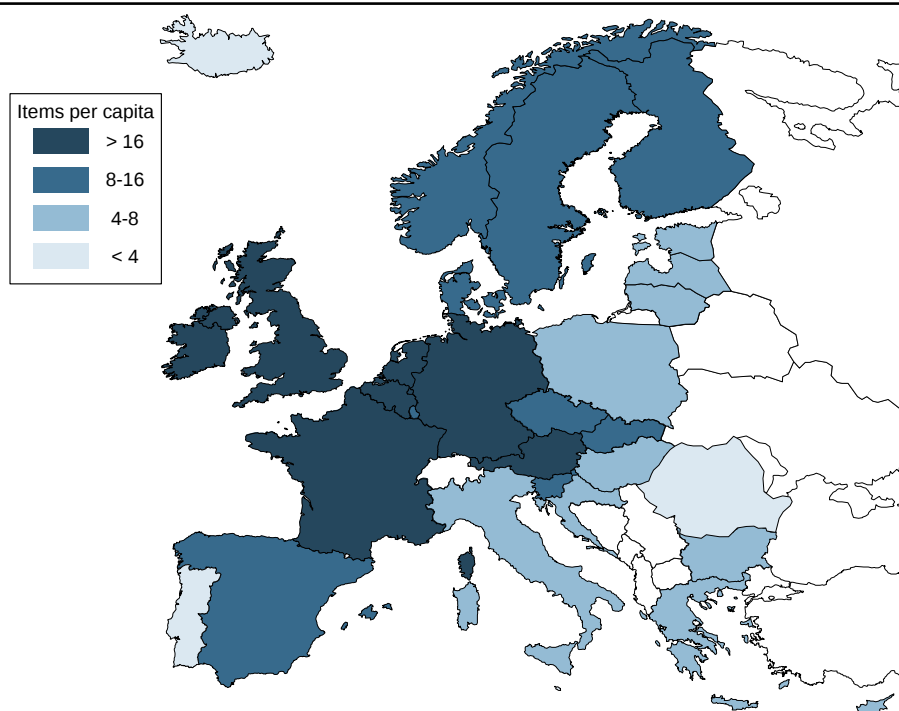
Pour les détaillants en ligne (micro, petits et de taille moyenne), il est relativement plus difficile de mettre en place des ventes transfrontières fructueuses via le commerce électronique, particulièrement s'ils résident au sein d'Etats Membres qui disposent d'écosystèmes pour le commerce électronique moins développés, car il leur manque les capacités opérationnelles, technologiques et juridiques leur permettant de bien répondre à chaque besoin. Pour ce groupe de détaillants en ligne, les incohérences des réglementations et les réglementations fiscales, ainsi que les différences de culture et les problèmes de langue, constituent des obstacles bien plus pertinents pour les ventes transfrontières que la simple gestion de la logistique transfrontière.

La croissance des marchés européens des colis est stimulée par le commerce électronique B2C

WIK estime que près de 9,4 milliards de colis et qu'au moins 1,7 milliards de paquets ont été livrés en Europe en 2017. Depuis 2013, le chiffre d'affaire global a augmenté de 4,3 pour cent par an pour atteindre près de 65 milliards d'euros en 2017, et il devrait atteindre environ 73 milliards d'euros en 2020 (Apex Insight).

Les données des séries chronologiques concernant le chiffre d'affaire et le volume global des colis ainsi que les indicateurs par catégorie de poids concernant les colis sont incomplets au niveau des Etats Membres. Les données disponibles montrent que la croissance des colis en volume a, d'une façon générale, été plus forte que la croissance en chiffre d'affaire, ce qui a pour conséquence un chiffre d'affaire moyen par colis qui diminue (par exemple en Allemagne, Pologne, Espagne et au Royaume-Uni).

Figure 2 Taille des marchés des colis au sein des Etats Membres de l'UE (2017)



Source: WIK-Consult.

wik
CONSULT

Au sein de l'Union Européenne, les marchés nationaux des colis ont une taille très différente, comme le montre le nombre de colis par habitant. La figure 2 montre que les marchés de la livraison des Etats Membres de l'UE du Nord et de l'Ouest ont des volumes par habitant plus importants que ceux de la plupart des Etats Membres du Sud et de l'Est de l'UE. De plus, les données par pays laissent entendre que la part des colis en B2C au sein des Etats Membres du Sud et de l'Est de l'UE est de façon générale plus faible. Cependant, les marchés nationaux des colis présentant des volumes plus faibles ont des taux de croissance en général plus élevés que ceux des marchés plus matures.

Actuellement, on ne dispose pas de statistiques précises sur les colis transfrontières au sein de l'Union Européenne et entre l'Union Européenne et le reste du monde. Les données disponibles concernant les colis transfrontières ont tendance à sous-estimer le volume transfrontière réel, et ce par définition: de façon générale, ces données ne prennent en compte ni les colis transportés vers le pays de destination par l'expéditeur

(ce qui s'appelle l'injection directe) ni les petits paquets livrés par le biais du courrier postal.

Les enquêtes consommateurs et détaillants en ligne tendent à montrer que les principaux flux intra-UE relatifs au commerce électronique transfrontière des petits paquets et des petits colis s'effectuent de façon générale soit entre les marchés à l'export de grande taille du commerce électronique (le Royaume-Uni et l'Allemagne) et les autres Etats Membres, soit entre Etats Membres voisins ayant des échanges économiques et culturels (et une communauté de langue) étroits, par exemple les pays nordiques (Danemark, Finlande, Norvège, et Suède). Les flux d'importation majeurs hors d'Europe ont généralement pour origine l'Asie (et particulièrement la Chine) et les Etats-Unis.

Le secteur des services de livraison des colis est concurrentiel ...

A ce jour, les marchés nationaux et transfrontières de la livraison de colis disposent d'un nombre important d'acteurs divers.

La plupart des transporteurs express et de colis nationaux et internationaux ont commencé par les services de livraison B2B en fournissant des solutions compétitives afin de gérer au mieux la logistique entre les fabricants, entre les fabricants et les grossistes, et entre les grossistes et les détaillants, à la fois au niveau national et international. Grâce à l'apparition du commerce électronique B2C, ils ont étendu leurs compétences B2B avec des composantes personnalisées permettant de répondre aux besoins des consommateurs individuels et aux demandes de valeur ajoutée des détaillants en ligne, par exemple avec la mise en place de boutiques de colis et la mise en œuvre des livraisons le samedi. De plus, les volumes croissants des colis (dus au commerce électronique) ont stimulé les investissements passés et actuels dans le domaine des capacités de livraison et de tri. Certains transporteurs de colis étaient auparavant dans le secteur de la vente à distance ou de la vente par correspondance en se concentrant principalement sur les services de livraison B2C (par exemple Hermes en Allemagne, Mondial Relay en France, ou Yodel au Royaume-Uni).

Les prestataires du service universel bénéficient des avantages liés à leur position de précurseur dans le domaine des livraisons B2C à cause de leur infrastructure dense qui couvre l'ensemble du territoire pour les lettres et les colis, et grâce à leur réseau dense de points de vente postaux. La plupart des prestataires du service universel se sont rendus compte que se développer dans le domaine de la livraison d'articles via le commerce électronique B2C leur offrait une possibilité de compenser un chiffre d'affaire en baisse du fait de la diminution des volumes du courrier. Les prestataires du service universel, particulièrement au sein des Etats Membres de l'Ouest et du Nord de l'UE jouent un rôle important dans les services de livraison intérieur des colis. A l'inverse, un grand nombre des services de livraison de colis au sein des Etats Membres du Sud et de l'Est de l'UE sont à la traîne pour les services de distribution B2C des colis et luttent pour s'accrocher au wagon de la croissance du commerce électronique B2C dans leurs pays respectifs.

Les prestataires du service universel performants sont partenaires de et coopèrent avec un ou plusieurs réseaux européens de colis, ou bien ont mis sur pied leur propre réseau (par exemple La Poste, Deutsche Post DHL, Royal Mail). Les prestataires du service universel détiennent des parts de marché très importantes dans le domaine des livraisons transfrontières de petits paquets et ils continuent à améliorer ces services grâce à la coopération internationale. L'expédition de marchandise par petits paquets est une alternative à bas coût aux services transfrontières traditionnels de livraison de colis, particulièrement pour les petits et micro-détaillants en ligne et pour les consommateurs qui souhaitent retourner les produits.

... et il évolue vers un marché de livraison européen intégré

Les pôles régionaux de livraison et quelques transporteurs qui ont des activités dans toute l'Europe continuent à se développer, et ils sont en train de créer un marché unique des services de livraison.

- Les intégrateurs internationaux comme UPS et DHL Express ciblent de plus en plus les détaillants en ligne pour faciliter les livraisons transfrontières concernant des achats via le commerce électronique de forte valeur et où le temps de livraison est crucial (intra-UE mais également entre les Etats Membres et vers le reste du monde).
- Les réseaux européens routiers de colis B2B se développent dans le secteur des livraisons intérieures et transfrontières du commerce électronique B2C. Geopost, propriété de La Poste, a initié une stratégie dédiée pour les livraisons B2C transfrontières via la marque internationale DPDgroup. GLS, propriété de Royal Mail, suit une stratégie d'expansion similaire, même si celle-ci est plus prudente. Ces réseaux opèrent par eux-mêmes dans la plupart des pays européens ou bien ils coopèrent avec des partenaires locaux de livraison, qui sont habituellement les prestataires du service universel.
- Des réseaux européens B2C dédiés aux colis sont apparus. Deutsche Post DHL a lancé un réseau séparé, DHL Parcel, qui est spécialisé dans les services de livraison de commerce électronique B2C transfrontière. Hermes Europe, filiale de l'un des plus gros détaillants en ligne d'Europe, livre couramment dans beaucoup d'Etats Membres européens.
- Sous l'égide de l'International Post Corporation (IPC), les prestataires du service universel travaillent à des initiatives visant à améliorer l'intégration de leurs services de livraison locaux, à développer des services de livraison transfrontière de colis plus souples et plus visibles, et à améliorer les services de retour des articles.
- Les transporteurs locaux B2B se tournent vers les livraisons B2C. De plus, ils ont étendu leurs activités auprès des Etats Membres voisins, ce qui a créé des

réseaux de distribution régionaux (transfrontières). Grâce à la croissance du commerce électronique transfrontière, les pôles de livraison régionaux et les transporteurs disposant de services de livraison couvrant l'ensemble de l'Europe continueront à se développer et à tendre vers un marché unique des services de livraison.

- Enfin, les prestataires internationaux de services de gestion de stock et de préparations des commandes (par exemple Amazon) ont commencé à améliorer la logistique du commerce électronique transfrontière en mettant à disposition des capacités d'entreposage dans plusieurs Etats Membres (principalement au sein des grands Etats Membres ou situés au centre de l'Europe).

La législation postale et la régulation nationale évoluent pour répondre au commerce électronique

La directive sur les services postaux⁵ laisse une grande marge de manœuvre aux Etats Membres pour définir le périmètre des services postaux universels et déterminer la façon de réglementer les prestataires de livraison de colis (express et ordinaire). En général, les autorités de régulation réglementent les services de livraison de colis de façon moins soutenue que les services de livraison du courrier.

Parmi les différents Etats Membres, il y a encore peu d'harmonisation et une transparence limitée en ce qui concerne la classification des services de livraison (colis, express, et les nouveaux services de livraison qui apparaissent). Une question importante est de savoir si ces services doivent être considérés comme *des services postaux* ou comme *des services inclus dans le périmètre du service universel* ou comme *des services universels*. Au fur et à mesure que le niveau de qualité des services de livraison s'améliore, les frontières entre les services express et les services ordinaires s'estompent encore plus à l'avenir.

La classification a son importance car elle détermine le périmètre de régulation. La régulation à laquelle sont confrontés les transporteurs de colis peut inclure des procédures d'autorisation, des exigences de reporting, des règles pour le traitement des réclamations, et éventuellement des contributions aux coûts nets découlant de l'obligation de service universel (pour un tout petit nombre d'Etats Membres) et au financement de l'autorité nationale de réglementation (dans à peu près les deux tiers des Etats Membres).

Le commerce électronique B2C et la concurrence ont engendré des incitations plus importantes pour les prestataires du service universel que les obligations dudit service universel

Les prestataires du service universel jouent un rôle important dans les livraisons intérieures et plus particulièrement transfrontières du commerce électronique. Cependant,

⁵ Directive 97/67/CE sur les Services Postaux amendée par les directives 2002/39/CE et 2008/6/CE.

cela ne signifie pas forcément que l'existence d'une obligation de service universel en est la cause. Pour les colis intra-UE, notre conclusion est que les marchés de la livraison se sont bien développés avec peu de régulation, et donc que le rôle des obligations du service universel a été de peu d'importance dans le développement des marchés des colis. De fait, les transporteurs fournissent en général des services pertinents qui vont au-delà des exigences de l'obligation de service universel, c'est à dire qu'ils offrent aux détaillants en ligne et aux consommateurs un meilleur service et en général des prix plus bas que ce qui leur est demandé par leur législation postale nationale. Les prestataires du service universel améliorent les niveaux de service des produits du service universel non pas pour répondre à la régulation mais en réaction à la demande du marché. De plus, le périmètre de l'obligation de service universel varie significativement d'un Etat Membre à l'autre pour ce qui concerne les services inclus et les niveaux de service définis, comme par exemple les objectifs de durée d'acheminement des colis. Cependant, bien que les produits du service universel soient rarement utilisés par les détaillants en ligne (qui ont en général un compte pro), ils peuvent jouer un rôle plus important pour les consommateurs en cas de retour d'articles.

Une part importante des importations de l'UE d'articles du commerce électronique sont envoyés en tant que petits paquets et lettres (souvent en recommandé) qui sont en général livrés par les prestataires du service universel qui remplissent leur rôle 'd'opérateurs désignés' (Union Postale Universelle, UPU) à des taux de frais terminaux (UPU). La livraison de ces articles est en général considérée comme étant un service universel. Les frais terminaux, en particulier pour les importations en provenance d'Asie, sont nettement plus bas que l'affranchissement intérieur pour des articles semblables dans presque tous les Etats Membres. Dans quelques Etats Membres (à coût élevé), les frais terminaux représentent seulement 20 à 30 pour cent de l'affranchissement intérieur pour des articles semblables. Par conséquent, de nombreux prestataires du service universel livrent des petits paquets importés à perte. Comme ces importations ont connu une croissance rapide, les pertes pour ces petits paquets entrants peuvent s'ajouter aux coûts nets de l'obligation de service universel.

Le choix et la qualité des services de livraison pour le commerce électronique B2C se sont grandement améliorés

La fourniture de services de livraison s'est fortement améliorée dans de nombreux Etats Membres. Ces améliorations incluent les efforts faits par les transporteurs nationaux et internationaux visant à rendre les services de livraison intérieure et transfrontière plus souples et plus aisés pour le destinataire (par exemple, grâce à la mise en œuvre et l'extension du réseau de points de collecte et de dépôt), et la mise à disposition d'outils et d'applications pour les consommateurs leur permettant de suivre et de réacheminer leurs livraisons. Les investissements permettant de disposer de services de livraison plus axés sur le destinataire permettent aux transporteurs de limiter le coût de la livraison car cela augmente la probabilité que les colis seront bien livrés du premier coup.

Plus particulièrement, les transporteurs européens express et de colis, comme UPS, DPD, DHL Parcel et GLS, cherchent à personnaliser leurs solutions de livraison transfrontière, proposant ainsi des options de livraison aisées pour le destinataire, en se basant sur les préférences des acheteurs en ligne du pays de destination. De plus, les prestataires du service universel ont développé de nouveaux produits qui ciblent une part importante des articles légers (transfrontières) du commerce électronique. Ces produits offrent une alternative à bas coût à des produits /colis de taille similaire pour les livraisons intérieures et transfrontières, et incluent des options (légères) de suivi.

Cependant, des différences considérables entre les Etats Membres existent encore, ce qui reflète bien les différents niveaux de développement de chaque marché national du commerce électronique.

Les Etats Membres qui ont une tradition bien établie de la vente à distance disposent en général de services intérieurs de livraison de colis B2C qui sont en place depuis des dizaines d'années. La croissance continue et une approche toujours plus centrée sur le client du commerce électronique (comparé au marché traditionnel de la vente à distance) a poussé tous les transporteurs, y compris les prestataires du service universel ainsi que les transporteurs express et de colis, à améliorer et à développer leurs services de livraison intérieure et transfrontière.

Au contraire, les pays ne disposant pas d'une tradition établie de vente à distance n'ont pas autant développé leur infrastructure de livraison B2C, mais cela commence à apparaître en réponse à la croissance du commerce électronique (comme dans beaucoup d'Etats Membres de l'UE du Sud et de l'Est). Par conséquent, les prestataires du service universel et/ou les transporteurs locaux qui sont traditionnellement présents sur le marché B2B au sein de ces pays commencent à se développer dans les services de livraison intérieure B2C du commerce électronique, et quelques détaillants en ligne ont créé leur propre service de livraison.

Les détaillants en ligne de petite taille sont reconnus comme étant des clients cibles et bénéficient de remises

Les transporteurs nationaux et internationaux ne cherchent pas seulement à attirer des détaillants en ligne de grande taille, mais ils s'intéressent également de plus en plus aux micro-détaillants en ligne et aux détaillants en ligne de petite taille en facilitant l'accès à leurs services. Ces transporteurs ont développé des portails internet afin de fournir un meilleur accès à leurs services aux détaillants en ligne, et ils coopèrent avec des plateformes de gestion des livraisons et des courtiers. De plus, certains transporteurs fournissent des informations détaillées et des rapports de recherche pour aider les détaillants en ligne à élargir leur offre (et à promouvoir leurs solutions de livraisons), alors que beaucoup d'entre eux ont également développé de nouveaux produits et mis en place de nouveaux services adaptés aux besoins des détaillants en ligne.

De plus, les détaillants en ligne de tailles petite et moyenne peuvent de plus en plus prétendre à bénéficier des avantages liés à un compte pro qui incluent des frais de livraison plus faibles. Ces remises varient en général en fonction de la taille des détaillants en ligne et de leur volume annuel. Le peu d'informations disponible quant à ces remises tend à prouver que même les détaillants en ligne de petite ou moyenne tailles, au moins au sein des marchés les plus matures du commerce électronique, bénéficient de services à des prix fortement réduits comparés aux tarifs publiés pour les articles à l'unité.

La croissance continue du commerce électronique B2C transforme la chaîne de valeur de la livraison

Le commerce électronique B2C, avec son approche centrée sur le client, présente des défis considérables pour les transporteurs de colis : une demande en croissance, des variations saisonnières importantes et des coûts en augmentation sur le « dernier kilomètre ». Ceci a stimulé des innovations constantes au sein du secteur de la livraison :

- Les transporteurs investissent massivement dans des capacités supplémentaires de tri, de transport et de livraison, et dans une chaîne de valeur de la livraison plus flexible. Il en résulte un nombre croissant de dépôts de livraison locaux principalement situés près des zones densément peuplées présentant des volumes de livraison importants.
- On s'attend à ce que la plupart des innovations technologiques et organisationnelles porte sur le « dernier kilomètre », c'est-à-dire la livraison finale des commandes via le commerce électronique aux consommateurs. Les transporteurs et les nouveaux entrants essaient de trouver des moyens permettant d'atteindre un équilibre entre des livraisons rentables et le confort des destinataires, et afin de mieux gérer les variations croissantes de la demande et les goulots d'étranglement qui en résultent en termes de capacité opérationnelle.
- La concurrence accrue pour le « dernier kilomètre » va entraîner le développement d'une large variété de solutions de livraison afin de mieux correspondre aux besoins des consommateurs et aux exigences spécifiques des catégories des produits simples du commerce électronique (par exemple les épiceries). Les plateformes de livraison qui coordonnent les différents acteurs tout au long de la chaîne logistique de livraison sont considérées comme étant un maillon important pour l'avenir des livraisons du commerce électronique, en général et plus particulièrement au sein des zones urbaines.

Des progrès importants ont été réalisés dans l'élaboration de normes techniques. Ils ont amélioré la visibilité et facilité le traitement des colis transfrontières. L'organisme de normalisation européen, le CEN, a élaboré avec succès des spécifications techniques pour un étiquetage harmonisé des colis, qui est ouvert à tous les transporteurs et détaillants en ligne afin d'améliorer la traçabilité des colis tout au long de la chaîne logistique du commerce électronique (y compris la livraison), et de faciliter les

coopérations futures entre les prestataires du service universel, les transporteurs express et les transporteurs de colis, les intermédiaires du commerce électronique et les détaillants en ligne.

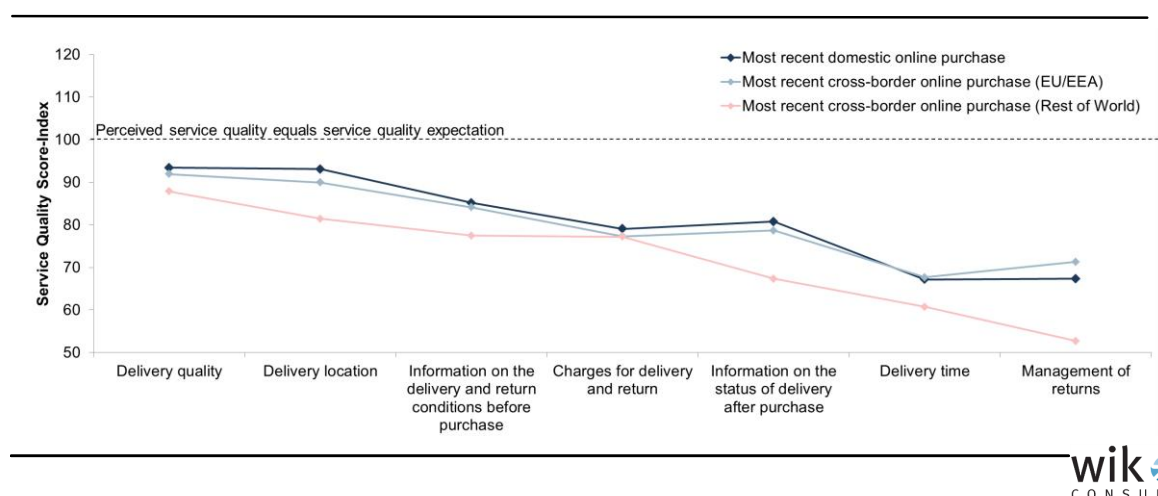
Une qualité de service similaire perçue pour les achats en ligne intérieurs et intra-UE

L'enquête consommateur WIK inclut, entre autres, les attentes des acheteurs en ligne comparées à l'expérience ressentie lors de leurs plus récents achats en ligne (intérieurs et transfrontières). L'enquête a recueilli les attentes et les expériences des consommateurs à travers sept catégories de qualité de service, toutes ayant trait aux différents aspects de livraison et de retour des commandes en ligne. L'indice WIK de qualité du service montre dans quelle mesure les expériences des consommateurs répondent à leurs attentes. Un score de 100 signifie que les attentes ont été parfaitement comblées par les expériences alors qu'un score plus faible indique un écart entre la qualité ressentie du service et les attentes.

Un score élevé sur cet indice de qualité du service dépend des actions menées à la fois par le détaillant en ligne et par le transporteur (s) impliqués. En d'autres termes, c'est seulement lorsque les consommateurs ressentent une performance remarquable dans toutes les catégories de service liées à la livraison, y compris les informations fournies avant et après l'achat, les frais de livraison et de retour, la qualité de la livraison, le délai et le lieu de livraison, ainsi que la gestion des retours, que leur expérience reflète complètement leurs attentes en termes de qualité de service. L'enquête montre que les sondés attachent autant d'importance à chaque aspect de la qualité.

La Figure 3 représente séparément les niveaux de qualité de service pour les achats intérieurs, les achats transfrontaliers intra-UE, et les achats transfrontaliers en provenance du reste du monde. Globalement, les expériences ressenties en termes de qualité de service pour les achats intérieurs et les achats transfrontières intra-UE répondent de près aux attentes des consommateurs. En règle générale, les acheteurs en ligne ne perçoivent pas de différence significative entre la qualité de service pour les achats nationaux et les achats transfrontières en provenance des autres Etats Membres de l'UE. Toutefois, ils perçoivent nettement un niveau de qualité de service plus faible pour les achats transfrontières en provenance d'autres régions du monde (principalement d'Asie).

Figure 3 Indice WIK de Qualité de Service par catégorie de service (moyenne UE/EEE)



Source: Enquête consommateur WIK .

Parmi tous les aspects du service examinés, les niveaux de service ressentis en termes de 'qualité de livraison' sont ceux qui correspondent au mieux aux attentes des consommateurs, suivis par le 'lieu de livraison' pour les achats en ligne intérieurs et transfrontières. Ceci laisse entendre que les acheteurs en ligne sont largement satisfaits de la performance des transporteurs (en conjonction avec l'offre des détaillants en ligne) en termes de ponctualité, de lieu de livraison correct et d'intégrité de l'article et de son emballage acheté via le commerce électronique.

Les consommateurs sont satisfaits des informations fournies par les détaillants en ligne en termes de coût et de modalités de livraison

Plus les détaillants en ligne fournissent d'informations avant l'achat, plus les consommateurs sont susceptibles d'avoir une confiance accrue en ce qui concerne les achats en ligne. La directive relative aux droits des consommateurs définit les obligations des détaillants en ligne quant à la mise à disposition des informations avant que le contrat ne soit conclu (c'est à dire avant l'achat). Ceci comprend les informations relatives au coût de la livraison (y compris les retours) ainsi qu'aux modalités de livraison. Le règlement de l'UE relatif aux services de livraison transfrontière de colis traite cet aspect spécifique dans son Article 7 et demande aux détaillants en ligne de communiquer les informations concernant les options de livraison transfrontière et les coûts à payer par les consommateurs pour la livraison transfrontière des colis avant que le contrat ne soit finalisé. L'enquête réalisée auprès des consommateurs par WIK montre que les acheteurs en ligne sont très satisfaits des informations fournies par les détaillants en ligne avant l'achat en ce qui concerne les options de livraison, le délai de livraison, et les coûts liés aux achats en ligne intérieurs et intra-UE. Ce résultat tend à prouver que les exigences de la directive relative aux droits des consommateurs et du règlement de l'UE relatif aux services de livraison transfrontière de colis sont de façon générale respectées par les

détaillants en ligne au sein des Etats Membres de l'UE pour ce qui est de la mise à disposition précontractuelle des informations liées à la livraison.

Les consommateurs demandent à avoir plus de choix pour les options de délai de livraison

A contrario, l'enquête montre qu'il y a encore une marge importante pour des améliorations concernant le 'délai de livraison' et la 'gestion des retours' selon le ressenti exprimé par les acheteurs en ligne. La première catégorie inclut les attentes des consommateurs en termes de livraison à effectuer à une heure et un jour particuliers ainsi que le fait de disposer d'une option de livraison express. La faible performance relevée dans cette catégorie suggère que les attentes des acheteurs en ligne sont relativement élevées, et que les détaillants en ligne ne proposent souvent que des options de livraison ordinaire, c'est à dire pas d'options permettant de choisir un moment de livraison spécifique ou une livraison express, ce qui est de plus en plus demandé par les acheteurs en ligne.

De nombreux détaillants en ligne ne sont pas assez attentifs à leur politique de retour

La 'gestion des retours' désigne la façon avec laquelle les détaillants en ligne facilitent la gestion des retours pour les acheteurs en ligne. L'enquête auprès des consommateurs réalisée par WIK a montré que la gestion des retours demeurerait un souci majeur des consommateurs pour les articles intra-UE du commerce électronique ainsi que pour les achats en ligne en provenance du reste du monde. Ces soucis concernent toutes les facettes des retours: la mise à disposition d'informations relatives au coût des retours avant l'achat, les coûts de retour, et leur gestion. En conséquence, ceci freine la croissance du commerce électronique dans son ensemble, ainsi que le commerce électronique transfrontière. Plus spécifiquement, et d'après différentes études effectuées auprès des consommateurs, dont celle effectuée par WIK, l'incertitude liée au traitement des retours et les coûts y afférents constituent certaines des raisons pour lesquelles les acheteurs en ligne évitent les achats transfrontières. Bien que les retours soient inhérents au commerce électronique, il semble que de nombreux détaillants en ligne ne prêtent pas assez d'attention à cet aspect important.

Les acheteurs en ligne habitant en milieu rural/périurbain et en milieu urbain sont souvent autant satisfaits de la qualité de livraison des transporteurs

La qualité ressentie du service de livraison ne dépend pas, en règle générale, de la zone résidentielle d'habitation du consommateur. Dans la plupart des Etats Membres de l'UE, les consommateurs ne perçoivent pas de différences dans la qualité du service de livraison entre les zones densément ou peu peuplées. Une légère différence de perception de la qualité des services de livraison entre les consommateurs habitant dans des zones urbaines et ceux habitant dans des zones rurales/périurbaines n'apparaît que dans un tiers des Etats Membres. Au Royaume-Uni, au Portugal, et à Chypre, les

consommateurs habitant dans des zones urbaines ressentent statistiquement une meilleure qualité de service que les consommateurs habitant dans des zones rurales ou périurbaines alors que pour huit Etats Membres les consommateurs habitant dans des zones rurales ou périurbaines ressentent une qualité de service supérieure à celle ressentie par les consommateurs des zones urbaines.

Les services de livraison transfrontière ne représentent pas un obstacle significatif pour la croissance des exportations du commerce électronique

Près de la moitié des entreprises qui vendent via internet réalisent également des ventes transfrontières, du moins à l'occasion. Pour ce groupe de détaillants en ligne, la gestion des services de livraison transfrontière n'est pas considérée comme étant un obstacle significatif à la croissance des exportations du commerce électronique. Cependant, du fait que les coûts de livraison représentent des coûts de production pour les détaillants en ligne, ils essaient de les limiter autant que possible.

Au sein des marchés avancés du commerce électronique, c'est-à-dire dans de nombreux Etats Membres de l'UE du Nord et de l'Ouest, la logistique transfrontière des colis est considérée comme étant un problème gérable traité de plus en plus grâce à des solutions innovantes et de nouveaux intermédiaires au sein de ces pays. Des courtiers en colis et des plateformes de gestion sont apparus qui améliorent la transparence en termes de services disponibles, facilitent le traitement des livraisons et des retours intérieurs et transfrontières, et réduisent les coûts de livraison, plus particulièrement pour les micro-détaillants en ligne et les petits détaillants en ligne.

La situation n'est pas la même pour les Etats Membres dont les marchés du commerce électronique sont moins avancés et où relativement peu d'articles sont exportés via le commerce électronique, comme par exemple en Bulgarie, en Grèce et au Portugal. Dans ces pays, les détaillants en ligne disposent de moins de potentiel pour une croissance à l'international, à cause d'un manque d'intermédiaires disponibles pour le commerce électronique. De plus, ils doivent faire face à des obstacles plus fondamentaux comme un accès limité au haut débit (par exemple en Bulgarie et en Grèce) ou une confiance limitée dans les achats via le commerce électronique de façon générale. De plus, les détaillants en ligne présents sur les marchés moins développés du commerce électronique disposent de moins de prestataires de livraison adaptés. Par conséquent, les coûts importants générés par la livraison ou le retour transfrontières des articles du commerce électronique continuent d'être un problème pour les détaillants en ligne PME de ces Etats Membres.

Des efforts supplémentaires sont nécessaires de la part du commerce électronique et du secteur de la livraison pour faire face aux enjeux des retours (transfrontières)

Les discussions qui ont eu lieu lors des six ateliers nationaux des parties prenantes en Bulgarie, Belgique, Allemagne, Pologne, Portugal, et Suède et les entretiens avec les experts ont montré que la gestion et le coût des retours transfrontières représentent une préoccupation plus importante que la gestion des livraisons transfrontières. L'enquête

auprès des consommateurs effectuée par WIK a montré que le traitement et le coût des retours étaient également une préoccupation majeure pour les acheteurs en ligne. Compte-tenu de la croissance du commerce électronique intérieur et transfrontière, le besoin de mettre en œuvre des solutions de retour gérables devient impérieux. Le développement de solutions adaptées de retour transfrontière par des transporteurs et par des intermédiaires du commerce électronique s'est accéléré, mais il n'en demeure pas moins dans l'esprit des détaillants en ligne et des consommateurs une lacune significative en termes de services de retour adaptés et à bas coût.

Les importations via le commerce électronique vers l'UE augmentent nettement, ce qui crée de défis pour les prestataires du service universel et les autorités douanières

L'enquête auprès des consommateurs réalisée par WIK montre, conformément à d'autres études, qu'il existe une utilisation très répandue d'achats transfrontières via le commerce électronique de la part des acheteurs en ligne. La moitié de ces achats en provenance de l'étranger proviennent de boutiques en ligne situées hors de l'UE. Pour un tiers des consommateurs sondés lors de l'enquête, leur dernier achat transfrontière était en provenance de détaillants en ligne chinois. Plus de la moitié des importations en provenance de Chine est livrée par des prestataires du service universel.

Les importations via le commerce électronique à destination de l'UE et en provenance de pays non membres de l'UE ont considérablement augmenté, et une grande partie de ces articles vient de Chine. Généralement, les articles du commerce électronique en provenance des détaillants en ligne asiatiques sont envoyés en tant que petits paquets au sein du circuit postal, souvent sous la forme de lettres recommandées. Environ 40 pour cent des flux de courrier est envoyé sous la forme de petits paquets, et ils contiennent pour la plupart des articles du commerce électronique. D'après les chiffres publiés par l'Union Postale Universelle (UPU), les volumes des colis internationaux ont progressé de 12 pour cent en 2015 par rapport à 2014, alors que le tonnage a progressé encore plus, de 16,6 pour cent.

Les importations du commerce électronique en provenance de Chine et des autres pays asiatiques représentent souvent un service à perte pour les prestataires du service universel. Les frais terminaux de l'UPU demeurent inférieurs au coût de livraison locale alors même que l'UPU lutte pour réformer son système de rémunération (notamment les frais terminaux). La réforme récente du système des frais terminaux pour les paquets du commerce électronique n'a pas comblé l'écart entre les revenus et les coûts pour la plupart des prestataires du service universel en Europe. Ils demeurent encore nettement plus faibles que les coûts de livraison locale. C'est pourquoi le régime actuel des frais terminaux continue de remettre en cause la pérennité financière des prestataires du service universel, et plus particulièrement au sein des petits pays européens qui doivent faire face à de forts volumes d'importation (par exemple l'Islande et d'autres pays nordiques).

Malgré de nombreux essais de réforme du système de frais terminaux de l'UPU depuis de nombreuses années, les taux des frais terminaux demeurent bien en dessous des coûts de livraison locale dans de nombreux Etats Membres. Ceci a des effets négatifs pour de nombreux prestataires du service universel de l'UE, et procure aux détaillants en ligne étrangers un avantage compétitif sur les détaillants en ligne basés au sein de l'UE (en leur accordant des tarifs de livraison préférentiels). A l'automne 2018, les Etats-Unis ont annoncé leur intention de quitter l'UPU et d'appliquer des « tarifs auto-proclamés » en lieu et place des tarifs de frais terminaux de l'UPU si l'UPU n'arrivait pas à trouver un accord sur des engagements significatifs visant à mieux aligner les frais terminaux sur les coûts de livraison.

En 2021, la règle de minimis actuelle qui exempte de TVA les importations de faible valeur effectuées via le service postal sera abolie. Les importations deviendront alors ipso facto plus chères une fois la TVA imputée. Cela va vraisemblablement réduire le montant des importations directes du commerce électronique via le service postal en provenance d'Asie, et plus particulièrement en provenance de Chine. En réponse à ce changement, les détaillants en ligne chinois devraient faire évoluer leur livraison directe depuis la Chine en passant de la Poste Chinoise à des prestataires de gestion de stocks et de préparation des commandes qui utilisent des entrepôts situés au sein de l'Union Européenne (c'est-à-dire des services de logistique fournis par Amazon, Alibaba, UPS, Spring, DHL ou bien par des prestataires de service de gestion de stocks et de préparation des commandes indépendants). En conséquence, les produits seront importés dans des conteneurs selon des procédures douanières classiques, et non plus en tant que paquets individuels envoyés par la poste, puis échangés au sein du système de l'UPU.

L'application complète de la TVA sur l'ensemble des importations postales suscite des difficultés opérationnelles majeures pour les prestataires du service universel et pour les autorités compétentes (les douanes) au sein des Etats Membres. Premièrement, les détaillants en ligne qui ne sont pas dans l'UE et les plateformes devront mettre en œuvre ces réglementations. Deuxièmement, les opérateurs postaux devront présenter en 2021 à la douane des millions d'articles supplémentaires, alors que des solutions numérisées pour les douanes ne seront peut-être pas prêtes qui faciliteront un traitement efficace. Troisièmement, les autorités douanières devront également faire face à une augmentation des volumes.

La livraison de colis crée de nouveaux emplois, pour la plupart dans le segment des bas salaires

Le nombre d'emplois total dans le secteur de la poste et de la messagerie atteignait 1,8 million en 2017, avec un taux annuel de croissance moyen de 0,4 pour cent entre 2013 et 2017. Cette croissance résulte d'une demande en augmentation dans le secteur du commerce électronique et des livraisons de colis associés. Au sein des marchés de colis les plus importants, les transporteurs ont de plus en plus de mal à recruter des chauffeurs qualifiés. Pour les prestataires du service universel, cette croissance de la livraison de colis leur offre une opportunité de compenser la baisse des emplois dans le segment du

traitement des lettres en augmentant les emplois dans le segment du traitement des colis (ou en accroissant la livraison combinée des lettres et des colis). Alors que le nombre d'emplois total du secteur augmente, seuls quelques prestataires du service universel augmentent leurs effectifs, et la plupart diminue leur effectif global.

Les conditions de travail sont souvent basées sur les salaires minimum et les normes de travail nationales, qui diffèrent fortement entre les Etats Membres. L'un des principaux défis auquel doivent faire face les transporteurs est le fait d'avoir à gérer les pics de demande des livraisons du commerce électronique. Les variations significatives des niveaux de la demande nécessitent la mise en place de formes d'emploi flexibles. Ceci a déjà eu pour conséquence l'apparition d'un marché du travail à deux vitesses consistant en, d'une part, des conventions collectives sectorielles ou au niveau de chaque entreprise et, d'autre part, des dispositions contractuelles atypiques (y compris du travail à temps partiel, des chauffeurs indépendants, et du travail saisonnier).

La sous-traitance est une pratique répandue au sein du secteur de la livraison de colis, et elle est généralement mise en place afin de générer la flexibilité nécessaire permettant de faire face aux variations de la demande. Les experts interrogés lors de cette étude s'attendent à ce qu'elle demeure importante au cours des développements à venir. La législation du travail relative à la sous-traitance semble varier de façon significative d'un Etat Membre à l'autre et manque également de transparence.

Les problématiques environnementales affectent de plus en plus le secteur de la livraison

Le secteur du transport est l'un des plus importants contributeurs aux émissions de gaz à effet de serre, représentant un quart du total des émissions européennes de gaz à effet de serre en 2017. Le mode de transport est un facteur clé de l'impact environnemental des livraisons de colis. Par exemple, le transport aérien est le mode de transport qui provoque les émissions les plus élevées par article. Du fait que les frais terminaux pour l'importation des colis (par voie aérienne) sont relativement faibles, cela contribue à une utilisation accrue du transport aérien et provoque des effets environnementaux négatifs.

La pollution, le réchauffement climatique, et une réglementation accrue afin de protéger l'environnement touchent l'ensemble des secteurs, y compris celui de la livraison de colis, et les services de livraison de colis sont un contributeur majeur aux émissions de gaz à effet de serre et de fines particules. Bien que l'on ne sache pas avec précision si le commerce électronique et la livraison des colis provoque plus ou moins de pollution que la distribution traditionnelle en magasins, en y incluant la logistique et le trajet du consommateur, il est cependant tout à fait clair que les émissions générées par la livraison de colis augmentent avec les volumes du commerce électronique. De plus, les villes sont de plus en plus touchées par des volumes de circulation élevés, le bruit et une pollution croissante. En tant que pollueurs notables, particulièrement au sein des villes elles-mêmes, les transporteurs agissent de plus en plus afin de réduire leur impact environnemental. Ces initiatives comprennent des véhicules de livraison électrique, des micro-plateformes, et la livraison par vélo-cargos électriques. De plus, les restrictions

locales et la coopération avec les autorités locales jouent un rôle important pour la promotion de ces concepts de livraison propre.

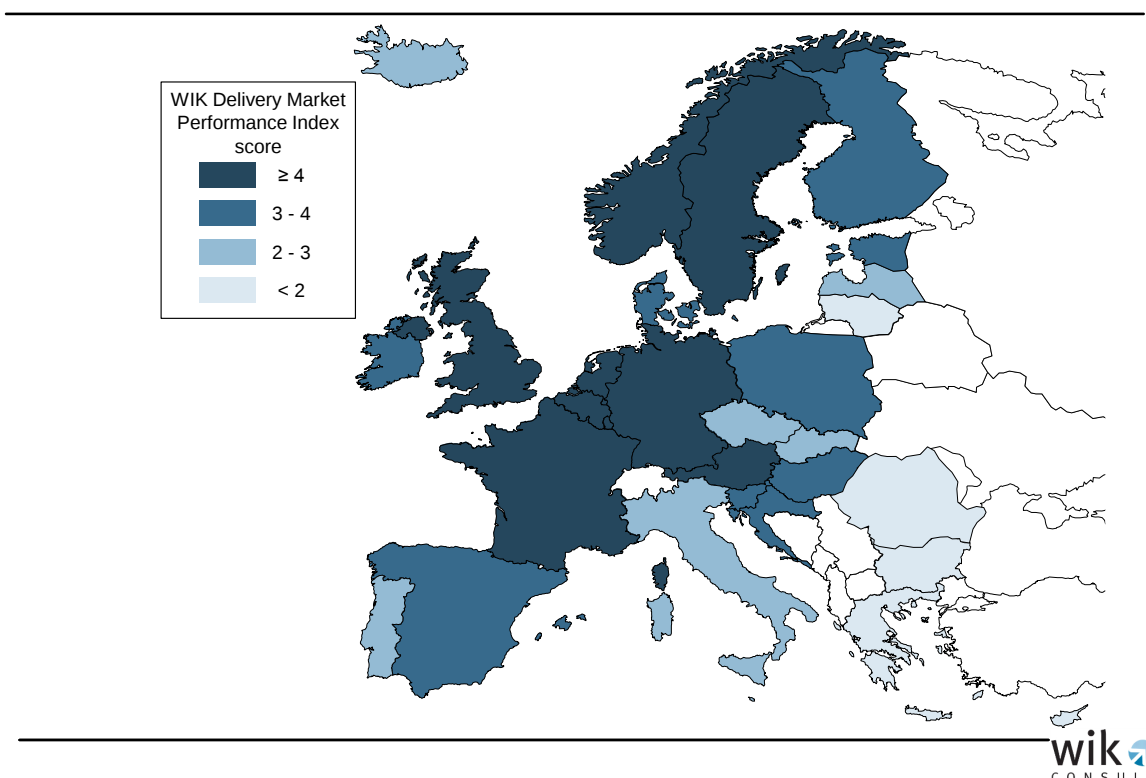
Des rapports en matière de développement durable effectués par les transporteurs de colis démontrent la prise de conscience environnementale du secteur. Les transporteurs agissent de plus en plus afin de contrôler ou de réduire leur impact environnemental en mettant en place des carburants de remplacement et des véhicules alternatifs ainsi qu'en améliorant l'efficacité du réseau et du carburant. De plus, les mesures qui contribuent à augmenter l'efficacité constituent d'importants vecteurs pour des améliorations environnementales grâce à leur potentiel de réduction des coûts.

Le commerce électronique B2C contribue à la performance des marchés de la livraison

Alors que l'offre de services de livraison intérieure et transfrontière pour les articles du commerce électronique s'est globalement améliorée au cours des cinq dernières années, il demeure encore des différences considérables dans la performance des marchés nationaux de livraison des différents Etats Membres, illustrant ainsi les différents paliers de développement des marchés nationaux du commerce électronique.

WIK a mis au point un Indice de Performance des Marchés de la Livraison qui comporte quatre critères de même poids: (1) la qualité de la livraison, (2) l'environnement concurrentiel au sein des services de livraison B2C, (3) la performance du prestataire du service universel et (4) l'état du commerce électronique. L'évaluation est basée sur une recherche approfondie concernant les services de livraison nationale et transfrontière ainsi que sur les marchés du commerce électronique, et sur les évaluations des experts.

Figure 4 Indice WIK de Performance des Marchés de la Livraison



Source: WIK-Consult.

La figure 4 présente les résultats de l'évaluation et montre des niveaux divergents de performance.

Les marchés de la livraison au sein des Etats Membres de l'UE du Nord et de l'Ouest affichent des niveaux de performance relativement élevés, avec les Pays-Bas affichant le niveau de développement de marché le plus fort. Ces pays se caractérisent par une longue tradition de la vente à distance. Par conséquent, les services de livraison intérieure B2C se sont installés avec succès par le passé. Dans ces pays, les prestataires du service universel ainsi que d'autres transporteurs locaux étaient bien préparés et se sont développés avec succès dans des services de livraison B2C plus centrés sur le client.

Quelques Etats Membres de l'UE du Sud et de l'Est n'ont jamais eu une telle tradition de la vente à distance et les prestataires du service universel n'ont pas non plus joué un rôle important dans les livraisons de colis B2B. Les transporteurs locaux de colis et les transporteurs express se sont donc lancés plus tard, se développant vers les livraisons B2C et, dans certains cas, quelques grands détaillants en ligne locaux ont comblé l'écart en lançant leurs propres services de livraison. De façon générale, les marchés de la livraison au sein de ces pays ont commencé à adapter leur offre de services afin de combler l'écart entre les besoins des détaillants en ligne et les besoins des consommateurs et à augmenter le nombre de services de livraison B2C actuellement disponibles.

Chaque Etat Membre peut encore s'améliorer, et plus particulièrement la Bulgarie, la Grèce, la Lituanie, et la Roumanie. Ces pays se caractérisent par des marchés du commerce électronique moins avancés, des prestataires du service universel à faible performance, et des marchés de la livraison qui commencent seulement à soutenir les détaillants en ligne locaux grâce à des services de livraison intérieure et transfrontière dédiés.

Recommandations pour de futures améliorations

Globalement, l'accroissement de la concurrence et l'émergence des intermédiaires du commerce électronique ont eu pour résultante une transparence accrue en termes de niveaux de produits et de services au sein des marchés de la livraison pour les détaillants en ligne. Cependant, ceci ne s'est pas produit pour tous les Etats Membres et pas nécessairement pour les petits et moyens détaillants en ligne (plus particulièrement au sein des marchés du commerce électronique les moins avancés). Le règlement (UE) 2018/644 relatif aux services de livraison transfrontière de colis sera pleinement mis en œuvre en 2019. Sa mise en œuvre permettra de continuer à améliorer la transparence des services de livraison transfrontière, particulièrement pour les entreprises de tailles petite et moyenne et pour les utilisateurs individuels. Les autorités de régulation du secteur postal seront chargées de surveiller plus efficacement les marchés de la livraison et davantage de transparence sera offerte en ce qui concerne les produits, les données du marché, et les prix pratiqués pour les détaillants en ligne et les consommateurs.

1. Compte-tenu des progrès réalisés en vue d'atteindre une meilleure qualité de la livraison de colis, des mesures supplémentaires au niveau de l'UE et des Etats Membres sur les prix, la transparence, et la qualité du service ne seraient pas opportunes à ce stade. La Commission Européenne et les autorités nationales de réglementation devraient plutôt s'assurer de la bonne mise en œuvre du règlement (UE) 2018/644 relatif aux services de livraison transfrontière de colis, et contrôler étroitement les évolutions au sein du commerce électronique européen et des marchés de la livraison afin d'évaluer les conséquences de cette réglementation.

La gestion et le traitement des retours, ainsi que le coût des retours, représentent des préoccupations majeures pour les acheteurs en ligne et les détaillants en ligne. Des solutions de retour transfrontière sont mises au point, lentement. C'est pourquoi nous recommandons que:

2. Les prestataires du service universel, les transporteurs express et les transporteurs de colis, ainsi que les intermédiaires du commerce électronique devraient continuer à mettre en œuvre des services de retour appropriés, particulièrement pour les détaillants en ligne PME.
3. Les transporteurs, les intermédiaires du commerce électronique, et les organisations du commerce électronique devraient intensifier leurs efforts en vue de fournir aux détaillants en ligne des informations facilement accessibles et

détaillées, incluant des guides relatifs à la gestion et au traitement des retours à la fois au niveau intérieur et au niveau transfrontière. Les organisations du commerce électronique pourraient fournir davantage d'orientations aux détaillants en ligne afin d'informer de manière plus efficace et transparente les consommateurs nationaux et étrangers pour ce qui est de leur politique de retour.

4. Les détaillants en ligne, les organisations du commerce électronique, les intermédiaires du commerce électronique, et les transporteurs pourraient envisager de promouvoir l'option de l'utilisation de l'adresse locale de retour pour les retours transfrontières.

Des éclaircissements supplémentaires sont nécessaires pour les transporteurs de colis au sein des Etats Membres en ce qui concerne la mise en pratique de la réglementation postale.

5. Les autorités nationales de régulation devraient préciser les critères utilisés pour déterminer si un service de livraison est considéré comme un service universel au sein des Etats Membres.⁶ Compte-tenu du fait que les définitions du service universel sont différentes d'un Etat Membre à l'autre, et des réglementations différentes des prestataires proposant des services universels, les autorités nationales de régulation devraient faire connaître clairement si, oui ou non, les modèles de livraison alternatifs et les nouveaux services sont considérés comme étant des services universels selon la législation actuelle, et ainsi proposer une sécurité de planification et une sécurité réglementaire aux entreprises du secteur du commerce électronique et de la livraison.
6. La demande accrue de la part des détaillants en ligne (PME et de grande taille) ainsi que la concurrence et l'innovation au sein des marchés de la livraison ont entraîné un choix plus important et une qualité accrue pour les services de livraison intérieure et internationale de colis. Il reste certes des marges d'améliorations futures, mais des progrès considérables ont été réalisés au cours des cinq dernières années. C'est pourquoi, pour les colis intra-UE, nous ne préconisons pas que de nouvelles normes de qualité pour les colis du service universel soient nécessaires ou qu'elles soient établies pour améliorer la performance de la livraison via le commerce électronique.
7. Afin d'améliorer le choix et la qualité des services pour les détaillants en ligne et les consommateurs, quelques Etats Membres devraient vérifier si les procédures d'autorisation peuvent être simplifiées. Par exemple, les procédures d'autorisation, et la charge administrative qui en découle, imposées à chaque prestataire de

⁶ Quelques Etats Membres (mais pas tous) utilisent le terme « au sein du périmètre de l'obligation du service universel » ou « services interchangeables comparé à services universels » pour faire la distinction entre des services universels obligatoires (fournis par le prestataires du service universel soumis à l'obligation de service universel) d'une part et des services similaires fournis par d'autres prestataires que le prestataires du service universel d'autre part.

services de colis, y compris ceux de très petite taille, semblent disproportionnées à Chypre, en Hongrie et en Grèce.

Les institutions de l'UE et les Etats Membres devraient assurer une égalité de traitement en ce qui concerne les importations du commerce électronique.

8. Pour les articles du commerce électronique importés en tant que paquets (postaux) individuels, l'ambition doit être de s'assurer que le coût de la livraison des paquets importés soit couvert par sa rémunération, comme pour la livraison intérieure des paquets. Les discussions en cours à l'UPU (accélérées par les actions engagées par les Etats-Unis) représentent une opportunité importante pour l'UE. Nous préconisons que les Etats Membres de l'UE, avec le soutien de la Commission Européenne, travaillent avec les autres délégations de l'UPU et les Etats-Unis afin d'atteindre des résultats tangibles en 2019, et de mettre en œuvre des frais terminaux reflétant mieux les coûts de livraison des paquets importés.
9. En parallèle, la Commission Européenne devrait tenter de négocier des accords commerciaux alternatifs pour le commerce électronique incluant des règles de rémunération et de traitement pour l'importation des paquets, idéalement incluses au sein d'un accord de libre-échange qui s'appliquerait à toutes les formes de commerce, en conformité avec les règles de l'Organisation Mondiale du Commerce. A minima, ces principes devraient être établis, d'une façon ou d'une autre, en accord avec les Etats-Unis comme mesure d'urgence en vue de se préparer à l'éventualité d'un départ des Etats-Unis de l'UPU.
10. Actuellement, les prestataires du service universel et les autorités douanières ne semblent pas être suffisamment préparés à la transmission électronique des données et/ou au dédouanement de volumes importants d'importations de faible valeur prévus pour une notification électronique et/ou des contrôles portant sur des importations de faible valeur. Nous préconisons que les Etats Membres évaluent soigneusement la nécessité d'accroître leurs ressources humaines au sein des douanes et, éventuellement, au sein de l'administration fiscale afin de se préparer à cette augmentation de la charge de travail en 2021.
11. Afin d'éviter des perturbations au sein du commerce électronique international traité par les opérateurs désignés par l'UPU, les prestataires du service universel de l'UE devraient rapidement mettre en place des systèmes de notification électronique et collaborer avec leurs homologues étrangers (et surtout avec la Poste Chinoise) pour éviter des blocages massifs aux frontières douanières et dans les centres postaux en 2021.

La croissance du commerce électronique et de la livraison des colis crée des défis, et peut comporter des risques sur les marchés du travail.

12. Afin d'assurer une protection efficace des droits des travailleurs, nous préconisons que les Etats Membres surveillent, si nécessaire, les cascades de sous-traitance dans le secteur de la livraison en prenant les mesures appropriées en conformité avec les législations nationales et/ou les pratiques et en conformité avec la législation de l'UE après consultation auprès des partenaires sociaux compétents.
13. Les Etats Membres devront s'assurer que la législation nationale du travail existante est effectivement en vigueur, particulièrement pour les secteurs à bas salaire qui font face à des risques importants de conditions de travail précaires.

Les transporteurs font des efforts importants en vue de réduire leur impact environnemental, et sont de plus en plus touchés par les réglementations environnementales.

14. Afin d'accompagner le secteur de la livraison dans une démarche plus durable, les autorités locales pourraient améliorer la transparence des réglementations environnementales locales et établir des responsabilités claires pour les transporteurs. De plus, les autorités locales, y compris les urbanistes, devraient encourager et soutenir les solutions technologiques et organisationnelles innovantes des transporteurs relatives au « dernier kilomètre » (par exemple en fournissant une infrastructure appropriée pour la recharge des véhicules électriques, des locations de micro-plateformes, des places de parking et des facilités de circulation pour les véhicules électriques).

1 Introduction

1.1 Background and objective of the study

Over the last ten years e-commerce has proven to be one of the most influential economic trends with a great impact on postal and logistics networks and infrastructure. Worldwide, the e-commerce market is developing at a rapid pace. The European association Ecommerce Europe estimated that Europe has a B2C e-commerce turnover of EUR 534 billion in 2017, an increase of more than 70% since 2013.⁷ Global B2C e-commerce sales were estimated to be USD 2.3 trillion (around EUR 2 trillion) in 2017.⁸ Cross-border e-commerce has gathered pace with impressive growth rates since 2013 and it is expected to outperform growth rates in domestic e-commerce: DHL estimates that the share of cross-border e-commerce sales to global e-commerce sales will increase from 15% in 2015 to 22% in 2020.⁹ The future development of the e-commerce market has the potential to enhance the prospects of retailers, consumers and the overall economy within the European Union (EU) and to promote the establishment of a digital single market.

The “Single Market Act”¹⁰ considers the achievement of the “digital single market”, including e-commerce, as one of the levers to boost economic growth and strengthen confidence in the Single Market. The “Digital Agenda for Europe”¹¹ lists key actions for achieving the digital single market and defines key performance indicators and targets to measure the implementation progress. One of the most important elements for achieving the digital single market is to promote e-commerce and particularly cross-border e-commerce. The objective for 2015 was that 50% of the EU population would make online purchases and 20% of the EU population would buy online from other Member States.¹² This objective was achieved: in 2017, 57% of the EU population made online purchases and 19% of the EU population purchased online from other Member States (24% of the EU population purchased online from countries including EU and non-EU countries). However, the activities of buying and selling online, domestically as well as across borders, still vary considerably between MS which in turn indicate different levels in the development of e-commerce.

⁷ See Ecommerce Europe (2018), European E-commerce Report 2018, p. 40. The figure covers all European countries including non-EU/EEA countries like Turkey and Russia.

⁸ See Shopify (2017), Global Ecommerce: Statistics and International Growth Trends (<https://www.shopify.com/enterprise/global-ecommerce-statistics>), retrieved on 20 June 2018.

⁹ See DHL (2016), The 21st Century Spice Trade, p. 7.

¹⁰ Communication from the Commission to the European Parliament, the Council, the Economic and Social Committee and the Committee of the Regions, *Single Market Act, Twelve levers to boost growth and strengthen confidence “Working together to create new growth”*, COM(2011) 206 final, 13.04.2011.

¹¹ Communication from the Commission to the European Parliament, the Council, the Economic and Social Committee and the Committee of the Regions, *A Digital Agenda for Europe*, COM(2011) 245 final/2, 13.08.2010.

¹² See Communication from the Commission to the European Parliament, the Council, the Economic and Social Committee and the Committee of the Regions, *A coherent framework for building trust in the Digital Single Market for e-commerce and online services*, COM(2011) 942 final, 11.01.2012

As delivery is a critical part of the e-commerce customer experience, affordable and high-quality parcel delivery services, domestically and across borders, are a prerequisite for successful e-commerce sales. In European surveys, high delivery costs have been identified as an important constraint for consumers and e-retailers to buy and sell products across borders, respectively. In light of this, the European Commission published “A roadmap for completing the single market for parcel delivery” (also called the Parcel Roadmap) in December 2013.¹³ By creating this roadmap, the Commission sought to support the development of e-commerce through a set of actions for improving parcel delivery. A major objective of the Commission was to promote cross-border e-commerce by improving the cross-border delivery of parcels. Particular emphasis was placed on the needs of SME e-retailers, as well as on delivery aspects for rural areas. It was argued in the roadmap that e-commerce must be accessible to all citizens and to all businesses, regardless of their size and location. The Parcel Roadmap, following a Green Paper, culminated in the Regulation of the European Parliament and of the Council on cross-border parcel delivery services (EU Cross-border Parcel Regulation) which came into force on 22 May 2018.¹⁴ It has the objective to improve the regulatory oversight of this dynamically developing sector and promote transparency of tariffs, particularly for SMEs. Furthermore, it requires the assessment of tariffs for cross-border parcel delivery services provided by postal operators subject to the universal service obligation (USO), for the purpose of identifying unreasonably high tariffs. Finally, the Regulation determines which information traders should disclose to consumers concerning cross-border parcel delivery services.

In 2017, the European Parliament asked the Commission to conduct a pilot project regarding the ‘development of cross-border e-commerce through parcel delivery’. The major purpose of this project is to analyse the capacity and the performance of delivery markets in 31 countries, including 28 Member States (MS) of the European Union (EU-28) and three Member States of the European Economic Area (EEA), to meet the needs of e-retailers and e-shoppers regarding cross-border e-commerce deliveries and returns.¹⁵ The study aims to improve the understanding on the state-of-play and the developments in the EU delivery markets since 2013 and provide insight regarding the needs of consumers and e-retailers in relation to cross-border e-commerce and delivery services. The analysis regarding developments and the state-of-play of EU delivery markets includes the demand and supply of parcel delivery services, intra- and extra-Community regulatory aspects, employment, and environmental topics. However, the major focus of the study lays on the needs of e-retailers and consumers concerning cross-border delivery and return services. The study will provide input for the evaluation report on the EU Cross-border Parcel Regulation (2020) and for the next report on the application of the Directive

¹³ A roadmap for completing the single market for parcel delivery. Build trust in delivery services and encourage online sales, COM/2013/0886 final.

¹⁴ Regulation (EU) 2018/644 of the European Parliament and of the Council of 18 April 2018 on cross-border parcel delivery services, OJEU L112/19 of 2.5.2018.

¹⁵ Due to lack of data for Liechtenstein the report provides detailed information on 30 countries (EU-28, Iceland and Norway). References to EU Member States (EU MS) should be understood as also including EEA Member States.

Directive 97/67/EC of the European Parliament and of the Council as amended by Directive 2002/39/EC and Directive 2008/6/EC ('Postal Directive')¹⁶.

The study is being prepared for the European Commission, Directorate General for Internal Market, Industry, Entrepreneurship and SMEs, by Alex Kalevi Dieke (project manager), Dr René Arnold, Dr Christian Bender, Annette Hillebrand, Antonia Niederprüm, Serpil Taş, Sonja Thiele, and Julia Wielgosch, all WIK-Consult. The team was supported by the market research companies Lightspeed (WIK consumer survey) and Efficiency³ (organisation of national stakeholder workshops in selected MS). James Campbell complemented the study team with his expertise in international postal regulation.

The study relies substantially on stakeholder interaction. It would have been much less insightful without the valuable input provided and the time involved by many stakeholders from very different groups including

- Parcel carriers;
- Universal service providers including the organisations PostEurop and IPC;
- European and national e-commerce associations;
- E-retailers;
- E-commerce experts and service providers;
- National regulatory authorities; and
- the standardisation body CEN / TC 331.

We are most grateful to the many individuals and organisations who provided valuable information for this study in personal and phone interviews, meetings, workshops, expert panels and to those who attended the public workshops and offered us their comments.

Throughout this study we were advised, encouraged, and guided by the staff of the European Commission, in particular Raphaël Goulet, head of the unit 'Public Interest Services' of the Directorate General for Internal Market, Industry, Entrepreneurship and SMEs; Sarah Barraclough, manager of this study; Anouk Dolfen; and Camilla Olivius.

¹⁶ Directive 97/67/EC of the European Parliament and of the Council of 15 December 1997 on common rules for the development of the internal market of Community postal services and the improvement of quality of service, OJ L 15, 21.1.1998, p. 14, amended by Directive 2002/39/EC of the European Parliament and of the Council of 10 June 2002, OJ L 176, 5.7.2002, p. 21, and Directive 2008/6/EC of the European Parliament and of the Council of 20 February 2008, OJ L 52, 27.2.2008, p. 3.

1.2 Outline of the study

The Terms of Reference asked for a comprehensive study “to understand how cross-border parcel delivery markets and services are changing as a result of e-commerce, and how this is affecting the needs of all users of these services”. The study shall include the following four elements:

1. A comprehensive assessment of how parcel delivery markets in the European Union have evolved since 2013, how they are expected to develop over the next five to ten years and the impact of these market trends on the supply and value chains. This assessment shall also include employment and environmental aspects.
2. An overview of the different regulatory regimes and how these affect the parcel delivery sector and different types of parcel delivery service providers.
3. A wide ranging assessment of the needs of users, both e-retailers and consumers, regarding e-commerce cross-border parcel delivery services and the extent to which they are met by existing services.
4. Identification of and recommendations for additional action needed to cover existing and future users' needs.

The study is structured in nine chapters to adequately describe and comprehensively assess the relationship between e-commerce and delivery markets with special emphasis on cross-border delivery services. This chapter commences with the terminology used in this study, introduces the complexity of the e-commerce supply chain, and describes the research methodology of the study. Chapters 2 to 7 describe and assess the different aspects of the study, with a summary of conclusions at the end of each chapter.

Chapter 2 “E-commerce in Europe” presents the e-commerce markets in the European Union with an emphasis on the supply side, i.e. we primarily focus on developments in e-commerce sales, domestically and across borders, and highlight the opportunities and challenges for e-retailers in cross-border e-commerce. It prepares the framework for analysing the performance of delivery markets in relation to e-commerce-driven delivery services due to the varying stages of development of national e-commerce ecosystems between MS.

Chapter 3 “Delivery services in Europe” describes and analyses the status quo, past and future trends in the European delivery industry. It is structured in three major parts. The first part describes past developments in European delivery markets in terms of volume and revenues, discusses the role of cross-border deliveries, and sheds light on the regulation of carriers in the different MS within the context of the regulation of postal markets and universal postal services. The second part discusses the typology of carriers in the European delivery industry, consisting of ‘traditional’ but heavily transforming carriers and new emerging delivery service providers. In particular, this chapter sheds

light on how delivery services have evolved to meet a growing demand for e-commerce deliveries. The third part investigates future trends in delivery services that are mainly driven by the needs of expanding e-commerce activities which in turn transform the mechanism of B2C deliveries.

Chapter 4 “Consumers’ experiences” emphasises consumer preferences and their experiences with delivery-related aspects of domestic and cross-border online shopping. The key results of the WIK consumer survey are discussed in this chapter and then combined with results of other international consumer surveys dealing with delivery aspects of cross-border and domestic e-commerce. In particular, the survey analyses the perceived gap between expected and perceived service quality for delivery-related aspects (like information before and after purchase, delivery options related to time and location, charges, quality of final delivery and the management of returns). We analyse the perception of consumers regarding domestic and cross-border online purchases within the EU MS as well as cross-border purchases from the Rest of World. The methodology and the detailed results of the WIK consumer survey, conducted for the purposes of this study, are appended to this report (see Appendix B).

Chapter 5 “E-retailers’ experiences” complements the analysis of Chapter 4 with the experiences of e-retailers regarding cross-border delivery and return services. To form a better understanding of the variety of e-retailers’ needs, WIK conducted national stakeholder workshops in six MS, comprising of different characteristics regarding the national e-commerce markets. The findings of these workshops are described and complement the analysis of e-retailers’ needs.

Growing e-commerce imports from non-EU countries, especially from Asia, result in increased competition in e-commerce markets and are considered as an economic and operational challenge by universal service providers. Chapter 6 deals with delivery aspects of e-commerce with non-EU countries including the impact of the UPU terminal dues system and of the abolition of the de-minimis VAT rule by 2021 on carriers and delivery markets.

Employment and environmental aspects, both exhibiting growing importance on the delivery industry, are dealt with separately in Chapter 7 and Chapter 8, respectively.

Finally, Chapter 9 presents the overall conclusions on the findings from the study including an assessment on the performance of B2C delivery markets in the EU-28 MS, Iceland and Norway. This assessment is informed by the findings on e-commerce and delivery markets as well as by the findings on the experiences of consumers and e-retailers. The chapter provides recommendations based on the analyses of the delivery markets and related employment and environmental aspects, the impact of e-commerce on the delivery industry, the impact of e-commerce with non-EU countries, and the assessment of the delivery market performance to meet the changing and growing needs of e-retailers and consumers.

The Country Fact Sheets, presented in Appendix A of the report, summarise detailed data and information on e-commerce and delivery in markets for each Member State. The methodology and more detailed results of the WIK consumer survey are presented in Appendix B of the report.

1.3 Major definitions and methodology of the study

1.3.1 Parcel delivery services and parcel delivery service providers

A 'parcel' is an item "containing goods with or without commercial value, other than an item of correspondence, with a weight not exceeding 31.5 kilograms" as defined by the EU Cross-border Parcel Regulation.¹⁷ The weight limit of 31.5 kg is commonly applied in the parcel & express industry. It describes an item that can usually be handled by one person. In the study we use the terms 'shipment', 'packet' and 'parcel' as synonyms for 'parcel'.

The expression 'parcel' should not be mixed up with a specific parcel of products offered by postal, parcel & express companies. It encompasses all items containing goods or merchandise either sent by a letter or by a parcel product. Format definitions of letter-sized items containing merchandise (small packets up to 2 kg) and parcels among suppliers of delivery services vary in terms of maximum size and weight per item and in terms of domestic and cross-border delivery services.

Parcel delivery services consist of "services involving the clearance, sorting, transport and distribution of parcels" (EU Cross-border Parcel Regulation, Article 2 (2)). Clearance means the collection of parcels either from the premises of the sender or at specific collection points, for example, parcel shops and lockers with a drop-off function, or other collection points offered by the service provider. Sorting refers to the sorting of parcels to delivery offices and tours (usually done in specific sorting facilities and hubs). Transport refers to the transport of parcels between collection facilities and destination facilities (with or without sorting function). Distribution defines the transport and delivery of parcels from the final distribution facility to the final delivery point. Delivery points can be the premises of the recipient or any alternative address, for example, shops or parcel lockers with a pick-up function.

Therefore, we consider only a segment, however an important one, of e-commerce driven deliveries. Items weighing more than 31.5 kg or items that are too bulky to be handled by one person (e.g. goods delivered on pallets) can also be ordered online, but require two-person handling or specific transport equipment for delivery. The UPU Convention Manual provides an indication for the maximum size of postal parcels for cross-border delivery

¹⁷ Regulation (EU) 2018/644 of the European Parliament and of the Council of 18 April 2018 on cross-border parcel delivery services, OJEU L112/19 of 2.5.2018, Article 2 (1).

services. Article 17-2014 of the Convention defines that “Parcels shall not exceed two metres for any one dimension or three metres for the sum of the length and the greatest circumference measured in a direction other than that of the length.”¹⁸ In practice, however, carriers have introduced individual definitions of maximum weights and sizes.

‘Cross-border parcel delivery services’ refer to the delivery or shipment of physical goods from, for example, the e-retailer’s warehouse in the country of origin to a consumer in another EU or non-EU country as an individual parcel.¹⁹ ‘Individual’ parcel means that goods ordered online are picked and packed into single parcels which are then prepared for final delivery in the e-retailer’s warehouse. These parcels are then collected by the service provider to transport, sort and deliver them. During this process, from the e-retailer’s warehouse to final delivery, one or more service providers can be involved.

A ‘parcel delivery service provider’ is an “undertaking that provides one or more parcel delivery services” as defined by the EU Cross-border Parcel Regulation²⁰. It explicitly mentions that different parties can be involved to deliver parcels across national borders. Parcel delivery service providers or, synonymously, ‘carriers’ can be international, national and local parcel and express companies, national postal operators and other service providers, e.g. consolidators who perform the services upstream to final delivery.

National postal operators are formerly postal administrations that provide domestic and cross-border letter and parcel delivery services. All of them provide universal postal services most by designation. Within the EU, postal services are part of the services of general economic interest that have to be ensured in each Member State. For this purpose, MS can either designate one or more ‘postal service providers’ to provide the universal postal services or rely on market forces with the designation as a fall-back position. As designated universal service providers (USPs), they are obliged to provide basic letter and parcel delivery services (universal postal services) nationwide and at a predetermined level of quality. The scope of the universal postal services is defined by national postal legislation in line with the requirements of the Postal Directive. Universal postal services include the delivery of letters and parcels on at least five days a week usually at the premises of the recipients within a reasonable time (domestically usually within one and three working days). Moreover, USPs are obliged by legislation (law, regulation or universal service license) to ensure the nationwide accessibility of postal services by a network of physical access points (post offices or postal agencies). Additionally, USPs are usually the ‘designated postal operator’ (designated by the respective country) to provide international postal services in line with the treaty obligations of the Universal Postal Union (UPU). In this context, we use the terms ‘small

¹⁸ Universal Postal Union (2018), Convention Manual. Designated operators may also apply smaller dimensions: (1) 1.5 metre for any one dimension or 3 metre for the sum of the length and the greatest circumference measured in a direction other than that of length (‘girth’) or (2) 1.05 metres for any one dimension or two metres for the sum of the length and the greatest circumference measured in a direction other than that of length.

¹⁹ See DHL (2016), The 21st Century Spice Trade.

²⁰ Regulation (EU) 2018/644 of the European Parliament and of the Council of 18 April 2018 on cross-border parcel delivery services, OJEU L112/19 of 2.5.2018, Article 2 (3).

packets', 'small packets' for merchandise shipments delivered by designated postal operators weighing up to 2 kg that are part of the international letter post as defined by the Universal Postal Union (UPU).²¹

1.3.2 E-commerce, e-retailers and consumers

In the most general way, e-commerce is defined as 'the business of buying and selling goods and services on the internet'.²² This definition includes online sales and online purchases between businesses and consumers (B2C) as well as between businesses (B2B). This study focuses on B2C e-commerce i.e. sales and purchases on the internet between businesses and consumers.²³

Businesses are 'retailers' who sell goods or services for commercial purposes to the consumer. Businesses who are selling goods and services to other businesses are 'wholesalers'. Retailers who sell goods and services on the internet exclusively or in combination with other sales channels (e.g. stationary retail) are 'electronic retailers' or 'e-retailers'. Other expressions used synonymously are 'e-tailers', 'internet retailers', 'e-sellers' and 'online sellers'. Retailers may sell their products online on one or multiple online shops or on online marketplaces. Online marketplaces are two-sided transaction platforms for e-retailers. Online marketplaces can be e-retailers if they also sell their own products (e.g. Amazon, Zalando or Otto), but in most cases they are only transaction platforms with value-added and support services (e.g. payment functions, advertising tools etc.) which are customised for e-retailers (e.g. Ebay, Allegro, Rakuten or Aliexpress).

When analysing e-retailers we differentiate between micro, small, medium-sized and large enterprises. We apply the definition based on the number of employees as defined by an EU guideline that recommends three indicators to determine the size categories of enterprises, namely the number of employees, annual revenues and total assets.²⁴ Small and medium-sized enterprises (SME) are defined as businesses with 10 to 249 employees. Very small or 'micro' enterprises have less than 10 employees. Micro and SMEs account for more than 99% of all EU-28 enterprises, while micro enterprises alone account for 93% of total enterprises in the EU-28.²⁵

Individuals who occasionally sell goods on the internet are not considered to be 'retailers' and are therefore not covered by the scope of this study. Individuals who purchase goods

²¹ The UPU defines the maximum size of letter post items as follows: "Length, width and depth combined: 900mm, but the greatest dimension may not exceed 600 mm" (Format E), UPU Convention Manual (2018), Article 17-104, 1.1.

²² <https://dictionary.cambridge.org/us/dictionary/english/e-commerce>

²³ Technically, B2C e-commerce uses the commonly established internet protocols Hypertext Transfer Protocol (HTTP) or its secure version (HTTPS) while B2B e-commerce is mostly organised via Electronic Data Interchange (EDI) based on specific encrypted protocols e.g. the Secure File Transfer Protocol (SFTP).

²⁴ Commission Recommendation 2003/361/EC, as published in the Official Journal of the European Union OJ L 124 of 20.5.2003, p. 36.

²⁵ See European Commission (2017), SBA Fact Sheet & Scoreboard: European Union.

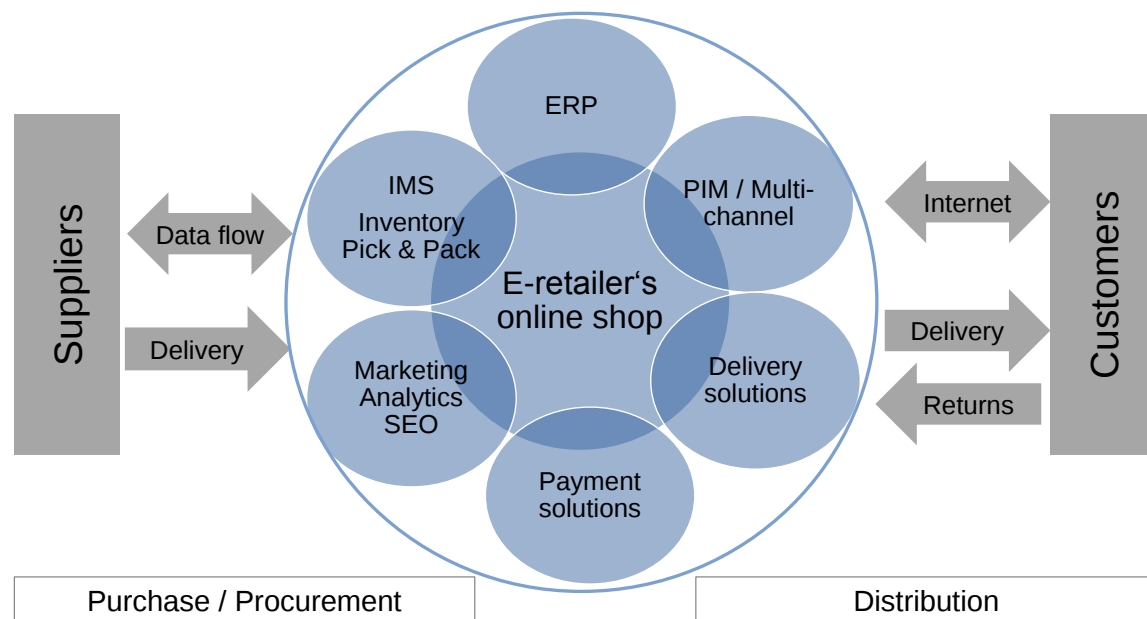
online may also be defined as 'e-shoppers' or 'online buyers'. When we use the expression 'consumer' we usually refer to consumers who make online purchases.

E-commerce statistics mostly refer to sales and purchases of 'goods and services'. Services include for example the booking of journeys, hotels or air/train tickets. Goods include 'physical' and 'digital' goods. Examples of digital goods include e-books, online games, music and film streaming services. As we analyse the relation between e-commerce and delivery services we concentrate on consumers' online purchases of physical goods.

The term 'cross-border e-commerce' defines international online trade. It entails the sale or purchase of products on the internet across national borders. That means that e-retailers and consumers are not located in the same country and therefore not necessarily ruled by the same jurisdiction, may use different currencies, and/or speak different languages.

1.3.3 The e-commerce supply chain

Figure 1 An e-retailer's stylized supply chain



Source: WIK-Consult (2014)

Notes: ERP: Enterprise Resource Planning (back-end systems including inter alia accounting, marketing & sales, shipping, payment)
IMS: Inventory Management System;
PIM: Product Information Management
SEO: Search Engine Optimisation

Figure 1 illustrates a simplified overview of an e-retailer's supply chain. The figure shows the different activities and related IT solutions e-retailers need to run an online shop. However, e-retailers are very different in size and skill levels. To what extent these enterprises use sophisticated IT solutions for setting up and operating an optimised online shop depends greatly on the size and the resources of the enterprise. The majority of e-retailers are micro-, small- and medium-sized enterprises. Many of them do not have sophisticated enterprise resource planning or inventory management systems because the business is too small, the investment is too costly and/or there is not sufficient knowledge on such systems. In this case many processes are done manually and the potential for growth is limited. More skilled and more ambitious e-retailers set up their businesses more comprehensively and they rely more on integrated processes that reduce costs and provide greater operational efficiencies. These integrated systems are used throughout the operational lifecycle from initial web sites through to fulfilment of orders, billing, customer service and after sales support.

There are two basic business models for e-retailers with different requirements on e-commerce logistics. The first model is 'drop shipping' and the second model is 'wholesaling & warehousing'.

Drop shipping is the simplest form of e-commerce. The e-retailer sets up the online shop, acquires online orders and transfers the orders to the supplier (the wholesaler or the manufacturer) who delivers the order. The e-retailer's tasks are limited to data-driven processes (set up of the online shop, order management, billing, customer communication) and customer service (after sales services), while warehousing and delivery is directly managed by the supplier. However, managing returns in the drop shipping model may be complicated.

The model 'wholesaling & warehousing' is the most common form of online trade. In this case the e-retailer has to perform warehousing and delivery. This requires significant logistical efforts additional to the running of the online shop. Upstream (or inbound) logistics include the e-retailer's purchase of goods from manufacturers or wholesalers. The goods have to be transported to the e-retailer's warehouse where they are taken into stock. Downstream (or outbound) logistics consist of picking & packing of the order, handing it over to the carrier, and delivery. This description also highlights that delivery is only one element of the e-commerce fulfilment process, but an important one that is essential for maintaining customer satisfaction.

Figure 2 E-commerce fulfilment: Inbound and outbound logistics

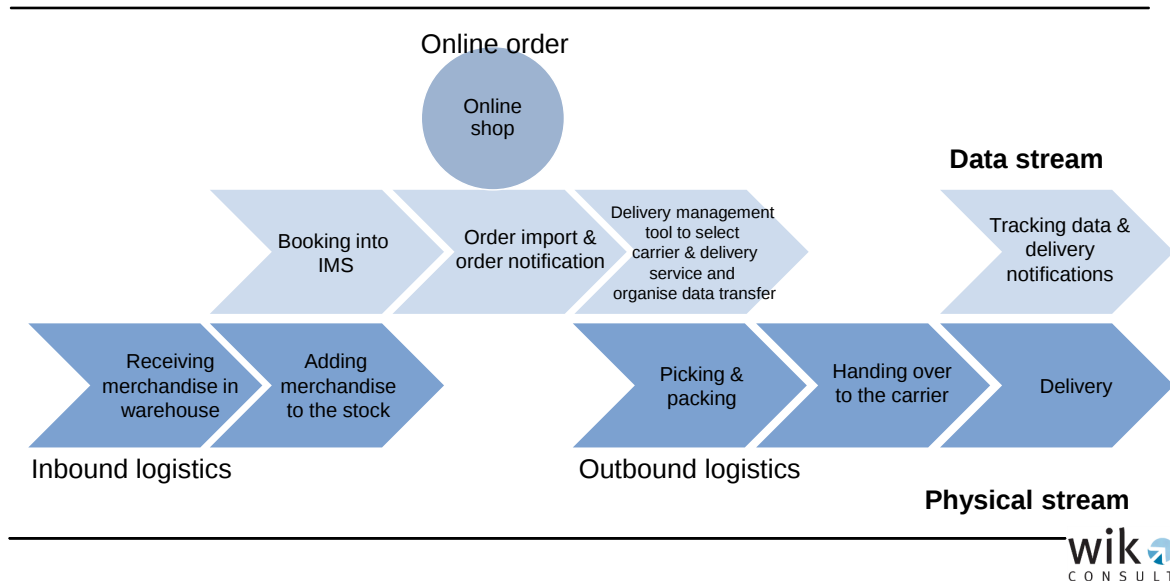
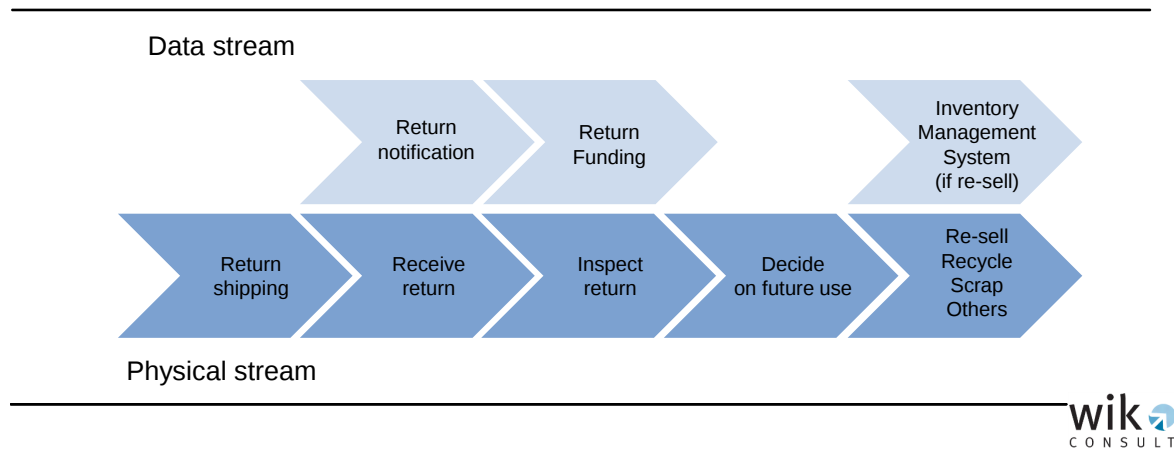


Figure 2 illustrates the e-commerce fulfilment process from the online order to the delivery (outbound logistics). It shows that the physical process and the data stream are two sides of the same coin. System integration is a must to keep product information (including product availability, delivery time and delivery options) displayed in the online shop up to date and to ensure the transparency of the process for the customer (order and delivery notifications). E-retailers may use delivery management tools to select the appropriate delivery service and organise the data transfer to the respective carrier.

In some cases, the transaction does not end with the successful delivery and payment of the ordered good. For example, if the product is wrong or damaged, it may be returned which requires a particular process, the so-called 'reverse logistics'. With expanding e-commerce activities, returned goods are a growing concern and a cost risk for e-retailers.

Figure 3 E-commerce fulfilment: Reverse logistics (returns)



Depending on product categories sold by e-retailers, returns can be a significant cost for e-retailers and managing them effectively is critical to their businesses profitability. Reverse logistics therefore becomes more and more important to keep return costs under control. Reverse logistics is an integrated and coordinated approach to manage returns and includes the reception of returns (including the provision of a return address), their inspection and the decision whether the returned good can be re-sold at the e-retailer's online shop or has to be recycled, scrapped or re-sold on alternative channels (see Figure 3). For carriers, returns create additional transport volume with particular challenges in collection.

From the e-retailer's point of view the complexity of the e-commerce supply chain increases with the size of the business (number of orders, distribution over time), the number of products and product categories sold, the number and location of warehouses and, last but not least, the geographical reach of his business (i.e. domestic and/or international).

1.3.4 Overview on the methodology of the study

Figure 4 Methodology: Seven pillars of research



The study is based on seven pillars of research (see Figure 4). Each of the pillars are described in more detail in the remainder of this section.

(1) Desk research

Desk research is the major source of information in this study for collecting and compiling data and information on domestic and international e-commerce and delivery markets. Given the long period of the project we have collected market data for the last five years (2013-2017). As 2017 data is not published at fixed dates, desk research was finished in November 2018. WIK collected up-to-date information on

(1) European and national delivery markets using including

- Postal statistics database of European Commission;
- Annual reports of parcel and delivery operators;
- Future trend studies and other studies published by parcel and delivery operators;
- ERGP studies and data;
- Market reports of national regulatory authorities (NRAs);
- Press releases from e.g. carriers, suppliers of innovative technology for e-commerce and parcel sector;
- Blogs, newspaper articles, newsletters on trends and new technologies.

(2) European and national e-commerce markets:

- Market statistics (by Eurostat), Eurobarometer Flash, surveys digital single market;
- Market and trend reports published by technology firms, e-retailers, e-retailer associations etc;
- Press releases from e.g. carriers, e-retailers, suppliers of innovative technology for the e-commerce sector;
- Blogs, newspaper articles, newsletters on trends and new technologies.

(3) User needs related to delivery services and e-commerce:

- International, European and national consumer surveys;
- International, European and national e-retailer surveys;
- Mystery shopping surveys;
- Publications of national and European consumer watchdog bodies.

(4) Relevant legislative and regulatory requirements:

- Postal and transport legislation and case law;
- Legislation on VAT taxation and exemptions;
- Customs rules;
- Aviation security rules;
- UPU documents and statistics.

(5) Environmental and employment aspects in delivery services:

- Sustainability reports by parcel and e-commerce operators;
- Reports and studies published by unions and social partners;
- Studies on climate impact of transport and delivery.

(2) WIK Consumer Survey

There is a lack of independent international research that allows an in-depth analysis of consumers' expectations on and experiences with more specific aspects related to domestic and cross-border deliveries of online purchases. The WIK consumer survey closes this gap.

The target group of the proposed survey comprises of individuals that have purchased goods online, either domestically and/or across borders in the last 12 months. For this target group, the most appropriate and cost effective tool is an online survey. The online survey included each MS of the European Union (EU-28) and the EEA MS Iceland and Norway. The questionnaire was translated into 24 languages and collected responses from more than 17,000 consumers. The fieldwork period was from 28 June to 26 August 2018. WIK developed the concept and the questionnaire of the consumer survey and was supported by the market research company Lightspeed to implement the survey, which included programming, translating and launching the online survey as well as organizing the fieldwork sourced from representative national online panels for each country.

The objective of the survey was to identify expectations and experiences of consumers with delivery-related e-commerce topics and to which extent these experiences meet the expectations of online shoppers. One important aspect of the consumer survey is to analyse differences in consumers' expectations and experiences between domestic and cross-border online purchases. The detailed approach and the results of the consumer survey are presented in Appendix B of this report. Selected results for each country are compiled in the Country Fact Sheets annexed to this report.

(3) Open online survey for e-retailers

WIK prepared an open online survey for e-retailers whose needs as users of delivery services differ significantly from those of consumers. E-retailers are not a group of similar enterprises either. They have very different delivery needs depending on the size, nature and value of the goods sold, where their customers are located, and many other aspects. The goal of the online e-retailer survey was to get responses from as many different kinds of e-retailers as possible.

Technically, the e-retailer survey was an open online survey, i.e. it was provided on a secure website as an internet questionnaire. The website contained information on the study itself and its goals. The information provided by e-retailers was anonymous. Naturally, the results of this survey were not representative. In order to recruit respondents or advertise the survey, we co-operated with European and national e-commerce associations within the EU to inform e-retailers of the study and promote participation in the survey.

The survey was launched in April 2018 and remained open until the end of October 2018. Despite significant efforts to make the survey public, the number of respondents was unfortunately too low to produce general results.

(4) NRA survey

In a separate survey, WIK asked national regulatory authorities in all EU MS as well as in Norway, Iceland, Switzerland and Serbia specific questions on regulatory topics. The purpose of the survey was to understand how different types of delivery service providers involved in B2C e-commerce deliveries are regulated in each country. The survey addressed the following regulatory topics and their relation to e-commerce delivery services:

- Universal postal service and B2C e-commerce delivery services;
- Authorisation and licensing of parcel delivery service providers;
- Financial contribution of carriers to the funding of NRAs and USO.

The survey was conducted in October/November 2018. The results of the NRA survey are presented in Section 3.2.4. Selected answers are compiled in the Country Fact Sheets annexed to this report.

(5) National stakeholder workshops

WIK organised national stakeholder workshops in six MS: Belgium, Bulgaria, Germany, Poland, Portugal and Sweden. The selection of countries covers the variety of the MS in terms of location, size and level of development of e-commerce markets within the Community and was subject to agreement with the Commission's Services. In Germany, the workshop was organised by WIK and in the other five MS by WIK's partner Efficienc³. The objective of these workshops was to gain stakeholder input on

- Recent developments and current status of e-commerce and delivery markets (domestic and cross-border),
- Barriers to growth in e-commerce and the role of delivery services
- Challenges for the parcel industry to support e-commerce and
- Future trends.

For each workshop, 10-15 selected experts have been invited to elicit the most current information and views. The experts were high-level representatives of e-retailers, postal and parcel/express operators, associations, administrators, unions and/or academics.

The national workshops took place in June/July (Bulgaria, Germany and Portugal) and in September 2018 (Belgium, Poland and Sweden). More details on the concept and on the key findings are presented in Section 5.4 of this report.

(6) Experts panels

WIK organised three expert panels on selected topics with international participants at EU level in November 2018. The expert panels provided an opportunity to discuss in-depth specific topics with market stakeholders and experts. They primarily addressed EU stakeholders, and took place in Brussels as half-day events.

The expert panels dealt with the following topics:

1) Impact of technology and future trends (3 November 2018)

- Technologies that will most likely impact future parcel delivery
- Parcel delivery of the future
- Future trends in e-commerce

The contributions and views of the participants are considered in the analysis of future trends in B2C delivery services.

2) Employment and working conditions (13 November 2018)

- Evolution of employment and working conditions in the parcel industry
- Impact of technology on type of work done and working conditions
- Role of social partners and social dialogue

The stakeholder input from this panel supported the analysis on employment and working conditions in the delivery sector (see Chapter 7).

3) Customs and VAT in cross-border e-commerce (19 November 2018)

- Practices of customs clearance for inbound international e-commerce items in different MS and how these currently differ for USPs and express/courier operators;
- Challenges for customs and VAT treatment of e-commerce items from outside the EU customs union, e.g. from Asia;
- Opportunities for electronic declaration of postal items;
- Opportunities for more effective collections of VAT and customs duties for imports by postal service;
- Potential measures to address these challenges.

The insights and views of this panel are taken into account in the analysis of the impact of customs and taxes on e-commerce imports from non-EU countries (see Chapter 3.5).

(7) Interviews & stakeholder interaction

Finally, additional to the surveys WIK had talks and interviews with many representatives of national and international stakeholders, including e-retailers, technology providers and e-commerce experts, carriers, e-commerce associations, and a standardisation body (CEN/TC 331). The interviews were face-to-face where possible, alternatively by email, or on the phone. Additionally, WIK took part in meetings and workshops

- PostEurop, meeting of the E-Commerce Working Group on 8 June 2018;
- Social Dialogue Committee, 3 July 2018;
- EMOTA, Supply Chain Committee, 3 July 2018;
- ERGP Open Workshop 'The Postal Framework – Views from within and outside the EU', 28 November 2018 in Belgrade
- Meeting of the Postal Directive Committee on 3 December 2018 in Brussels.

and in total three public stakeholder workshops held in Brussels on

- 'Delivering for the Future: Workshop on Developments in the Postal Sector', 7 March 2018;
- 'Delivering for the Future II: Workshop on Developments in the Postal Sector', 19 September 2018;
- 'Delivering for the Future III: Workshop on Developments in the Postal Sector', 29 January 2019.

to introduce the study, and to present and discuss findings, conclusions and recommendations.

2 E-commerce in Europe

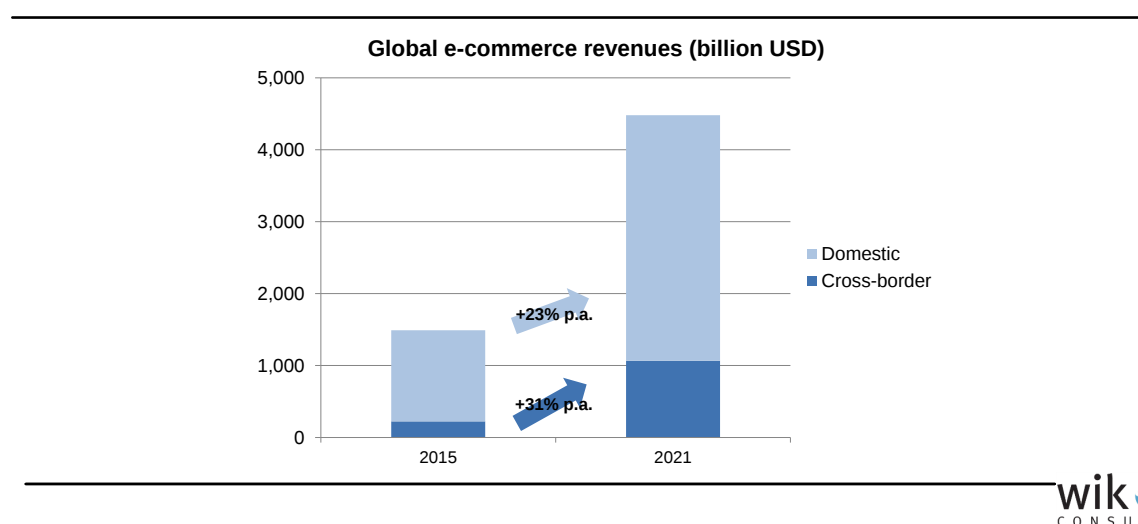
2.1 Online sales

2.1.1 Domestic and cross-border B2C e-commerce is growing at significant rates in all Member States

Ecommerce Europe estimates that the European B2C e-commerce market, comprising online sales of services and goods, has reached an estimated turnover of EUR 534 billion in 2017, from EUR 307 billion in 2013. This corresponds to an average annual growth rate of nearly 15%. For 2018, the association forecasts revenues of EUR 602 billion.²⁶ Based on data of Ecommerce Europe and national e-commerce associations, WIK estimates that the EU/EEA e-commerce market increased its revenues by around EUR 200 billion since 2013 to EUR 490 million in 2017.

B2C e-commerce revenues are growing more rapidly than total retail/wholesale revenues indicating that the online share in total retail (stationary and online) is continuously increasing.²⁷ IPC estimates that online retail sales share of total retail sales (2017) varies from less than 2% for Cyprus and Croatia to more than 10% in the Netherlands and the UK (the latter reporting a share of 14%).²⁸

Figure 5 Trends in global e-commerce revenues



Source: WIK-Consult based on IPC (2018), Cross-border E-commerce, presentation of 8 June 2018.

²⁶ See E-commerce Europe (2018), European B2C ecommerce still growing fast, with national markets moving at different speeds, press release of July 2, 2018. This estimation includes non-EU/EEA countries like Russia, Serbia, Turkey and Ukraine.

²⁷ See E-commerce Europe (2018), European Ecommerce Report 2018 Edition, Eurostat.

²⁸ See IPC (2018), Cross-border e-commerce, presented by Mark Harrison, 8 June 2018.

Promoting cross-border e-commerce is one of the pillars to achieving the Digital Single Market. Research from different sources suggests that the growth in cross-border e-commerce is outperforming growth in domestic e-commerce markets. Forrester estimates that global cross-border online sales will make up 20% of e-commerce in 2022, with sales reaching USD 627 billion, up from Forrester's previous forecast which predicted cross-border e-commerce would reach USD 284 billion in 2017.²⁹ Accenture-AliResearch estimates that global cross-border B2C transaction values will increase from USD 236 billion in 2014 to USD 994 billion by 2020.³⁰ IPC estimated that global revenues in cross-border e-commerce accounted for 15% on total in 2015 and will increase to nearly one quarter by 2021 (to more than USD 1 billion, more than quadrupled compared to 2015 cross-border e-commerce sales, see Figure 5).³¹ DHL expects that the share of cross-border e-commerce on global e-commerce increase from 15% in 2015 to around 22% in 2020.³² Ongoing growth of global e-commerce is also expected by an e-commerce expert at PostNord, particularly driven by global online marketplaces: "My prediction is that global e-commerce will continue to grow, not led by individual countries but via huge digital marketplaces such as Amazon and Alibaba. With their vast offerings, powerful marketing muscles and global logistics solutions, e-commerce giants such as these may also enable small and local businesses to reach customers worldwide – and in the long run make e-commerce a truly borderless enterprise."³³

The largest e-commerce markets in Europe by revenue are the UK, Germany and France, followed by Spain, the Netherlands and Italy.

²⁹ See Forrester (2017), Cross-border e-commerce will reach \$627 billion by 2022.

³⁰ See AliResearch / Accenture (2016), Global Cross Border B2C e-Commerce Market 2020, p. 2.

³¹ See IPC (2018), Cross-border E-commerce, Market overview and consumer preferences, presented by Mark Harrison on 8 June 2018.

³² See DHL (2016), The 21st Century Spice Trade, p. 7.

³³ See PostNord (2017), E-commerce in Europe 2017, p. 6.

The volume growth in the European parcel market is basically driven by the growth in domestic and cross-border e-commerce. The upper part of Figure 6 shows that the average share of individuals in the EU that purchase online increased from 47% in 2013 to 57% in 2017. At the same time, the share of consumers buying online across borders increased from 15% in 2013 to 24% in 2017. Generally, the share of cross-border purchases increased with the usage of online shopping. The picture is somewhat different when looking at the share of individuals purchasing across borders. Firstly, there is a

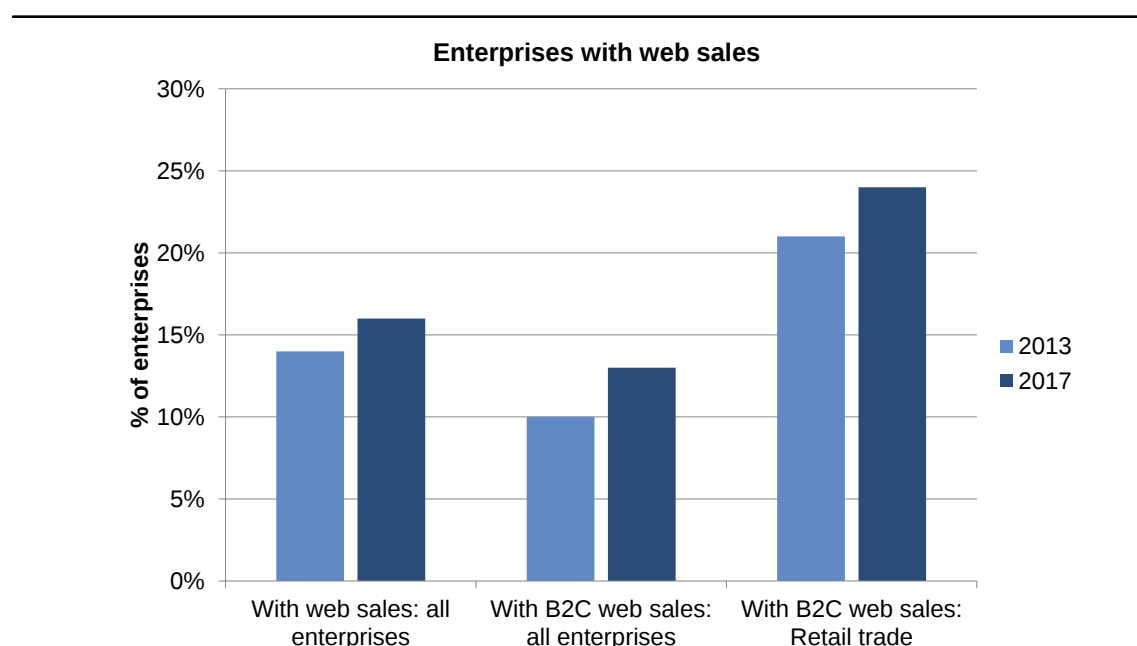
tendency that cross-border purchases increase with the share of online buyers. Secondly, particularly consumers in small MS buy abroad more often (e.g. Iceland, Malta and Luxembourg).

The lower part of Figure 6 shows the e-commerce revenues per capita and their average growth rates. The figures illustrate that the e-commerce markets in the Western and Northern EU MS are substantially more mature than most Eastern and Southern EU MS. B2C e-commerce markets continue to expand in all MS. Higher growth rates in the less advanced e-commerce markets indicate that these markets have been slowly catching up to the more mature e-commerce markets. Structural differences between the country groups in terms of purchasing power and income per capita, broadband infrastructure and other factors may still limit the growth potential of e-commerce revenues in these MS in the short and medium term.

2.1.2 Growing share of enterprises provide web sales

The average share of enterprises with web sales in EU-28 increased from 14% to 16% between 2013 and 2017.

Figure 7 Web sales of enterprises (2017)



Source: Eurostat [isoc_ec_eseln2], extracted on 10.7.2018.

Note: Enterprises with more than 9 employees.

Web sales include (1) sales through own website and / or through platforms and (2) sales to consumers as well as businesses and public institutions.

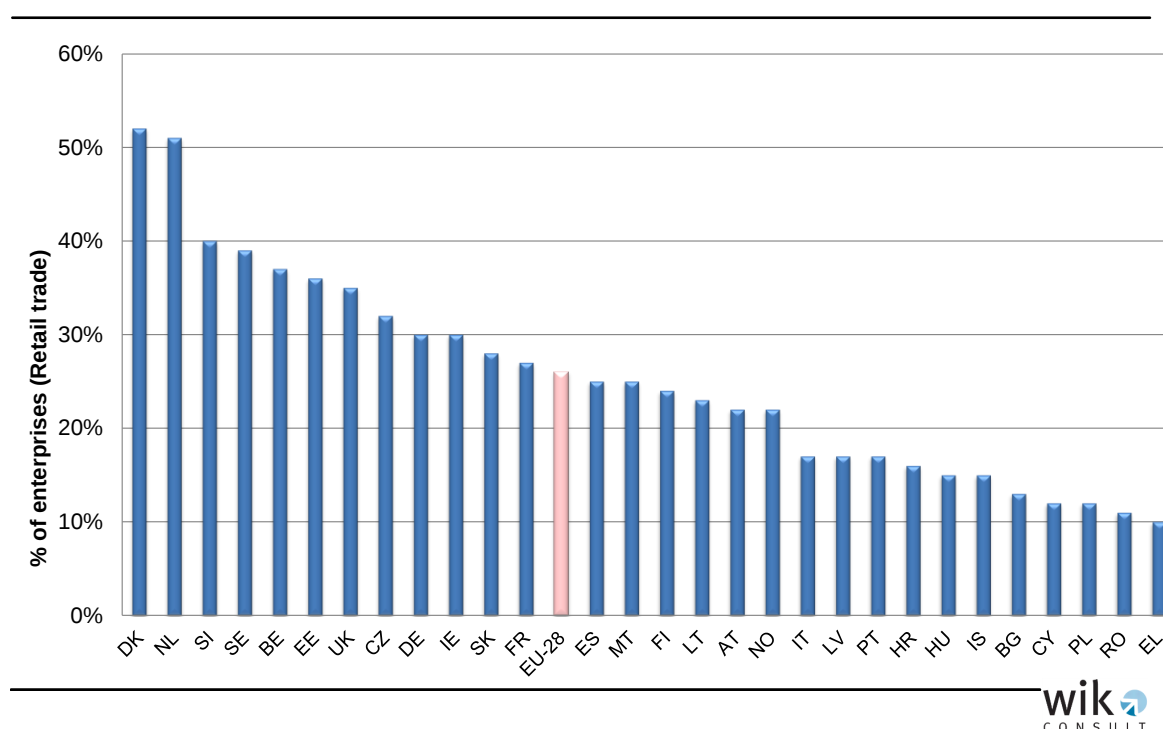
The share of enterprises with B2C web sales is lower because these enterprises come from different sectors such as manufacturing, services, wholesale and retail trade, that

partly have a focus on B2B business. When considering the retail trade sector separately, the share of enterprises with B2C web sales is more than a fifth higher compared to all enterprises. It increased by three percentage points between 2013 and 2017 (from 21% to 24%).

2.1.3 The share of retailers with B2C web sales varies among Member States

Recently published Eurostat data indicates that the share of enterprises in retail trade with B2C web sales further increased in 2018, by two percentage points to 26% (see Figure 8).

Figure 8 B2C web sales of enterprises in retail trade (2018)



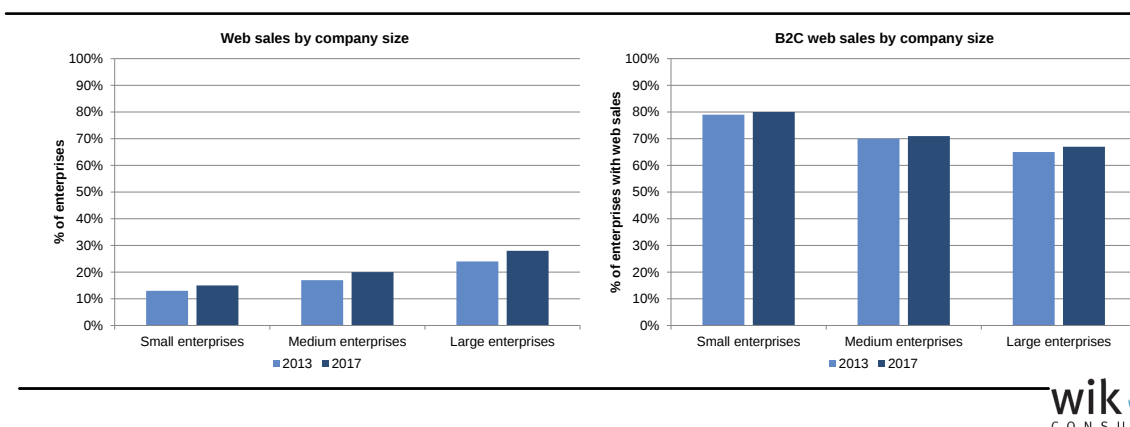
Source: Eurostat [isoc_ec_eseln2], extracted on 10.7.2018.

Note: No data available for Luxembourg.

The share of enterprises in retail trade with B2C web sales is generally much higher than the share of total enterprises as Eurostat data shows. On average, 26% of retailers are active in B2C web sales compared to 13% of all enterprises. At country level, the picture is more mixed. In 2018, more than half of Dutch and Danish retailers sold online to consumers. A high share of retailers with B2C web sales is also visible in some Eastern EU MS with shares well above 25% (Slovenia, Estonia and the Czech and Slovak Republic). However, in some Eastern and Southern EU MS, including large MS like Italy, Poland, Bulgaria and Romania, far less than 20% of enterprises in retail trade sell online to consumers.

2.1.4 Small enterprises are more active in B2C web sales

Figure 9 Enterprises with web sales: Company size and B2C web sales (EU-28, 2017)



Source: Eurostat [isoc_ec_eseln2], extracted on 10.7.2018.

The share of companies with web sales increased regardless of company size. However, the smaller the companies are in terms of their total number of employees, the lower is their share (see on the left hand side in Figure 9). While only 15% of small enterprises sell online, 28% of large companies do so. The right hand side of Figure 9 shows that the share of small enterprises selling online to consumers (B2C web sales) is 80% which is substantially higher than the corresponding share of large enterprises with 67%. The shares across all company sizes have slightly increased since 2013.

2.1.5 Most e-retailers are very small companies with revenues below EUR 100,000

The Eurostat data indicate that the number of small e-retailers is very high. While data on the distribution of e-retailers in terms of total revenues are rare, there are strong indications that the vast majority of e-retailers is rather small with annual revenues significantly lower than EUR 100,000. Depending on the size of the country, the biggest e-retailers (which may include huge ones like Amazon or Zalando) account for more than 50% of total e-commerce revenues:

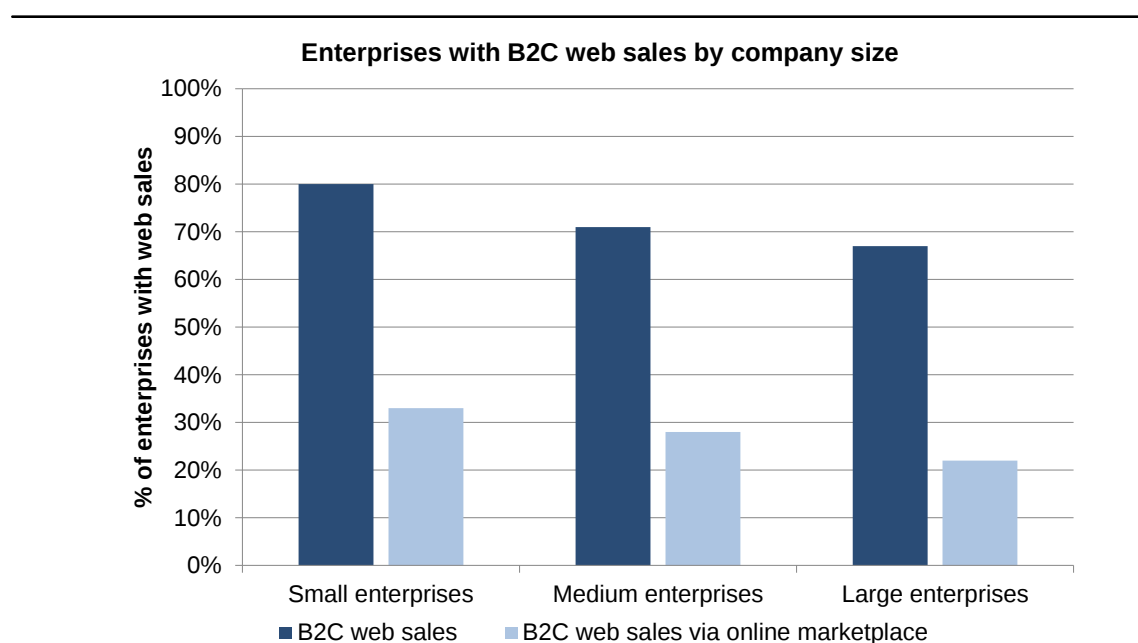
- France: The French e-commerce association, Fevad, estimates that there were 182,000 active merchant sites in 2017 (from 14,500 sites in 2005). More than three quarters have revenues of less than EUR 100,000 per year which accounts for 2.5% of total e-commerce revenues while 0.6% of the sites account for two thirds of total e-commerce revenues (with revenues per site above EUR 10 million).³⁴

³⁴ See Fevad (2018), E-commerce in France – Key Figures.

- Germany: EHI/Statista³⁵ estimates that in 2017 the TOP 100 online shops generated a total revenue of EUR 30 billion. The TOP 3 (Amazon, Otto and Zalando) have combined revenues of more than EUR 13 billion, i.e. more than 40% of the TOP 100 revenues. In another German e-commerce study, the authors assume that the TOP 500 online shops account for 80% of total e-commerce revenues.³⁶
- Austria: The TOP 100 online shops had total revenues of EUR 2.1 billion (2016) with the TOP 3 (Amazon, Zalando and Universal) reaching around 40% of these revenues.
- The Netherlands: The TOP 10 online shops in the Netherlands generated a total revenue of nearly EUR 5 billion (around 25% of total e-commerce sales), the TOP 3 (bol.com, coolblue and Zalando) account for more than half of these revenues.³⁷

2.1.6 Online marketplaces provide an important sales channel particularly for small and micro e-retailers

Figure 10 Enterprises with B2C web sales and the use of online marketplaces (EU-28, 2017)



Source: Eurostat [isoc_ec_eseln2], extracted on 10.7.2018.

³⁵ See EHI (2018), Top 100 umsatzstärkste Onlineshops in Deutschland, press release of 9 September 2018.

³⁶ See DHL / IFH Köln (2018), Onlinehändler im Spannungsfeld von Wachstum und Marktkonzentration.

³⁷ See logistiek.nl (2018), Bol.com weer grootste e-commerce bedrijf van Nederland, published on 5 October 2018.

Eurostat data indicate that the smaller the enterprise the higher the share of using online marketplaces for B2C web sales becomes. 33% of small enterprises with B2C web sales used online marketplaces while only 22% of large enterprises used them in 2017 (see Figure 10). Selling on platforms is particularly preferred by enterprises located in Germany, Italy, Austria and Poland with shares above 40%.³⁸ Nonetheless, many enterprises use a combination of online sales channels or even a combination of online and offline sales channels. Generally, online marketplaces facilitate enterprises to sell online by providing support services (marketing, payment and other fulfilment services) and exposure to a broader community. This is particularly useful for micro and small enterprises that frequently face limitations in financial and technical capacity as well as in digital skills.

The structure of sellers on online marketplaces by company size appears to be even more biased in favour of small sellers than for e-retailers selling on their own web shop. While the number of sellers on marketplaces such as Amazon or Ebay is quite high, only a very small fraction of these sellers achieve revenues above USD 100,000, as an example of the Amazon marketplaces shows:

Amazon reports that in 2017 more than 50% of all products were sold by sellers using Amazon marketplaces. The total number of active sellers on Amazon marketplaces is unknown. This number might be very high if considering that (1) in 2018 more than one million new sellers have joined one of their international platforms³⁹ and (2) there were more than one million US-based businesses registered on Amazon in 2017⁴⁰. Of all Amazon sellers worldwide around 140,000 sellers have generated revenues above USD 100,000⁴¹ and more than 20,000 marketplace sellers worldwide surpassed USD 1 million in 2017.⁴²

The high share of micro e-retailers on marketplaces is also supported by metrics published by the French e-commerce association (Fevad). They report that 38% of e-retailers with more than 10 employees sell on marketplaces while half of e-retailers with less than 10 employees do so.⁴³

Online marketplaces are becoming increasingly important in B2C e-commerce. Marketplaces equip sellers with a relatively easy and cost-effective way to sell their products since it enables e-retailers to reach a large number of potential customers. However, there are also concerns. Competition within online marketplaces is fierce due to more transparency of operations. Consumers can easily search and compare prices

³⁸ Eurostat [isoc_ec_eseln2], retrieved on 10.7.2018.

³⁹ See Marketplace Pulse, One Million New Sellers on Amazon, published on 22 October 2018.

⁴⁰ See Amazon (2018), Small Business Impact Report.

⁴¹ See Marketplace Pulse, marketplacepulse.com/stats/amazon, Amazon Number of Sellers With Over \$100,000 in Sales (based on Amazon Quarterly Results), retrieved on 7 October 2018.

⁴² See Amazon (2018), Small Business Impact Report.

⁴³ See Fevad (2018), E-commerce in France, Key Figures 2018, p. 3.

between different offers, therefore e-retailers' success in the marketplace highly depends on positive customer feedback.

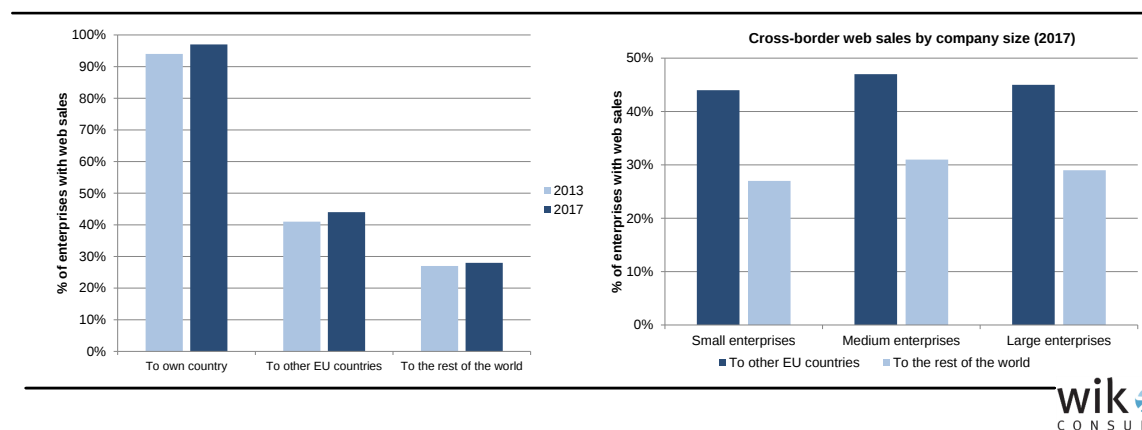
- A survey among 1,200 Amazon sellers in the United States revealed that more than 30% of sellers' greatest concerns are competition with Amazon, the affordability of marketplace fees, and negative customer reviews.⁴⁴
- A survey among 152 German e-retailers lists following TOP 3 challenges when selling on online marketplaces: High fees, fierce competition, and dependency on the marketplace provider. The vast majority of these respondents operates Amazon and/or Ebay.⁴⁵

In Europe, Amazon and Ebay are the dominant online marketplaces⁴⁶, but they are not dominant in every country and they are definitely not the only online marketplaces. The German association BVOH identified 335 online marketplaces throughout Europe in 2015.⁴⁷ Today, the total number of online marketplaces would likely be even higher.

2.2 Cross-border online sales

2.2.1 More than 40% of enterprises with web sales sell across borders

Figure 11 Enterprises with cross-border web sales



Source: Eurostat [isoc_ec_eseln2], extracted on 10.7.2018.

Data from Eurostat confirm that the share of enterprises with cross-border online sales increased between 2013 and 2017 (see Figure 11, left hand side). The share of enterprises with web sales to other EU MS and the rest of the world increased to 44% and 28% respectively in 2017. There is no significant difference between the share of

⁴⁴ See Feedvisor (2018), The state of the Amazon marketplace 2018.

⁴⁵ See DHL/IFH Köln (2018), Onlinehändler im Spannungsfeld von Wachstum und Marktkonzentration.

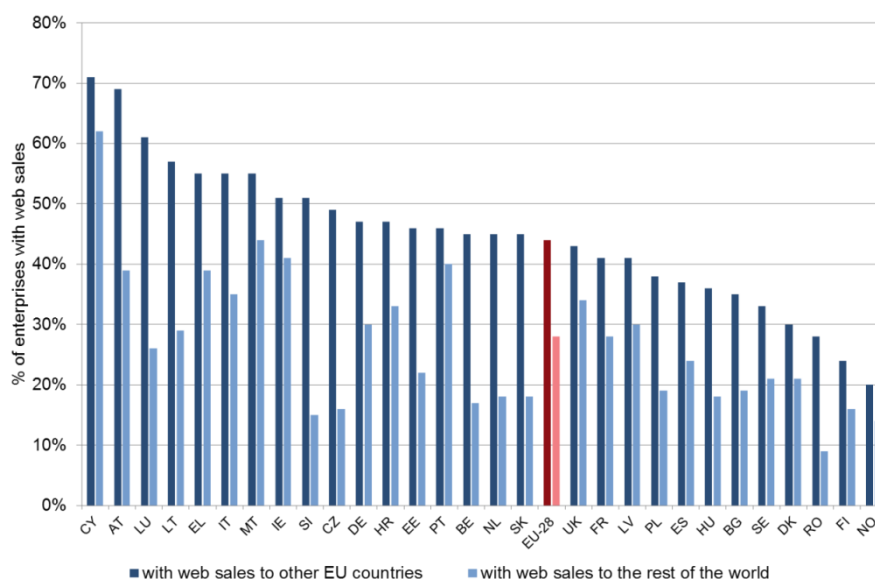
⁴⁶ See Ecommerce Europe (2018), European Ecommerce Report 2018 Edition

⁴⁷ See Bundesverband Onlinehandel BVOH (2015), Marketplaces across Europe,

enterprises with cross-border web sales by company size (at least for companies with more than 9 employees).

2.2.2 Enterprises in small Member States are more active in cross-border sales than companies in large Member States

Figure 12 Share of enterprises with web sales to other countries (2017)



Source: Eurostat [isoc_ec_eseln2], extracted on 10.7.2018.

Note: No data available for Iceland.

Enterprises with cross-border web sales mostly sell to other EU MS. This is notably the case in small MS like Cyprus, Luxembourg, Greece, Ireland, Slovenia and Malta. The share of cross-border sellers in MS with large domestic retail markets like Germany, France, Poland and the UK is much lower. It appears that with the increasing size of the domestic retail market (in terms of the number of inhabitants) the incentives to expand internationally become weaker. Similarly, relatively low shares of cross-border web sales are observed in the Nordic MS, where retail prices are relatively high. However, with rising competition in domestic e-commerce markets, e-retailers in MS like Germany and the UK increasingly search for business opportunities across borders.

Royal Mail conducted some research on the behaviour of small and medium-sized e-retailers in the largest e-commerce ecosystem in Europe, the UK.⁴⁸ According to their findings, UK e-retailers are highly export-oriented with more than half of online sales en

⁴⁸ See Royal Mail (2018), UK SME Exports Show Marked Growth, Up 30 Per Cent Since 2016, press notice published 4 September 2018 and Small Business Advice Week. The research was carried out online between 22nd August 2018 and 25th August 2018 in support of Small Business Advice Week. The sample comprised 534 UK decision makers in SMEs (1-249 employees).

route to destinations outside the UK in 2018, up from 40% two years ago. The majority of e-retailers in the UK operates in international online marketplaces. According to this survey, the main reasons to not sell across borders are high costs and the complexity of getting through customs, knowledge of the destination market, and risks associated with currency conversion. Furthermore, their most recent research revealed that nearly 70% of UK SME online retailers sell their products 'overseas'.⁴⁹

2.2.3 The majority of enterprises with web sales do not follow a dedicated internationalisation strategy

These statistics do not provide any details whether e-retailers occasionally sell across borders or whether they follow a more dedicated internationalisation strategy with localised websites. A content analysis of websites by the Amsterdam University of Applied Science⁵⁰ provides interesting insights into the aspect of cross-border sales. They analysed more than 8,500 online shops with head offices in one of 31 European countries and conclude that

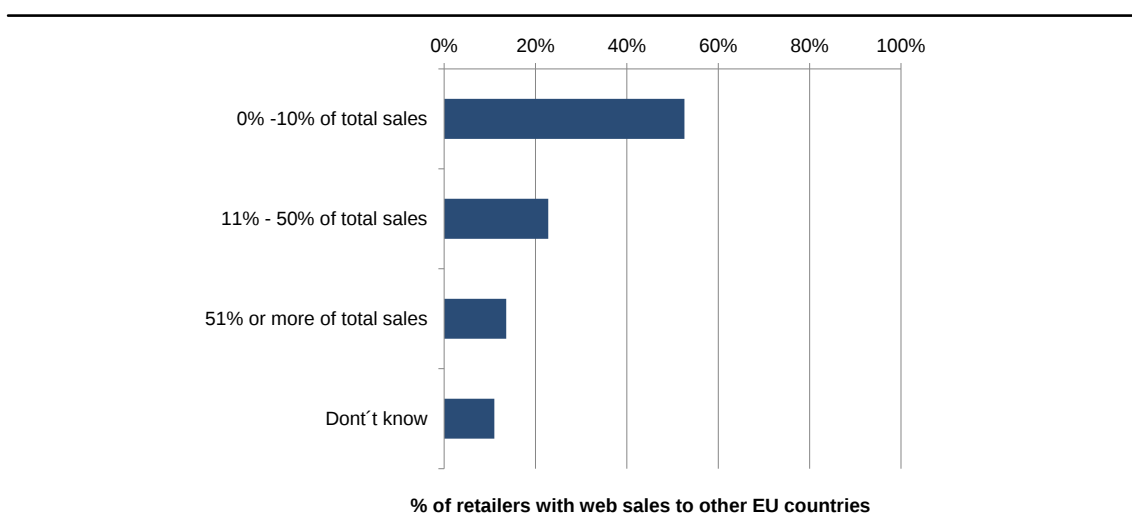
- the vast majority of online shops only have a single website (97.1%), while only 2.8% have country specific websites or web pages (i.e. a dedicated online shop in a country different from the home country).
- the average traffic for online shops with a single website was on average 12,500 site visits per month. This was much lower than the traffic of online shops with dedicated country specific web pages or websites that amounted to 370,000 visits per month. This would suggest that online shops with a dedicated internationalisation strategy are better off in terms of traffic and demand compared to online shops with only single websites.
- accordingly, the share of cross-border web visitors to total visits was less than one quarter for online shops with a single website while online shops with country-specific websites and web pages achieved shares of more than 50% and nearly two thirds of total visits, respectively.

As a result, the survey shows that the success of international online sales depends on the approach followed to achieve international expansion. Moreover, it suggests that the vast majority of e-retailers either only occasionally sells across borders or only target customers in those countries without major barriers in terms of culture, language and consumer habits as a way to avoid the development of customised web shops.

⁴⁹ See Royal Mail (2019), Overseas sales remain important as online retailers express confidence for 2019, says Royal Mail, published 11 January 2019.

⁵⁰ See Amsterdam University of Applied Science (2017), The State of Cross-border Ecommerce in Europe. The results are based on a content analysis of websites of European online retailers from May 2015-April 2016 (n=8,570 in 31 countries) and an additional content analysis between June and July 2017 (n=692 in 20 countries). It covers online shops with headquarters in one of the 31 countries (thus not including Amazon or Ebay) and focuses on e-retailers selling products to consumers;
<https://public.tableau.com/profile/cmihva#!/vizhome/TheStateofCross-borderEcommerceinEurope>.

Figure 13 Share of revenues from cross-border sales to other EU MS (EU-28, 2016)



Source: TNS (2017), Retailers' attitudes towards cross-border trade and consumer protection 2016.

According to the TNS survey, web sales to other EU MS account for up to 10% of total sales for more than half of retailers. This result also indicates that the vast majority of e-retailers do not follow a dedicated internationalisation strategy.

A non-representative e-retailer survey of Ecommerce Europe⁵¹ with more than 500 respondents additionally found that the majority of the respondents primarily sell directly from their country of origin (more than 80%). Other strategies applied to develop their businesses internationally were to establish a presence in marketplaces abroad and/or to establish a branch (a local web shop) abroad. This would suggest that particularly micro and very small e-retailers, with less than 25 employees, find it difficult of doing business across borders in Europe.

2.3 Opportunities and challenges in cross-border e-commerce

2.3.1 Reach more customers due to international expansion and reduce dependency on the domestic market

E-commerce represents a significant opportunity for fast and (relatively) low risk international expansion for businesses. In contrast to conventional street shops, online shops can easily be visited by customers living elsewhere in the country or even abroad. Accordingly, e-commerce broadens the potential customer base domestically and internationally. Although there exist considerable growth potentials in cross-border

⁵¹ Ecommerce Europe (2016), Cross-border E-commerce Barometer 2016.

e-commerce, only a very small fraction of e-retailers implements dedicated internationalisation strategies with localised websites and country-specific fulfilment services. Most e-retailers appear to prefer occasional cross-border sales rather than large scale international sales operations. An increasing number of web visitors and e-shoppers from abroad is an indicator for potential demand. Ideally, in combination with positive past experiences with cross-border sales, this drives e-retailers to consider expanding their cross-border business.⁵²

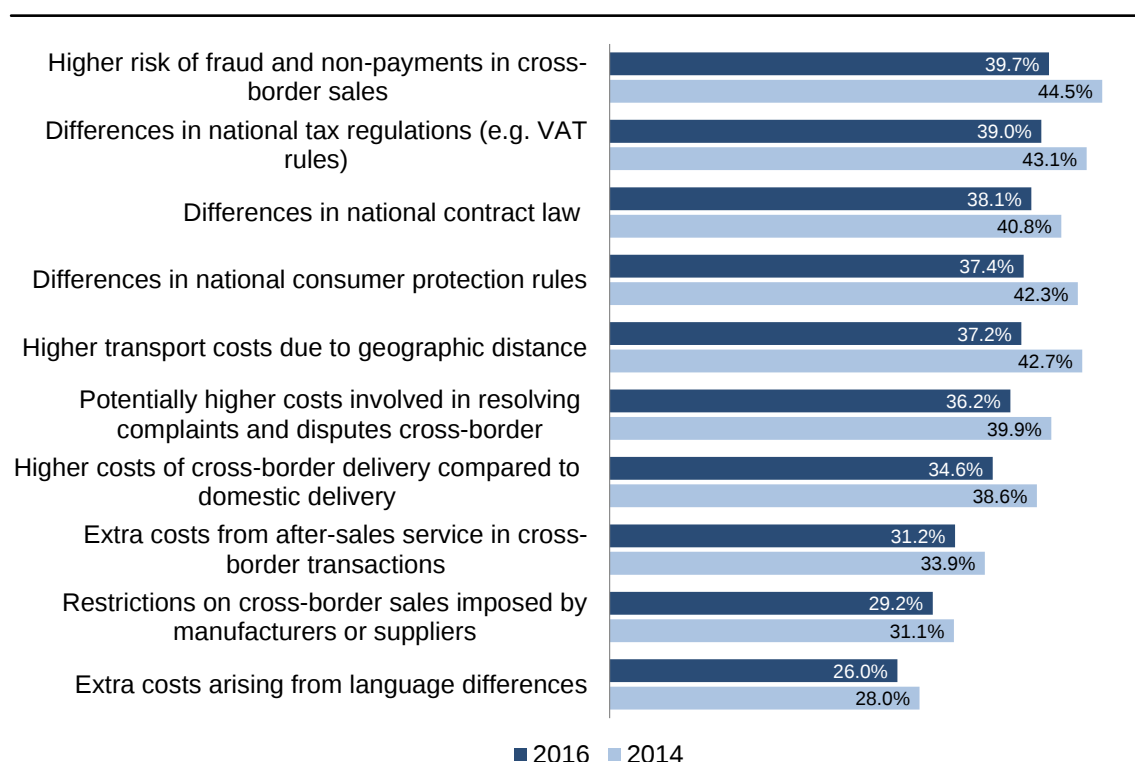
In particular, e-retailers located in highly competitive e-commerce markets may have a stronger incentive to expand internationally. Gaining market shares in competitive domestic e-commerce markets requires more effort (and costs) than expanding into less developed foreign e-commerce markets with more growth potential. Highly competitive e-commerce markets are characterised by a large number of SME e-retailers alongside large and very large e-retailers, powerful online marketplaces, and a large share of consumers already purchasing online. This is, for example, the case in Germany and the UK. Increasing demand for the fulfilment of cross-border e-commerce, including delivery and return solutions, then also drive the supply of such services.

Conversely, many e-retailers may consider cross-border sales as welcome additional business, but they do not have distinct ambitions to promote international sales due to limited financial, legal and operational resources. The barriers of entry into cross-border e-commerce are comparatively higher for micro and small e-retailers than for large e-retailers. However, these barriers are becoming less cumbersome for those e-retailers located in highly developed e-commerce markets.

⁵² See Amsterdam University of Applied Sciences (2017), The State of Cross-border Ecommerce in Europe, Drivers for cross-border ecommerce among European online shops (<https://public.tableau.com/profile/cmihva#!/vizhome/TheStateofCross-borderEcommerceinEurope/Cross-borderE-Commerce>)

2.3.2 Fraud and differences in national regulations are more important barriers for cross-border sales to other EU Member States than transport & delivery costs

Figure 14 Barriers for developing cross-border sales to other EU MS (EU-28, 2014 and 2016)



Source: TNS (2017), Retailers' attitudes towards cross-border trade and consumer protection 2016.

Note: % of retailers currently selling online that consider the item as important.

Figure 14 provides an overview of major challenges when selling online to other EU MS in the view of retailers with web sales. Fraud (no. 1) and regulatory topics (no. 2-4) are major issues for cross-border sales. Regulatory topics include tax regulations, contract laws and consumer protection rules which vary among MS. These are followed by more operational topics, including transport/delivery costs and extra costs for translation and after-sales-services. In contrast, however, more than half of the surveyed retailers with web sales do not see specific challenges when selling items across borders. For all of the reported barriers, the share of retailers considering them as important obstacles is lower in 2016 compared to 2014, particularly for transport costs (by 5.5 percentage points) and differences in national consumer protection rules (by 4.9 percentage points). Regarding the cost differences between cross-border and domestic deliveries, the share dropped by four percentage points in 2016.

Overall, the TNS survey suggests that there are three major barriers for expanding e-commerce activities to other EU MS

- Risk of fraud and non-payment (i.e. no trust in foreign e-commerce markets and their buyers)
- Differences in legislation and tax regulations
- Higher transport costs due to distance and/or higher costs for cross-border deliveries compared to domestic deliveries.

2.3.3 Expanding internationally requires significant financial, legal, technical and operational capacities

Expanding internationally requires e-retailers to develop a strategy regarding the manner of expansion and how much to invest in the localisation of their online shop. At this point, internationalisation may require significant financial, technological, operational and regulatory capacities which impede, in particular, small and medium-sized e-retailers to grow across borders. E-retailers have to consider aspects such as

- Doing market research: Identification and analysis of appropriate target markets (growth potential, competition, price levels);
- Considering legal and tax regulation issues in destination countries;
- Considering cultural differences (marketing, product presentation, delivery/return and payment habits, etc.);
- Speaking the local language (translations and after-sales services);
- Managing international payments;
- Analysing international shipping conditions and/or use a (local) fulfilment service;
- Meeting the local legal and regulatory requirements: Learning about tax and customs, transport restrictions (not harmonised, even within the EU/EEA), as well as regulations related to consumer and data protection;
- Considering returns (and associated costs);
- Considering exchange rate fluctuations (not relevant in the Euro-Zone).

To minimise such investments and to avoid capacity limitations, every internationalisation strategy starts with prioritising potential target countries and identifying those countries where the e-retailer would be able to grow without many additional investments ('identify the easy wins').⁵³ This includes taking account of the growth prospects in the target market and the level of operational complexity in terms of language proficiency, cost of shipping, and ease of payment processing.

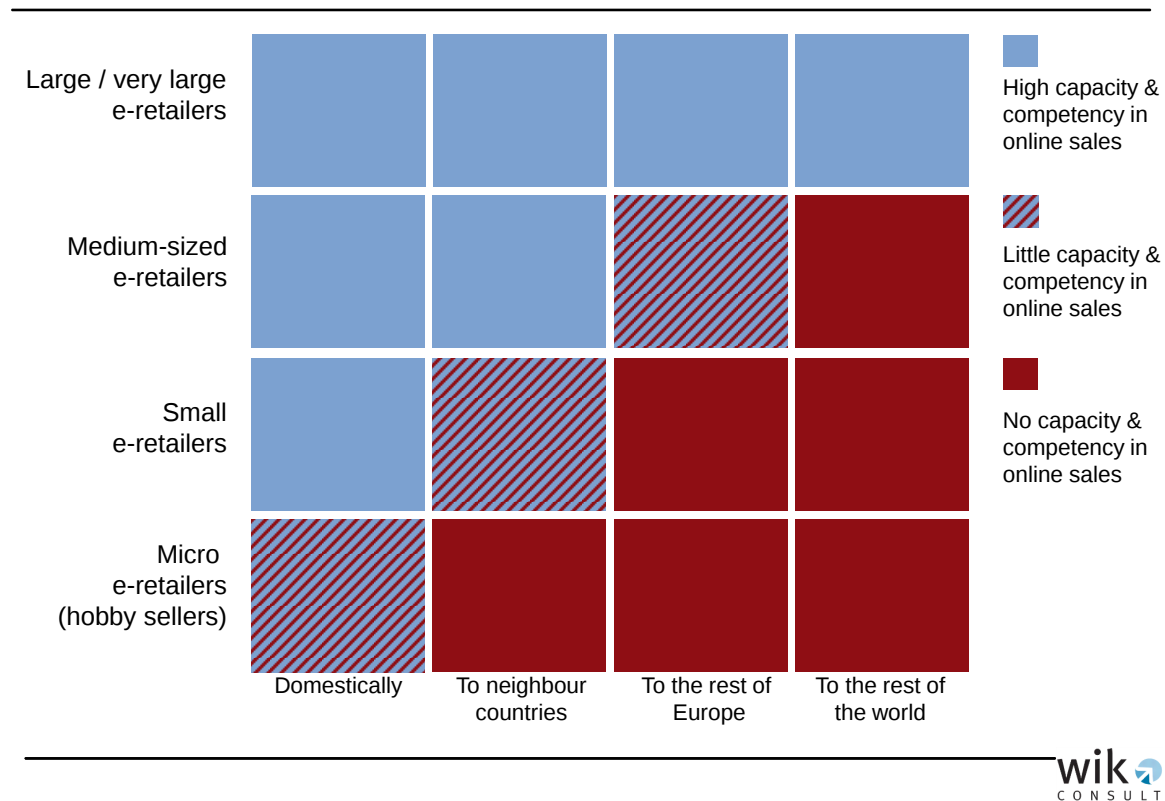
⁵³ See OC&C (2014), The Global Retail e-mpire.

Domestic e-commerce markets are characterised by a very small number of large and powerful e-retailers and a huge number of small e-retailers and hobby sellers. MS that are late starters in e-commerce (as many Eastern and Southern EU MS are and where mail order business did not play any role in the past) and/or characterised by relatively small domestic retail markets (as for example very small countries and islands like Iceland, Malta and Cyprus but also countries like Ireland and Portugal) may not have such large or very large e-retailers in their countries.

During interviews and the national workshops, stakeholders highlighted that differences in regulations and taxing rules, cultural differences and language issues, and dealing with cross-border returns are more important barriers for cross-border sales than higher delivery costs and management of cross-border deliveries. In particular, small e-retailers are more affected by these barriers because they do not have the operational, technological and legal capacities to adequately address each of these challenges. Another outcome was that cross-border parcel logistics are not considered as a barrier at all, but rather as a manageable challenge that is increasingly addressed by innovative solutions and emerging new service providers in these countries. This is particularly true for more developed e-commerce markets such as in Belgium, Denmark, Germany and Sweden. The situation is different in countries with less developed e-commerce markets like Bulgaria, Greece and Portugal. In the latter mentioned MS, e-retailers have less capacity for international growth while also having a lack of available support service providers. Additionally, some of them have to deal with more basic barriers like limitations in broadband access (in Bulgaria and Greece), and low levels of trust in e-commerce purchases in general. On top of this, e-retailers in low developed e-commerce markets have less choice of appropriate domestic and, in particular, cross-border delivery services.

However, legal and basic commercial requirements do not vary with the size of the e-retailer. Small e-retailers have to meet the same regulatory requirements (particularly in relation to consumers rights) as large e-retailers. They have to deal with all aspects of the e-commerce supply chain, the same as large e-retailers. This limits the capacities of this group of small e-retailers to expand internationally.

Figure 15 E-retailers' capacity and competencies in online sales



Source: WIK-Consult

Figure 15 illustrates the stylized relationship between e-retailers' size and their capacity and competency of doing e-commerce domestically or internationally. The capacity of doing e-commerce includes all aspects of the business regarding the delivery of e-commerce purchases and the handling of returns as another important aspect.

Subsequently, many e-retailers often sell to neighbouring countries that are most similar to their home market in terms of language and culture, and shipping costs are usually lower (e.g. Germany/Austria/Switzerland, BeNeLux, France/Belgium), see Table 1. In this specific case (same language), e-retailers have no specific need to adjust the online shop except for allowing for cross-border deliveries and returns.

Table 1 TOP 3 countries retailers sell to (2014)

	TOP3 countries retailers sell to		
AT	Germany	Italy	Czech Republic
BE	France	Netherlands	Germany
BG	Germany	Greece	Romania
CY	Greece	United Kingdom	Germany
CZ	Slovakia	Germany	Poland
DE	Austria	France	Netherlands
DK	Sweden	Germany	United Kingdom
EE	Finland	Latvia	Lithuania
EL	Germany	United Kingdom	France
ES	Germany	France	United Kingdom
FI	Sweden	Estonia	Germany
FR	Belgium	Germany	United Kingdom
HR	Germany	Slovenia	Austria
HU	Austria	Slovakia	Germany
IE	United Kingdom	Germany	France
IS	Germany	United Kingdom	Denmark
IT	Germany	France	Netherlands
LT	Latvia	Germany	Poland
LU	Belgium	France	Germany
LV	Lithuania	Estonia	Germany
MT	United Kingdom	Italy	Germany
NL	Belgium	Germany	France
NO	Sweden	United Kingdom	Germany
PL	Germany	Czech Republic	France
PT	Spain	France	Germany
RO	Germany	Italy	France
SE	Denmark	Germany	Finland
SI	Austria	Croatia	Germany
SK	Czech Republic	Austria	Germany
UK	Germany	France	Spain

Source: Flash Eurobarometer 396 (2015), Retailers' attitudes towards cross-border trade and consumer protection.

Note: Neighbouring countries are grey-marked.

2.3.4 International online marketplaces can promote internationalisation of small e-retailers

International online marketplaces can be an important tool to expand internationally particularly for small and medium-sized e-retailers not only from Europe but also from countries outside of Europe (notably from Asia). Generally, online marketplaces reduce cross-border complexities for sellers and are able to make international expansion more scalable since they support payment processes, localise marketing activities and may

support logistical processes. The required investment for international expansion of marketplaces is much lower compared to launching a localised website or even a local online shop. Online marketplaces offer a wide variety of products from multiple retailers and brands at competitive prices, by means of a uniform service, adding trust and making customers feel secure about their purchases. Being aware that intelligent localisation is crucial, online marketplaces are available in different languages, have developed localised marketing strategies, and offer customer services in multiple languages. Moreover, they also support retailers in their logistical operations offering fulfilment services aimed at reducing time of delivery, both shipping internationally and delivering the last mile locally. Additionally, online marketplaces represent an opportunity for SME e-retailers to gain exposure in international markets which they would like to penetrate and test the attractiveness of their products, as well as to collect insights about markets and customers. This may help e-retailers decide whether to invest additional money and launch a localised online shop in the target country.

For small e-retailers looking to penetrate international markets, an established online marketplace offers the necessary tools with less risk and investment. The behaviour of UK SME e-retailers also highlights the trend of using existing online marketplaces for international e-commerce sales. According to Royal Mail research, over half of UK SMEs sold to customers outside of the UK in 2017, up from 40% in 2016. Nearly 40% of cross-border sellers did so by using international marketplaces. This share has increased to 60% since 2016.⁵⁴

Support for the importance of online marketplaces for cross-border sales is impressive when analyzing the TOP 3 e-commerce websites (by revenues or site visits) of each EU/EEA country.

⁵⁴ See Royal Mail (2018), UK SME Exports Show Marked Growth, Up 30 Per Cent Since 2016, press release 4 September 2018

Table 2 TOP 3 e-commerce websites

	TOP 1	TOP 2	TOP 3	Indicator
AT	amazon.de	zalando.at	universal.at	revenue
BE	coolblue.be	bol.com	amazon.fr	revenue
BG	olx.bg	bezar.bg	aliexpress.com	site visits
CY	amazon.co.uk	bazaraki.com	amazon.com	site visits
CZ	heureka.cz	bazos.cz	alza.cz	site visits
DE	amazon.de	otto.de	zalando.de	revenue
DK	elgiganten.dk	saxo.com	apple.com	revenue
EE	aliexpress.com	okidoki.ee	online.ee	site visits
EL	skroutz.gr	ebay.com	xe.gr	site visits
ES	amazon.es	elcorteingles.es	pccomponents.com	revenue
FI	verkkokauppa.com	gigantti.fi	zalando.fi	revenue
FR	vente-privee.com	amazon.fr	cdiscout.com	revenue
HR	njuskalo.hr	ebay.com	aliexpress.com	site visits
HU	jofogas.hu	arukereso.hu	ebay.com	site visits
IE	argos.ie	amazon.co.uk	tesco.ie	revenue
IS	amazon.com	aliexpress.com	ebay.com	site visits
IT	amazon.it	zalando.it	apple.com	revenue
LT	skelbiu.lt	aliexpress.com	pigu.lt	site visits
LU	amazon.de	amazon.fr	ebay.de	site visits
LV	aliexpress.com	1a.lv	ebay.com	site visits
MT	ebay.co.uk	ebay.com	amazon.co.uk	site visits
NL	bol.com	coolblue.nl	zalando.nl	revenue
NO	komplett.no	kolonial.no	coop.no	revenue
PL	allegro.pl	olx.pl	ceneo.pl	site visits
PT	amazon.com	worten.pt	laredoute.pt	revenue
RO	olx.ro	emag.ro	aliexpress.com	site visits
SE	netonnet.se	elgiganten.se	webhallen.com	revenue
SI	bolha.com	mimovrste.com	aliexpress.com	site visits
SK	bazos.sk	heureka.sk	alza.sk	site visits
UK	amazon.co.uk	tesco.com	argos.co.uk	revenue

Source: SimilarWeb (site-visits) and Ecommercedb (revenue), extracted in October 2018

Note: The international online marketplaces Amazon and Ebay, both originated from the USA, and Chinese Alibaba are grey-marked.

Table 2 presents the TOP 3 e-commerce websites of each EU/EEA country. The international platforms Amazon (US), Ebay (US), Aliexpress (CN) and Zalando (DE) are grey/yellow-marked.

- Amazon is listed in 13 countries: It provides very successful online marketplaces in the largest Western and Southern EU MS, such as Germany, France and the UK, as well as in Italy and Spain. It is mainly ranked as TOP 1 in these MS (except for France). Moreover, local Amazon marketplaces are often used in neighbour MS (e.g. Belgium, Luxembourg, Portugal (on rank 5) and Austria). Finally,

amazon.com or amazon.co.uk are ranked in first place in Cyprus, Iceland, Malta and Portugal.

- Aliexpress is listed in eight MS: The Chinese online marketplace, Aliexpress, is often visited in the Baltic MS, including Bulgaria, Croatia, Romania and Slovenia, as well as in Iceland. The platform appears to be particularly successful in MS where Amazon is less prominent. One reason could be that Chinese e-retailers use the European Amazon marketplaces to sell their products in the Western and Southern EU MS (see Case study 1).
- Ebay is listed among the TOP 3 in seven, mostly smaller, EU MS, i.e. in Croatia, Greece, Iceland, Hungary, Latvia, Luxembourg, and Malta.

In some MS, international online marketplaces have not been as successful, so far. These include the Nordic countries (Denmark, Finland, Norway and Sweden) and the Netherlands, but also the Czech and the Slovak Republic as well as Poland (even though Amazon operates warehouses in these three MS). One reason for this, among others, is, for example, the high cost of labour in the Nordic countries. Another reason could be that in these countries, local online marketplaces are very popular such that these markets appear to be less attractive for entry by international online marketplaces, for example, bol.com in the Netherlands, Naspers-owned OLX in Bulgaria, Romania and Poland, Allegro in Poland (formerly owned by Naspers), and Schibsted-owned leading online marketplaces⁵⁵ in Finland (tori.fi), Norway (finn.no) and Sweden (blocket.se).

⁵⁵ Schibsted is a Norwegian media group and Naspers a South-African media group. By site visits (SimilarWeb, 2019).

Case study 1: Amazon marketplaces in Europe and the role of Chinese e-retailers

In Europe, Amazon is by far the biggest international online marketplace. They provide SME e-retailers the opportunity to sell on one or more of their five European marketplaces (in France, Germany, Italy, Spain and the UK) and combines this offer with the pan-European FBA as part of 'Fulfillment by Amazon'.

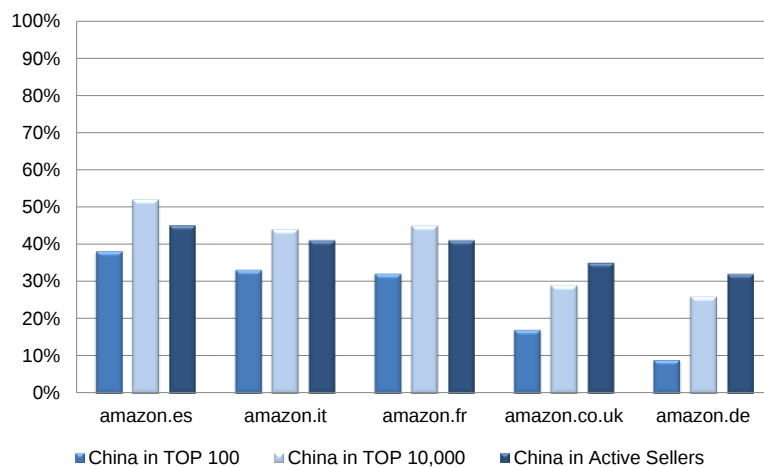
According to Marketplace Pulse

- 85% of Amazon.es,
- 80% of Amazon.fr,
- 79% of Amazon.it,
- 54% of Amazon.de, and
- 51% of Amazon.co.uk

marketplace sellers also sell on other European marketplaces. Around half of the TOP 1,000 sellers are active on all European marketplaces while around one quarter gets feedback from only one European marketplace. However, the European Amazon marketplaces are also used by many US and Chinese e-retailers to sell in Europe. The share of European e-retailers using more than one European marketplace of Amazon is not available.

E-retailers in Europe have to disclose their business location as part of European Union law, this also applies to sellers on online marketplaces active in Europe. The business information is analysed by Marketplace Pulse to determine what country the seller is located in.

Figure 16 China e-retailers' share of European Amazon marketplaces (2018)



Moreover, as highlighted in Figure 16, Chinese sellers are well represented on all European Amazon marketplaces which further drives Chinese imports. However, more than two thirds of Chinese sellers (in the TOP 10,000 on each of the European Amazon marketplaces) use Fulfillment by Amazon (FBA) deliver their products more quickly to European e-shoppers.

Source: Marketplacepulse.com/amazon/europe-cross-border-sellers, accessed on 6 November 2018; marketplacepulse.com (2018), China Sellers Share of Amazon Marketplace (accessed on 2 November 2018).

2.4 Conclusions

B2C e-commerce is growing at significant rates in all Member States

Ecommerce Europe estimates that the European B2C e-commerce market reached turnover valued at EUR 534 billion in 2017, up from EUR 307 billion in 2013. The European B2C e-commerce market is dominated by the three most prominent European markets, i.e. France, Germany and the UK. These markets account for around two thirds of total e-commerce revenues. Research from various sources suggests that growth in global cross-border e-commerce is outperforming growth in domestic e-commerce markets.

Growth in e-commerce is driven by an increasing share and frequency of consumers that shop online. While in many Western and Northern EU MS e-commerce penetration is already high, most Eastern and Southern EU MS still present much growth potential as the shares of online shoppers are still relatively low. Along with growing e-commerce penetration and thus increasing confidence in online shopping, the share of consumers' online shopping from abroad has also increased.

Not surprisingly, growth rates in e-commerce revenues are highest in the Eastern and Southern EU MS with ever emerging e-commerce markets, while B2C e-commerce has become more mature in most Western and Northern EU MS that already had a long tradition of long-distance selling in the past.

More than 40 per cent of enterprises with web sales also sell across borders

Growing demand from domestic as well as foreign online shoppers drives the supply of goods and services sold online which is reflected in a growing share of enterprises creating web shops and using the internet to reach their customers online. The share of retail trade companies selling products online is particularly high. Most enterprises with web sales generate e-commerce revenues of less than EUR 100,000 per year and are relatively small in terms of revenue (in online sales) and number of employees. They have limited capacities to develop their online business which is a rather complex task involving technical, operational, financial and legal challenges that are different from the requirements in case of stationary sales. Particularly for this group of e-retailers, online marketplaces are an important sales channel because they can reach a high number of potential customers and benefit from support services provided by the platforms.

Many enterprises with web sales also sell items across borders, in fact, more than 40%. In particular, e-retailers in smaller e-commerce and retail markets mainly sell to neighbouring countries as demand from these countries increases at a faster rate than demand from more distant countries, for different reasons. They basically reflect the demand of online buyers. Apart from online purchases from the UK and Germany (the largest and most competitive domestic retail markets in Europe) and from China, many European consumers purchase online from countries with similar languages and cultures. Consumer

surveys (including the WIK consumer survey) highlight that a high share of cross-border orders are placed on web shops located in neighbouring countries.

The largest e-commerce markets in Europe, notably Germany and the UK, are the major e-commerce export countries sell goods internationally (not only to European countries but also to the rest of the world, notably to USA and China).

The majority of enterprises with cross-border web sales do not follow a dedicated internationalisation strategy

E-commerce presents a significant opportunity for fast and (relatively) low risk internationalisation. In contrast to street shops, online shops can easily be visited by customers living elsewhere in the country or even abroad. Therefore, e-commerce broadens the potential customer base both domestically and internationally. Additionally, it helps reduce the dependency on the domestic market (particularly in highly competitive domestic e-commerce markets like Germany and the UK). Despite there appearing to be huge growth potentials in cross-border e-commerce, only a very small fraction of e-retailers administered a dedicated internationalisation strategy with localised websites and country-specific fulfilment services. Consequently, domestic e-retailers expand their business following the demand. Most e-retailers prefer occasional cross-border sales than large scale international sales operations. They consider cross-border sales as welcome additional business, but they do not have distinct ambitions to promote international sales. International expansion of a business in a professional manner requires additional financial, legal, technical and operational capacities. International online marketplaces offer an opportunity, in particular, to small and medium-sized e-retailers to expand in foreign markets. They provide support and fulfilment services to e-retailers and many facilitate market entry in foreign e-commerce markets. For e-retailers with more ambitions, international online marketplaces are an opportunity to test the demand in a target country or countries.

Fraud and differences in national regulations are more important barriers to cross-border sales than transport and delivery costs

Major barriers for international expansion include fraud and differences in regulations, and are considered much more of a disruption than logistical challenges, including high costs for cross-border delivery and transport. However, progress made in harmonising legal requirements (e.g. related to consumers' rights) are reflected in growing activities of e-retailers selling to other Member States. International online marketplaces provide support to SME e-retailers to expand into other countries, thus facilitating market entry and limiting the risk of small sellers when selling products across borders.

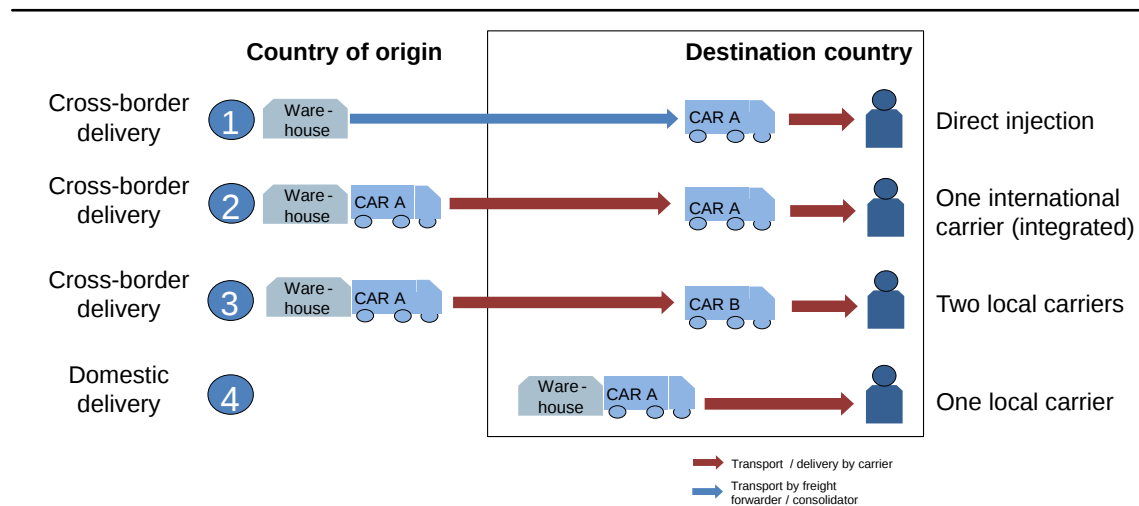
3 Delivery services in Europe

3.1 Introduction

This chapter describes and analyses developments and the state-of-play concerning 'cross-border B2C e-commerce of physical goods that are delivered as individual parcels across national borders'.

This study puts the emphasis on cross-border parcel services. Cross-border parcel services can be considered from two perspectives. From senders' point of view, cross-border parcel services refer to the collection and transport of export parcels from one country ('country of origin') to another ('country of destination'). From recipients' point of view, cross-border parcel services comprise the delivery of import parcels. That said, the performance of cross-border parcel services depends on the performance of participating national parcel delivery service providers.

Figure 17 Cross-border outbound logistics (exports)



Source: Bender, Christian and Sonja Thiele (2018), Der deutsche Postmarkt als Infrastruktur für europäischen E-Commerce, WIK Discussion Paper No. 435, p.13.

Figure 17 shows the typical options for cross-border delivery. The first three options depict the case that the warehouse of the e-retailer, or of his fulfilment service provider, is located in a different country from that of the recipient, i.e. the consumer. The first option portrays the case of 'direct injection'. The e-retailer (or his fulfilment service provider) has sufficient order volumes and the capacity to organise direct transports of parcels to the destination country, e.g. by hiring a freight forwarder. In the country of destination, the parcels are then handed over to a local carrier for final delivery at domestic rates. E-retailers with low order volumes per destination country may have the opportunity to use international consolidators who collect and consolidate the items of different e-retailers

and transport them by truck to the country of destination. Thereafter, the parcels are handed over to local carriers for final delivery at domestic rates. Examples of such international consolidators include B2C Europe, IMX Europe, or subsidiaries of USPs like Asendia or Spring.

Options 2 and 3 illustrate carrier-based approaches for cross-border deliveries. Parcels are collected by a local carrier, who acts as a consolidator, in the country of origin and cooperates with local carriers in the destination countries for parcel delivery. The types of cooperation range from fully integrated country organisations (intercompany, as illustrated in Option 2), to acquisitions, contractual relationships with service level agreements (partnership or strategic cooperation) and franchise models, to loose agreements as illustrated in Option 3.⁵⁶

Examples of the second option may include delivery services provided by international express carriers like UPS or DHL Express. These services are characterised by a relatively short transit time (transport by air in case of long distances) and consist of a fully integrated intercompany network with identical standards for data exchange and tracking events across many countries.

One example for the third option is the cooperation between USPs for the exchange of cross-border, small packets in the event that the e-retailer decides to use a letter product for cross-border delivery. Another example is the case where a German e-retailer uses DHL Parcel for the delivery of parcels from, e.g. Germany to Finland. DHL Parcel cooperates with USPs in a selection of European countries for final delivery of import parcels (in this example with Itella/Posti in Finland and the Baltic countries). DPD Group and GLS present further examples for European networks based on close cooperations between national parcel carriers. DPD and GLS have been extending their European networks by the stepwise acquisition of local carriers and franchises to promote the integration of local partners, a process that is still underway.

The fourth option shows the case that the e-retailer is located in another country, but his products are stored in a warehouse (either operated by him or by a fulfilment service provider) located in the destination country. In this case, the cross-border online order does not involve a cross-border delivery, but a domestic delivery. The key advantage of this is that the delivery time of fulfilling the order is shorter compared to arranging outbound logistics in the country of origin. Of course, other combinations are also possible, e.g. warehouses are neither located in the e-retailer's home country nor in the country of destination (e.g. the case that a German e-retailer uses fulfilment by Amazon and stores his products in one of Amazon's Polish warehouses that delivers to customers in Germany).

⁵⁶ See WIK-Consult (2014), Design and development of initiatives to support the growth of e-commerce via better functioning parcel delivery systems in Europe, Section 1.3.5.

This chapter provides a comprehensive overview of the state-of-play and developments in delivery markets within MS of the EU and the EEA⁵⁷. The chapter consists of four parts:

- Section 3.2 provides a high-level description of the current status as well as past and expected future developments in the parcel delivery markets in the EU in terms of size and composition of the parcel markets. The role of postal regulation for delivery operators in the EU MS is analysed in Section 3.2.4.
- Section 3.3 describes the services offered by active carriers in the European parcel markets and their role in competition. Furthermore, this section discusses current developments, describing how carriers have developed their services and operations in response to growth in B2C e-commerce deliveries.
- Section 3.4 sheds light on future trends in core operations and the last mile of the delivery value chain, as well as an outlook on how market trends and technology may transform networks and delivery services in future.
- The conclusions of the chapter are summarised in Section 3.5.

3.2 Delivery markets in Europe

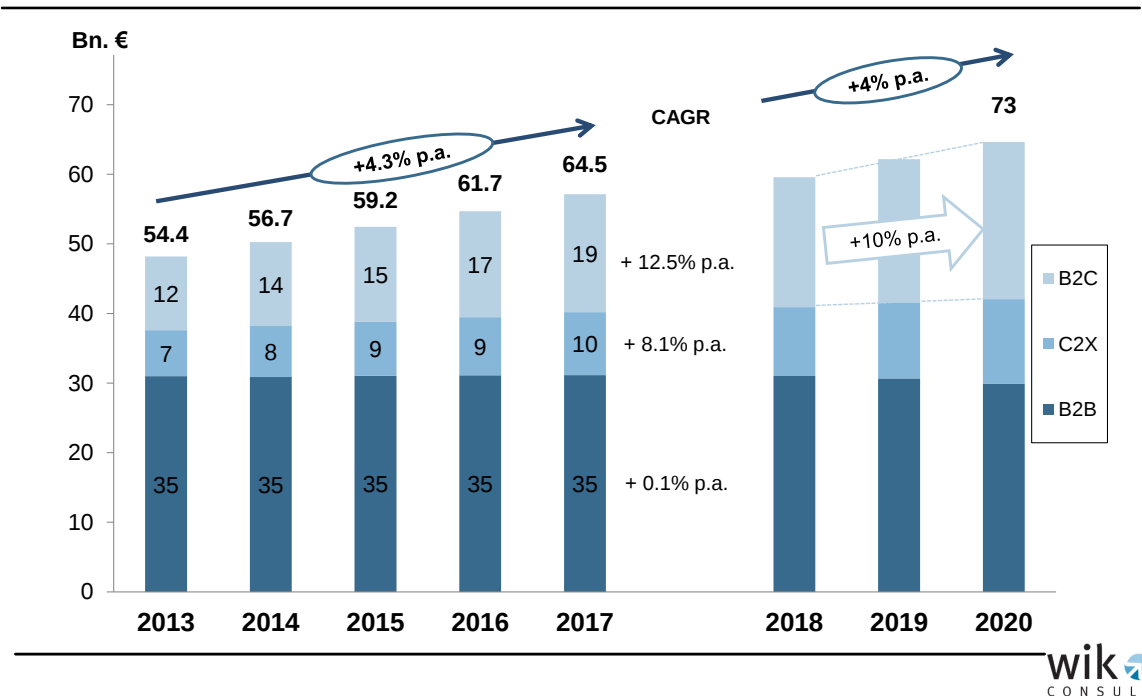
3.2.1 B2C e-commerce drives growth in European parcel markets

Market studies of national regulators, research companies, and carriers all show that parcel delivery volumes and revenues have expanded in most countries. However, available statistical information on parcel and express markets vary considerably due to different methodologies and market definitions. Many national regulatory authorities increasingly provide data on parcel and express markets. Data availability has improved since 2013, but there remain significant data gaps particularly regarding revenue data. Moreover, data on small packets, weighing less than 2 kg usually delivered by USPs as letter products (especially cross-border) are usually excluded by the reports.⁵⁸ However, these items play a significant role in cross-border parcel deliveries as well as in domestic deliveries of merchandise, depending on the individual service strategies of USPs.

⁵⁷ Except for Liechtenstein due to missing data.

⁵⁸ Some national regulatory authorities provide more detail on this segment, but this is still the exemption. See for example the market reports of the French regulator ARCEP (Le marché des activités postales et connexes en France, année 2017) and the Spanish regulator CNMC (Análisis del sector postal y del sector de la mensajería 2017) that shed more light on the segment of small packets weighing less than 2 kg.

Figure 18 Annual revenues in the European parcel market



Source: WIK-Consult based on Apex Insight (2018), European Parcels, Market Insight Report 2018; Statista (2018), The parcel market in Europe – revenue by segment 2010-2020.

Note: Includes EU MS, BA, CH, RS, AL, MK, and ME; time definite and deferred services. Adjacent services, such as mail, pallet distribution, groupage, freight forwarding, sameday courier and contract logistics are excluded.

Figure 18 provides estimates of past developments and forecasts of annual revenues in the European parcel market and its segments based on Apex Insight research.⁵⁹ In 2017, revenues reached EUR 65 billion with Germany, the UK, France, Spain, Italy, Netherlands, Belgium, and Poland accounting for 80% of total parcel revenues.⁶⁰ Since 2013, total revenues increased by 4.3% per annum, mainly driven by growth in the B2C segment (+12.5% p.a.) and the C2X segment (+8.1% p.a.). C2X includes returns from consumers to e-retailers and possibly items of micro e-retailers. The growth in B2C and C2X is expected to continue, but growth rates in the B2C segment are expected to slightly moderate to around 10% per annum. In contrast, the B2B segment is stagnant in most European countries (+0.1% p.a.) and forecasts predict that the segment will marginally decline in future.⁶¹

According to the forecasts, total revenue will exceed EUR 70 billion in 2019 and amount to around EUR 73 billion in 2020. Given growth in the B2C and C2X segments and the

⁵⁹ Available statistical information on parcel & express markets is very heterogeneous due to different methodologies and market definitions. Many, but not all national regulatory authorities increasingly provide data on parcel and express markets (in some cases restricted to parcels within the scope of the universal service). The situation has much improved compared to 2013 but there are still significant data gaps.

⁶⁰ See Apex (2018), European Parcels, Market Insight Report 2018, Summary, August 2018.

⁶¹ See IPC (2017), Global Postal Industry Report 2017 – Key Findings, p.11.

stagnation in the B2B segment, the composition of total revenue has changed substantially. While the B2B segment has been the major source of revenue in the parcel market for decades and represented nearly two third of total revenue in 2013, the relevance of B2C parcels has been continuously increasing. The B2C share on parcel revenues has increased from around 20% in 2013 to around 30% in 2017 and is expected to comprise around 35% in 2020.

Figure 19 Structure of the European parcel and express market by country (2017)



Source: WIK research.

Based on in-depth desk research, we estimate that approximately 9.4 billion (deferred and express) parcels (excluding small packets below 2 kg in most MS) were delivered in the EU/EEA during 2017. Figure 19 highlights that more than 70% of items were delivered in the three largest MS, i.e. Germany, France and the United Kingdom. Our estimate is roughly in line with the results of other sources: For example, Pitney Bowes estimated that parcel markets in France, Germany and the UK amounted in total to 7.8 billion parcels in 2017.⁶² Geopost (La Poste) estimated that the number of parcels increased from 7.2 billion to 9.3 billion parcels between 2012 and 2016.⁶³

The higher than expected growth in B2C e-commerce is outperforming growth in the B2B segment in most MS.⁶⁴ As a result, the share of B2C deliveries in total parcel volumes has been continuously increasing and amounted to more than half of total parcels in many MS. Geopost estimated that about 5 billion of the 9.3 billion parcel and express items in Europe in 2016 were B2C items and they predict that the number of B2C parcels will nearly triple to an estimated 12-14 billion items by 2025.⁶⁵ The increasing relevance of the B2C segment is also reflected across countries. In the UK, for example, the B2C share of all parcels in terms of revenue increased from only 15% in 2009 to 34% in 2015 and reached 42% in 2017.⁶⁶ Furthermore, in the Netherlands, the B2C share in terms of volumes has reached more than 70% of all domestic parcels in 2017.⁶⁷

⁶² See Pitney Bowes (2018), Pitney Bowes Parcel Shipping Index, <https://www.pitneybowes.com/us/shipping-index.html>, download 30 August 2018.

⁶³ See La Poste (2018), Registration Document 2017, p. 37.

⁶⁴ See IPC (2017), Global Postal Industry Report 2017 – Key Findings, p.11.

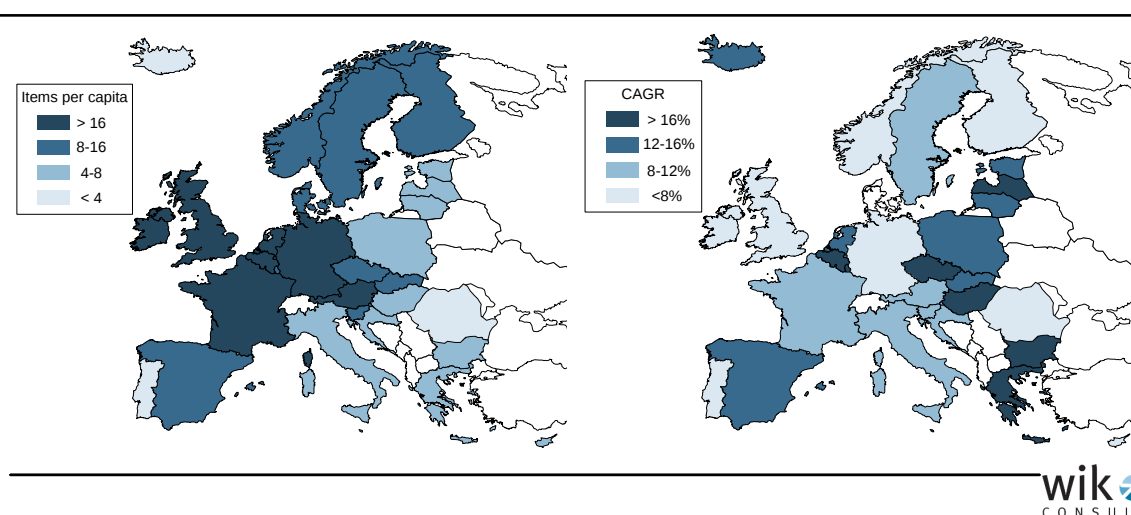
⁶⁵ See CEP Research, DPDgroup plans new innovative services as B2C volumes soar, published on 21 November 2017.

⁶⁶ See Post&Parcel, Pitney Bowes: UK parcel market set for “huge shake-up” in new trends and technologies, published on 31 August 2018.

⁶⁷ See ACM (2018), Post- en Pakkettenmonitor 2017, p. 18.

In a recently published study on the main developments in the postal sector between 2013 and 2016, Copenhagen Economics shed some light on the importance of small packets in domestic and cross-border letter post traffic.⁶⁸ They reported that small packets comprised a constant share of 1.6% of total domestic letter post items between 2013 and 2016. This would imply volumes of approximately 1.2 billion items in 2013 and 1.1 billion items in 2016. Cross-border small packets (half inbound and half outbound) amounted roughly the same number of items so that the total number of small packets delivered (domestic and cross-border inbound) could be between 1.5 billion and 1.7 billion items in 2016. Assuming that the vast majority of these items are B2C deliveries, small packets below 2 kg could account for at least 15% to 20% of total B2C e-commerce deliveries. This is only rough estimate, based on incomplete data, but it provides a preliminary idea about the potential scale of small packets in B2C e-commerce deliveries.

Figure 20 Parcels per capita (2017) and average growth rates



Source: WIK research.

Note: AT, BE, BG, CY, DE, EE, EL, ES, FI, FR, HR, HU, IS, IT, LT, LV, MT, NL, PL, PT, SE, SK, UK (CAGR 2013-2017); SI (CAGR 2013-2016); CZ, IE (CAGR 2013-2015); RO (CAGR 2014-2017); LU (CAGR 2016-2017); NO (CAGR 2016-2017).

Figure 20 presents the development in parcel volumes per country. On average, 18.2 parcels (C2X, B2C and B2B) were delivered per capita in 2017, but there are significant differences between the various MS. Only few MS actually reached more than 16 items per capita in 2017, while for the majority of MS the number of parcels per capita was below 8, including express and parcel items.

However, e-commerce markets with lower volumes are catching up, which is illustrated on the right-hand side of Figure 20. While the volume increased in all MS by around 10% per year on average, growth rates were generally higher in less advanced e-commerce markets with lower per capita volumes compared to the corresponding growth rates in the

⁶⁸ See Copenhagen Economics (2018), Main Developments in the Postal Sector 2013-2016.

mature e-commerce markets with high per capita volumes.⁶⁹ There are a few exceptions to the general trend. For example, Belgium, the Netherlands and Spain exhibited high growth rates, but they have already reached a relatively high level of per capita volumes. In contrast, the growth rates in Romania and Portugal appear to be low despite their low level of per capita volumes.

It should be noted that the numbers include all parcels delivered, including consumer parcels as well as business and B2C e-commerce parcels. We estimate that the share of B2C e-commerce parcels is rather low in MS with less developed e-commerce markets, while for mature e-commerce markets more than half of all parcels are B2C e-commerce deliveries. Since the development of B2B parcels strongly depends on a country's economic situation, this may partly outweigh the positive impact of growing B2C volumes.

There are also clear indications that the development of cross-border items outweighs the development of domestic shipped items.

- AT Kearney estimated that international shipping in Europe is worth more than EUR 16 billion comprising 720 million items (estimates based on 13 European countries including Russia). They expect that the number of international shipments in Europe will reach more than 900 million items by 2019.⁷⁰
- DHL Express' international e-commerce shipments have grown at high single-digit rates, increasing its share from about 10% of total worldwide delivery volumes in 2013 to over 20% in 2017.⁷¹
- IPC reported that international items currently represent less than a fifth of total parcel volumes on average across postal operators, but that many postal operators report increases in cross-border deliveries and expect robust growth in the future.⁷²
- La Poste reports that cross-border flows are experiencing significant growth. The volume of shipments of less than 2 kg increased by 26% in 2017 and GeoPost / DPD group's international flows increased substantially in recent years.⁷³ According to ARCEP, the number of cross-border inbound parcels, including small packets weighing less than 2 kg, increased by around 45% between 2014 and 2017.⁷⁴
- Royal Mail reports that around two percentage points of its parcel volume growth and around one percentage point of the parcel revenue growth are attributable to the increase of cross-border shipments, mainly from Asia into Europe.⁷⁵ According to

⁶⁹ See also Copenhagen Economics (2018), Main Developments in the Postal Market 2013-2016 who also reports an average growth rate of 13%.

⁷⁰ See AT Kearney (2017), Europe's International CEP Market : Solid Growth With Challenges Ahead. Their study includes shipments up to 2,500 kilograms and therefore overestimates the size of the international CEP market in value and (to lesser extent) in volume.

⁷¹ See CEP Research, DHL Express orders 14 B777 freighters to support cross-border e-commerce growth, published 16 July 2018.

⁷² See IPC (2017), Global Postal Industry Report – 2017 Key Findings.

⁷³ See La Poste (2018), Registration Document 2017, p.30, p.41sq.

⁷⁴ See ARCEP (2018), Observatoire des activités postales - année 2017, p.24.

⁷⁵ See Royal Mail (2018), Annual Report and Financial Statements 2017-18, p. 22.

Ofcom, international inbound parcels made up 12% of total parcel volumes (from 10% the year before) and 15% of revenues (from 13% the year before), while outbound parcels made up 7% of total parcel volumes, and 23% of revenues in the financial year 2017-18 which is a slight increase from 2016-17.⁷⁶

- Deutsche Post reported a continuing trend towards merchandised shipments by mail and dynamic growth in its cross-border parcel services amounting to double-digit growth rates.⁷⁷ Furthermore, the German association for parcel and express logistics reported that since 2015, actual and expected growth rates for international parcel shipments continuously outperform the growth for domestic shipments.⁷⁸

3.2.2 B2C cross-border deliveries come from the largest e-commerce markets

Traditionally, the number of cross-border deliveries between countries has been driven by the intensity of their economic relationships. Cross-border B2C e-commerce deliveries are primarily driven by the location of warehouses (of large e-retailers), the level of development of each e-commerce market (in terms of the share of e-shoppers and the share of heavy e-shoppers in a country), and the size of the domestic (e-commerce) market (i.e. the availability of goods). Therefore, we estimate that the number of export countries (with focus on B2C e-commerce) is relatively low while most EU MS tend to be importers of cross-border e-commerce purchases. Moreover, in small countries (e.g. Iceland, Luxembourg or Malta), the share of cross-border e-commerce deliveries tends to be higher compared to large e-commerce markets.

⁷⁶ See Ofcom (2018), Annual monitoring update on the postal market - Financial year 2017-18, p.20 sqq.

⁷⁷ See Deutsche Post DHL (2018), 2017 Annual Report, p.63 sqq.

⁷⁸ See BIEK (2016), KEP-Studie 2016, p.16.

Table 3 Country of origin of the most recent cross-border purchase

Most recent online purchase of online shoppers in ...					
	was ordered from a e-retailer in ...				
AT	DE (68%)	CN (13%)	UK (2%)	USA (2%)	NL (1%)
BE	FR (49%)	CN (10%)	NL (8%)	DE (7%)	UK (6%)
BG	CN (44%)	UK (17%)	DE (10%)	USA (6%)	RO (3%)
CY	UK (39%)	CN (22%)	EL (18%)	DE (5%)	USA (4%)
CZ	CN (67%)	UK (7%)	DE (7%)	USA (6%)	PL (1%)
DE	CN (41%)	UK (15%)	AT (5%)	USA (5%)	ES (4%)
DK	DE (22%)	CN (20%)	UK (15%)	SE (11%)	USA (8%)
EE	CN (49%)	UK (14%)	DE (9%)	USA (8%)	FI (2%)
EL	CN (31%)	UK (21%)	DE (8%)	USA (7%)	ES (5%)
ES	CN (40%)	UK (16%)	DE (12%)	USA (6%)	FR (5%)
FI	CN (28%)	DE (20%)	UK (12%)	SE (10%)	USA (10%)
FR	CN (30%)	DE (15%)	UK (14%)	USA (6%)	IT (5%)
HR	CN (53%)	UK (12%)	USA (7%)	DE (6%)	ES (2%)
HU	CN (55%)	UK (8%)	DE (7%)	USA (5%)	SK (3%)
IE	UK (58%)	CN (16%)	USA (6%)	DE (4%)	IT (2%)
IS	CN (32%)	UK (17%)	USA (11%)	LV (5%)	DE (4%)
IT	CN (29%)	UK (20%)	DE (19%)	USA (7%)	ES (4%)
LT	CN (55%)	UK (17%)	DE (9%)	USA (4%)	PL (3%)
LU	DE (71%)	FR (12%)	UK (5%)	CN (4%)	BE (3%)
LV	CN (46%)	UK (16%)	DE (6%)	USA (5%)	EE (3%)
MT	UK (68%)	CN (18%)	DE (5%)	USA (3%)	IE (1%)
NL	CN (36%)	DE (18%)	UK (10%)	BE (5%)	USA (4%)
NO	CN (29%)	UK (17%)	USA (15%)	SE (10%)	DE (7%)
PL	CN (46%)	DE (12%)	UK (8%)	USA (6%)	CZ (2%)
PT	CN (31%)	ES (20%)	UK (17%)	DE (7%)	FR (6%)
RO	CN (35%)	UK (17%)	DE (9%)	USA (7%)	PL (4%)
SE	CN (24%)	DE (21%)	UK (17%)	USA (15%)	DK (4%)
SI	CN (35%)	DE (22%)	UK (15%)	AT (4%)	USA (3%)
SK	CN (41%)	CZ (26%)	UK (8%)	DE (7%)	HU (2%)
UK	CN (34%)	USA (19%)	DE (5%)	IT (2%)	PL (2%)

Source: WIK Consumer Survey

Notes: N=8,212. Question: Thinking of your most recent purchase from an online shop or a seller on an online marketplace in a country other than the one you currently live in, where was the online shop or seller located? Single choice.

Table 3 presents the TOP 5 countries of consumers' most recent cross-border purchase and its percentage share based on the WIK consumer survey (see Chapter 3.5 and Appendix B for detailed results). The results clearly indicate that major cross-border flows

originate from the largest e-commerce markets. In Europe, B2C e-commerce export countries are clearly Germany and the UK (light blue and dark blue shaded cells). According to the survey results, around 30% of e-shoppers' most recent cross-border purchases originated from e-retailers and marketplaces located in these countries. China (red shaded cells) markedly represents the most important country for cross-border online purchases outside Europe. More than one third of e-shoppers (35%) declared that their most recent purchase originated from an e-retailer located in China. The second most important non-EU/EEA market is the USA with a share of (only) 7% (see Section 4.2.3).

The direction of cross-border streams reflects the size and development of national e-commerce markets. More mature and larger (e-) retail markets are characterised by more widespread availability of goods and more attractive prices – due to competition – compared to the domestically available offers in emerging e-commerce markets and countries with relatively small retail markets. Additionally, elements such as language and cultural aspects play an important role for e-shoppers.⁷⁹ This is also reflected in the results of the WIK consumer survey and in Table 3 above: there exist relevant cross-border streams between neighbouring countries (indicated by grey shadings). For example, there is a high share of consumers in Nordic countries purchasing from e-retailers in other Nordic countries. These cross-border flows between neighbouring countries promote the emergence of regional country clusters in e-commerce and delivery.

3.2.3 Available statistical information underestimates cross-border streams

Unfortunately, there are no accurate statistics on cross-border parcel deliveries in Europe. The available data only provide indications on the developments in domestic and cross-border B2C parcels. In fact, data on cross-border parcels published in statistics and market reports underestimate the actual volume of cross-border parcel deliveries by definition.

Published data on cross-border items usually exclude parcels resulting from direct injection. Only items that are collected by a carrier in the country of origin, transported to the country of destination and delivered by a carrier, are counted as cross-border parcels. One example for increasing cross-border volumes by direct injection is Amazon's use of warehouses in Poland and the Czech Republic near the border to deliver orders in Germany. These warehouses do not specifically serve the Polish or the Czech market (where Amazon is not currently active), but their main purpose is to fulfil online orders of German and Austrian customers. This further boosts cross-border volumes without being reflected in any official statistics.

⁷⁹ See GfK (2015), Provision of two online consumer surveys as support and evidence base to a Commission study: Identifying the main cross-border obstacles to the Digital Single Market and where they matter most, p.71 sqq., p.201 sqq.

B2C e-commerce has not only pushed the demand for parcel and express services, but also for small packets that are part of the letter post stream and therefore usually delivered by USPs.⁸⁰ The most recent UPU research on postal markets shows that the share of small packets in cross-border letter post had increased from 11% in 2005 to 18% in 2015. According to the authors of the study, this increase is mainly driven by B2C e-commerce.⁸¹ As USPs face a structural decline in correspondence, the share of small packets in the letter post stream has most probably increased since then. This is also confirmed by statements of big players in this field.

- Deutsche Post reports that trends towards merchandise shipments by letter post continued in the cross-border mail business in 2017.⁸²
- La Poste states that e-commerce is changing the growth profile in the international letter segment as B2C cross-border packets of less than 2 kg from e-commerce are experiencing significant growth.⁸³
- ARCEP's market data confirm this development. Between 2014 and 2017, the French regulator reported a decline of inbound correspondence of around 10% per year on average while cross-border inbound parcels and small packets increased by nearly 45% annually.⁸⁴ Overall, small packets have grown at higher rates than parcels (excluding express items) in France.⁸⁵
- In the financial year 2017-18, Royal Mail estimated that these shipments accounted for 20% of UKPIL parcel volumes and 18% of revenue. According to Royal Mail, this development is mainly driven by increasing volumes from Asia into Europe.⁸⁶

There are no exact figures on the share of small packets in total or cross-border volumes. However, there are indications that these items represent a significant share of e-commerce items. Greek regulator EETT, for example, reports that around 80% of all cross-border items in 2016 were sent as small packets.⁸⁷ The Spanish regulator CNMC reports that around 46% of the courier, express and parcel volumes in 2017 were items below 2 kg.⁸⁸ French regulator, ARCEP, reports that the volume of small packets accounted for one third of total parcel volumes (domestic and inbound, excluding express items), but only 13% of parcel revenues in 2017.⁸⁹

⁸⁰ We use the terms 'small packets', 'small packets' for merchandise shipments delivered by USPs weighing up to 2 kg that are part of the international letter post as defined by the Universal Postal Union (UPU). See also Section 1.3.1 for definitions.

⁸¹ See UPU (2016), Research on Postal Markets, Trends and Drivers for International Letter Mail, Parcels and Express Mail Services.

⁸² See Deutsche Post (2018), Annual Report 2017, p. 63.

⁸³ See La Poste (2018), Registration Document 2017, p. 30.

⁸⁴ See ARCEP (2018), Observatoire des activités postales - année 2017, p.20 sqq.

⁸⁵ Ibid, p.17 sqq.

⁸⁶ See Royal Mail (2018), Annual Report 2017/18, short version, p. 5.

⁸⁷ See EETT (2017), Market review of Electronic Communications & Postal Services, p.79.

⁸⁸ See CNMC (2018), Análisis del sector postal y del sector de la mensajería y la paquetería 2017, p.53.

⁸⁹ See ARCEP (2018), Le marché des activités postales et connexes en France – Année 2017, p.17.

Currently, there are no accurate and consistent statistical figures available on cross-border parcels in Europe to provide general metrics or allow for a detailed breakdown of items, for example, by origins, destinations, or weight. The EU Cross-border Parcel Regulation came into effect in 2018 and will be fully implemented in 2019. It will shed more light on 'traditional' cross-border streams of parcels in the future. Cross-border volumes linked to direct injection will not be covered by the EU Cross-border Parcel Regulation.

3.2.4 E-commerce parcels are outside the scope of USO in many Member States

Parcel and express carriers have to cope with rules and obligations arising from several pieces of legislation specific to the postal sector, but also from other legislative areas. The Postal Services Directive 97/67/EC focusses on providing a framework for rules for postal service providers and USPs in particular. MS transposed these rules into national law. The Directive has thus also an impact on cross-border parcel carriers but does not set up specific rules for these carriers. By contrast, the Regulation on cross-border parcel delivery services (2018/644) forthrightly applies to cross-border parcel carriers, including vertically integrated e-commerce sellers providing delivery services.⁹⁰ In addition, carriers have to comply with rules for consumer protection and transport law both on European and domestic levels.

The objective of this section is to analyse whether there are national rules that apply to specific carriers only – e.g. to only cross-border but not to domestic carriers, or to private parcel operators in the international parcel market but not to the USP – and which impact these regulations have. The ERGP has worked on similar issues.⁹¹ This section covers four regulatory areas: 1) universal service, 2) authorisation regimes, 3) financial contributions to NRA funding and compensation funds and 4) assessment of cross-border tariffs.

The scope and role of universal service

National rules often refer to the scope of universal postal services. It is therefore important to keep in mind that MS define the USO quite differently. The table below shows weight limits for outbound cross-border parcels within the scope of universal service. In 14 MS, all international parcels below 20 kg are within the scope of USO. Another nine MS apply the 10 kg limit, the exception being UK with a very low weight limit for international parcels within USO.

⁹⁰ See Regulation 2018/644, recital 17.

⁹¹ ERGP (2015), ERGP 2015 report to the European Commission on legal regimes applicable to European domestic or cross-border e-commerce parcels delivery.

Table 4 Weight limits for cross-border parcels within USO

2 kg	UK
10 kg	AT, CZ, HR, LU, LV, PT, RO, SI, SK
20 kg	BG, CY, DE, DK, EE, EL, ES, HU, IT, MT, PL, CH, IS, NO

Source: ERGP (2017), Report on core indicators for monitoring the European postal market; WIK research

Single piece international parcel services within the weight limits stated above are considered as universal services in all MS, except one (the Netherlands) where additionally to international single piece parcel services the respective bulk services are within the scope of the USO.⁹² In legal terms, bulk parcels are defined as parcels which are not sent as single piece items in the Netherlands and in the UK. Other MS do not have a specific legal definition for bulk parcels according to regulators' answers to our survey, but some mentioned definitions applied in regulatory decisions. In Estonia, parcels are considered as bulk if at least 25 parcels are shipped at once. In Lithuania, the distinction is made at 250 parcels shipped per month, and 50 parcels per month in Romania. In Austria, postal items cleared at a sorting centre are not within the USO. Some regulators pointed out that parcels sent under a written contract between sender and carrier are considered as bulk services. All of this implies that the vast majority of cross-border e-commerce parcels sent from EU MS are not within the scope of the USO.

Tracking is a feature of universal service parcels in most MS for domestic and cross-border parcel services (see Table 5).

Table 5 Tracking as a feature of universal service parcels

Domestic universal service parcels include tracking services	AT, CZ, DE, EE, EL, ES, FR, HR, IE, IT, LU, MT, NL, NO, PT, SE, SI, SK, UK
Cross-border universal service parcels include tracking services	AT, BE, CZ, DE, EE, EL, ES, FR, HR, IE, LU, MT, NL, NO, PT, SE, SI, SK, UK
Universal service parcels do not include tracking	BE, BG, CY, DK, HU, LV, PL, RO

No answer: IS

Source: NRA survey

Some NRAs (e.g. in CZ, DE, IE) stressed the fact that tracking is offered on a voluntary basis by USPs although it is not required by national universal service regulation. Interviews with NRAs and USPs further indicated that tracking has become a standard service feature of universal service parcels in many MS but is not required by universal service definitions. Many operators have included tracking as a standard feature to their universal service parcels as a reaction to customer needs, in particular e-commerce-customers. With the exception of Latvia, e-commerce items are also sent by using universal service products in all MS, although the extent is unknown.⁹³ While a thorough

⁹² See ERGP (2018), Report on core indicators for monitoring the European postal market.

⁹³ The Irish NRA did not answer this question.

analysis of the detailed features of universal service parcels has not been part of this study, we noticed USPs are including more and more features to basic parcel products, including tracking or basic insurance. This indicates that delivery market performance, choice of operator and a well-developed e-commerce landscape might be stronger drivers for high-quality parcel services than quality requirements for universal services.

Another quality requirement for universal services is the frequency of collection and delivery. Most MS within the EU require USPs to collect and deliver five times per week, with the exception of BG, DE, FR, MT and UK where mail must be collected and delivered six times per week.⁹⁴ In recent years, some MS have reduced frequency of collection and delivery (see Table 6). It is very likely this trend will continue in the future, for basic universal services, as cost pressure on USPs due to volume declines is increasing.⁹⁵

Table 6 Overview on changes of collection and delivery frequency

Denmark	XY delivery and exemption of day-to-day delivery services from USO, resulting in D+5 delivery for non-priority mail
Netherlands	Reduction from 6 to 5 days except for mourning letters and medical samples. No delivery on Mondays.
Iceland	XY delivery since 2018
Italy	XY collection and delivery in areas with less than 200 inhabitants per km ²
Norway	Reduction from 6 to 5 days, no deliveries on Saturdays.

Source: DK, NL, IT: ERGP Report 16 (35); IS: Copenhagen Economics (2018), Report on USO net costs in Iceland; NO: Annual report 2015.

In general, European NRAs consider e-commerce parcels delivered across borders to be within the scope of universal service, if they are within the weight limits of USO and are not characterised as express parcels.⁹⁶ While there are differences in how Member States distinguish express delivery from universal services, there is no doubt that express services are postal services. This had been, once again, confirmed by the *Confetra judgement* of the CJEU.⁹⁷ Table 7 provides an overview on criteria used to define express delivery services in national legislations.

⁹⁴ See ERGP (2018), Report on the quality of service, consumer protection and complaint handling 2017, 44 (18). In the UK, six day delivery and collection applies only to correspondence.

⁹⁵ As e-retailers are requiring high standards for delivery, it is also likely that USPs will maintain (or create) products that include six or more day of delivery per week, possibly at a higher price.

⁹⁶ According to NRA survey carried out by WIK.

⁹⁷ Judgement of 31 May 2018, Joined Cases C-259/16 and C-260/16, *Confetra* and others.

Table 7 Criteria used to distinguish express delivery services from universal services

No distinction	AT, CY, LU
Value-added services	BE, BG, CY, CZ, EL, ES, HR, HU, IT, MT, NL, PT, RO, SK
Faster transit time	CY, CZ, EE, EL, ES, HR, HU, IT, MT, PT, RO, SK
Constant control by courier	BE, EL, ES, HR, MT
Direct collection from sender	BE, BG, CZ, EL, ES, HR, IT, LV, MT, PL, SK
Tracking	BE, BG, CY, CZ, EE, EL, ES, HU, IT, LV, MT, PL, PT, RS, SK
Guaranteed delivery time	BE, BG, CY, CZ, EL, ES, HR, LV, MT, PT, RO, SK

No answer: DE, DK, IE, IS, LU, SE, SI, UK

Source: NRA survey

In Austria, postal legislation does not distinguish postal and express services. As a consequence, express services are within the universal service area, as it is the case also in Luxemburg and Cyprus. In most MS, express delivery services are defined in postal legislation, but definitions apply very different criteria.⁹⁸ In our survey, most regulators stated that there is a need for some kind of 'value added' to qualify as an express service. But there is no unanimous opinion among NRAs what such features might be. Table 7 shows that faster transit time, tracking and guaranteed delivery time are the most common characteristics defined by postal law for express services. Yet NRAs also named other features such as liability (BE, MT, PT), re-direction (BG, CZ, IT, MT), personal services to the customer (BE, BG, CZ, MT, SK), or delivery to the addressee in person or to the door (CZ, EL, ES, IT, PL). The last point seems to be relevant only in MS where delivery to the door is not part of a standard parcel service.

With increasing quality of parcel services as regards e.g. tracking and transit time, and express carriers entering the parcel market, parcels and express services might not be easy to distinguish in some cases. For example, e-retailers like Amazon urge parcel carriers in high-developed e-commerce markets to provide certain features even for non-express services like tracking, delivery notification, and deliver the next working day, collection at the customer being a standard for business parcels anyway. While the customer does not care whether a parcel is deemed to be a standard parcel (generally within USO) or an express parcel (generally outside USO), it will make a huge difference for a carrier how its services are classified, e.g. as regards financial obligations (see Case study 2).

Complaints handling

The Postal Services Directive requires MS to ensure all postal services providers establish complaint handling procedures for consumers, and to publish information on the

⁹⁸ The ERGP report on boundaries around postal services supports this finding. See ERGP (2018), ERGP report on the boundaries around postal services in order to ensure NRAs clarity in the performance of their tasks.

number of complaints and the manner in which they have been dealt with (Art. 19). Technical standard EN 14012 defines how complaint handling procedures for postal services should be organised. The standard also includes recommendations how complaints relating to cross-border delivery services should be treated.⁹⁹ As cross-border deliveries usually include more than one carrier, consumers may choose the postal operator they want to complain to. The chosen carrier will remain the point of contact for the consumer until the complaint is resolved or, if the chosen carrier is not responsible for the source of the complaint until the complaint has been forwarded to the responsible carrier.

Table 8 Regulation of complaint handling procedures in the MS

NRAs have competence to deal with user complaints	AT, BG, CY, CZ, DE, DK, EE, EL, FI, FR, HR, HU, IE, IS, IT, LT, LV, LU, MT, NL, PT, SI, SK
Obligation to provide information on complaint handling procedures	BE, BG, CZ, DK, EL, ES, FI, FR, HR, HU, IE, IS, IT, LT, LU, LV, MT, PL, PT, RO, SI, SK, UK
Out-of-court dispute resolution exists	AT, BE, BG, CY, CZ, DE, DK, EE, ES, FI, FR, HU, IE, IT, LU, LV, MT, NL, NO, PL, PT, RO, SE, SI, SK, UK
Mandatory compensation schemes	BG, DK, EL, ES, FR, HR, HU, IE, IS, IT, LU, LV, MT, PL, PT, RO, SK, UK

Source: ERGP report 44 (2018)

In most MS, NRAs have competences to deal with user complaints, but it is outside their scope in BE, ES, NO, PL, RO, SE and UK.¹⁰⁰ In Germany and Finland, NRAs may only deal with user complaints made within the scope of universal service. According to research by ERGP, the number of MS where out-of-court dispute resolution is accessible to consumers has increased since 2015. Only five MS (BE, MT, NO, PT and UK) have adopted mandatory out-of-court dispute resolution procedures, in all other MS these procedures are voluntary for parcel carriers. DK, IS and HR do not have in place such alternative resolution mechanisms. There are compensation schemes in place in 18 MS but 8 MS (AT, BE, CY, CZ, DE, EE, NL, SE) have not defined such rules.

Authorisation procedures for cross-border parcel operators

Whether cross-border parcel carriers need to obtain a license or a general authorisation depends on their activity within the scope of the universal service in most MS (Table 9).

⁹⁹ Paragraph 4.13 of standard EN 14012 relates to complaints on items which have been handled by more than one operator, i.e. cross-border items or domestic items handled by more than one operator.

¹⁰⁰ See ERGP (2018), Report on the quality of service, consumer protection and complaint handling 2017, 44 (18).

Table 9 Authorisation for cross-border parcel service providers

No authorisation needed to provide parcel services in	BE, FI, FR, NL, SE, NO
Authorisation/license within USO only needed to provide parcel services	-
License within USO and general authorisation outside USO needed to provide parcel services in	BG, EE, EL, ES, MT, PT, RS
General authorisation within and outside USO needed to provide parcel services in	AT, CY, CZ, DE, DK, HR, HU, IT, LT, LU, LV, PL, RO, SI, SK, UK, NO

No answer: IE, LT, IS
Source: NRA survey

In order to provide parcel services, carriers need to obtain authorisations in some form in 22 MS, and in NO. Although the Postal Services Directive does not oblige MS to introduce authorisation procedures, there are only a few (six) MS in which carriers neither need a general authorisation nor a license to start operations. MS with authorisation procedures for carriers impose them not only for parcel services within the scope of the USO but also outside. There is no country in which an authorisation is needed only for parcel services within the scope of the USO.

Authorisation procedures may be burdensome for carriers, as they can be required to provide proof of coping with quality, labour, and potentially other requirements such as data protection, environmental protection (e.g. in CY), or technology used (e.g. in HU).¹⁰¹ The Postal Services Directive is very clear on that: 'authorisations may not [...] duplicate conditions which are applicable to undertakings by virtue of other, non-sector-specific national legislation' (Art. 9 (2)). It seems quite surprising, if not contrary to the goal of enhancing quality and choice for cross-border delivery services, to make the granting of authorisation subject to burdensome conditions – in particular in MS whose e-commerce and delivery markets are in the lower half of the delivery market performance assessment (see Chapter 8.4), and where new carriers could thus help to develop the market.

Financial obligations to support NRA operations

Parcel and express carriers can be obliged to contribute to funding the operational costs of the national regulatory authority, as defined by Art. 9 (2), fourth indent of the Postal Services Directive. Yet 11 MS have opted not to require NRA funding from any parcel or express carriers (see Table 10). In five MS, the obligation to contribute to NRA funding is limited to the scope of the USO while 13 MS do not apply such limits. Out of these, the Netherlands are the only country which requires contributions to NRA funding from parcel carriers without having imposed authorisation procedures on them. While the Postal Services Directive does not ban this, the Directive mentions the possibility to have carriers contribute to NRA funding in conjunction with authorisation procedures. In comparison with other MS, it seems to be a quite unusual practice to require contributions from

¹⁰¹ The examples mentioned here are based on answers of NRAs to the WIK NRA survey for this study. It is not a comprehensive overview on conditions related to authorisation procedures in the EU.

carriers which are neither licensed nor authorised. In 12 MS, express carriers have to contribute to NRA funding. According to the NRA survey, there are no MS where cross-border parcel carriers are treated differently from domestic operators regarding funding of regulators.

Table 10 Parcel delivery providers contributing to NRA funding

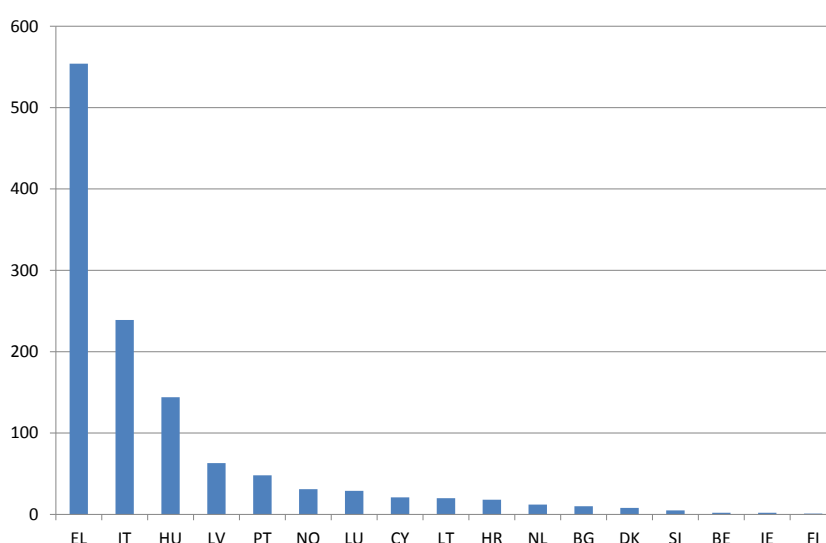
None	BE, CZ, DE, EE, ES, FI, FR, PL, SE, SK, UK
USPs only	BG, DK, NO, RO, SI
All parcel operators	AT, CY, EL, HR, HU, IT, LU, LV, MT, NL, PT
Providers of express services	AT, CY, EL, HR, HU, IT, LU, LV, MT, PT

No answer: IS

Source: NRA survey

Figure 21 provides an overview of the number of carriers contributing to NRA funding. In Greece and Italy, there is no minimum revenue threshold below which carriers are exempt from contributions, thus the number of obliged carriers is much higher than in other MS. In Hungary, there is a threshold but at a very low level.¹⁰²

Figure 21 Number of operators contributing to NRA funding per country



No answer: AT

Source: NRA survey

¹⁰² Parcel carriers in Hungary are not obliged to pay NRA funding contributions if their contribution would be less than 5,000 HUF, approximately 15 EURO. The fee is calculated as 0,113% of the net revenue derived from the provision of postal services.

Compensation funds to finance net cost of the universal service obligation

Contributions to a compensation fund can be another obligation for cross-border parcel carriers. Compensation fund are authorised by law in a majority of MS (18), but only few have actually activated such compensation funds. See Table 11.

Table 11 Compensation funds

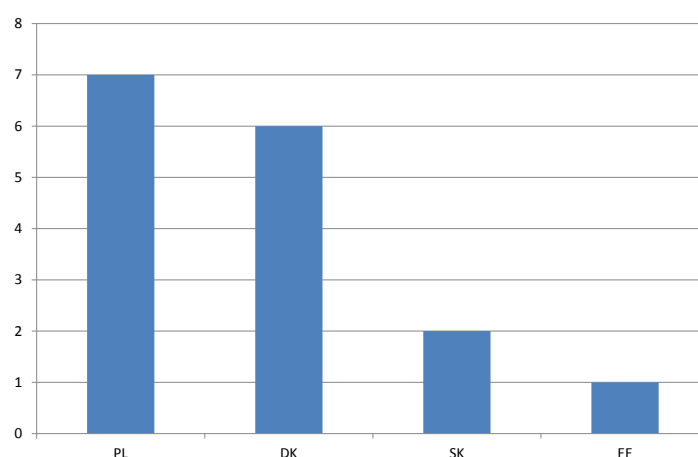
Compensation fund authorised by law	AT, CY, DE, DK, EE, EL, ES, FR, HU, IE, IT, LU, LV, PL, PT, RO, SI, SK
Compensation fund established but not activated	CY, LV
Compensation fund established and activated	DK, EE, PL, SK
USP contributes to compensation fund	DK, EE, PL

No answer: CZ, IS

Source: NRA survey

With the exception of Slovakia, in all other MS with an activated compensation fund, the USP also contributes to the fund.¹⁰³ In addition, domestic and cross-border carriers operators within the USO are also required to contribute to the compensation fund (see Figure 22). There are no examples where carriers providing only non-USO services required to pay into the compensation fund. However, there has been a lengthy discussion about contributions from express carriers in Italy (see Case study 2). In Denmark, the decision to abolish the compensation fund has already been taken and 2019 will be the last year with a compensation fund.¹⁰⁴

Figure 22 Number of carriers contributing to compensation fund other than USP



No answer: LV

Source: NRA survey

¹⁰³ In Slovakia, more than 99% of the fund is financed by the State. See Copenhagen Economics (2018), Main Developments in the Postal Sector (2013-2016), p. 223.

¹⁰⁴ According to information provided by the Danish NRA.

According to current legislation in Luxembourg, express carriers and vertically integrated online retailers such as Amazon could be required to contribute to a compensation fund if it was established in the future. But to date, Luxembourg has not established such a compensation fund.

Case study 2: Contribution to compensation fund by express carriers in Italy

In Italy, the net cost of the universal service have been verified in 2011 for the first time. For the years 2013 and 2014, the criteria for setting up a compensation fund to finance the net costs of the universal service obligation have been met and Italian regulator AGCOM had planned to set up the fund for these years. A compensation fund may be set up if the actual net cost of the USO exceeds the State budget for funding established in the '*Contratto di programma*'. AGCOM calculated the net costs of the universal service for the years 2013 at EUR 343 million which is EUR 2 million higher than the public budget, while the net cost in 2014 amounts to EUR 336 million, taking an efficiency factor of 5% on total USO costs into account. Despite the efficiency factor, the actual net cost in 2014 is EUR 29 million higher than the planned budget.

In this case, the compensation fund shall raise the difference by collecting contributions from carriers with an individual license, i.e. offering services within the scope of the universal service, as well as from carriers holding a general authorisation, e.g. express service providers. Whether or not an authorised carrier has to contribute to the fund is determined by AGCOM's judgement of whether the services are 'interchangeable' with universal services or not.

However, the Italian regulator called off the compensation fund in 2017 for several reasons. First, the authority took into account the overall financial position of Poste Italiane, allowing the company to finance universal service losses from other, more profitable services. Second, Poste Italiane was able to lower costs of the USO due to quality of service reductions in the field of delivery in 2015 (in particular, delivery on every second working day in some parts of the country). Third, the expected transaction and administrative costs for setting up the compensation fund would have not been adequate compared to the amount of the fund.

Sources: Legislative Decree No. 261/99; AGCOM Annual Report 2017; AGCOM (2016), Delibera N. 166/16/CONS, Allegato B; AGCOM (2017), Delibera 298/17/Cons

Assessment of cross-border tariffs

Cross-border parcel carriers are subject to specific reporting obligations to national regulatory authorities. According to Art. 6 of the Regulation on cross-border parcel delivery services, 2019 is the first year in which NRAs will have to assess cross-border tariffs, and single tariffs that they considers to be unreasonably high, if any. In order to harmonise comparable assessments across MS, it will be crucial to establish a common methodology¹⁰⁵.

The price difference between domestic and cross-border prices will play an important role. The Annex to Regulation 2018/644 defines the products whose prices will have to be assessed. In addition to weight and basic characteristics, there is also a requirement concerning the size limits: the smallest dimension shall exceed 20mm both for letter and parcels products.

¹⁰⁵ See COM (2018) 838 final of 12.12.2018, Communication from the Commission on guidelines to national regulatory authorities on the transparency and assessment of cross-border parcel tariffs pursuant to Regulation (EU) 2018/644 and Commission Implementing Regulation (EU) 2018/1263.

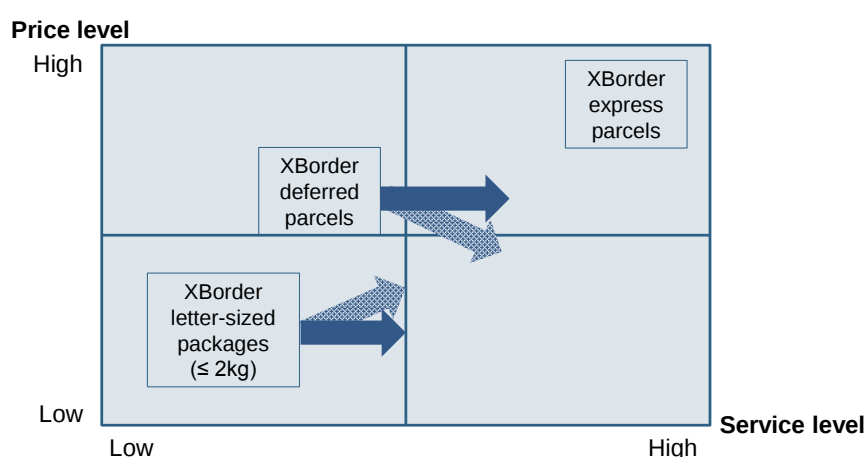
According to answers of NRAs in the survey, it seems that not all USPs offer letter or packet products below 2 kg which allow sending an item which is thicker than 20mm. This appears to be the case in at least four MS: CZ, EE, EL, LT (no answers were received to this question from CY, DE, FI, HR, HU, MT, PL, and PT). Regulators should thus take into account potential differences in size when comparing prices for these products¹⁰⁶.

3.3 Carriers and services in the European B2C delivery markets

3.3.1 Cross-border delivery services consist of three segments

This section describes the different types of carriers and their services with special emphasis on cross-border delivery services.

Figure 23 Stylized segmentation of cross-border parcel delivery services and developments



Cross-border delivery services can be segmented by price and service level. Figure 23 illustrates the different segments. “Price level” refers to the delivery price per item and “Service level” refers to quality of service elements like delivery speed (e.g. ranging from 4-7 days to 1-3 working days from collection to final delivery), tracking (ranging from no tracking up to real-time tracking) and guaranteed delivery (ranging from non-guaranteed delivery to guaranteed time-definite delivery). The full-shaded arrows indicate past trends in the service levels in the last five years and the dotted arrows potential future developments in the price level for each service category. As stated in Section 3.2.3, accurate statistical data is not available for a break-down of cross-border streams to these three segments.

¹⁰⁶ Note that the relevant website allows for these differences to be accounted for.

- Cross-border economy and priority delivery services of small packets (weighing up to two kilogramme) are relatively low priced and usually provided without any tracking. They are mainly provided by USPs and their subsidiaries specialised on cross-border delivery services that collect items abroad for direct injection, e.g. Asendia (La Poste) and Spring (PostNL). USPs in cooperation with the International Postal Corporation IPC seek to develop e-commerce products with improved service levels, for example (light-)tracking of small packets.
- Cross-border deferred parcel delivery services refer to items weighing up to 31.5 kg and more and are usually more expensive than the delivery of small packets by USPs. Cross-border parcels include items of a certain value. Deferred parcel services are the transport of largely standardised packages that usually have a non- guaranteed delivery time of 2-4 days within Europe.
- Cross-border express delivery services are the most expensive option. Express services usually have shorter delivery times and include guaranteed day- or time-definite delivery.

Apex Insight estimates that in Europe the USPs of the three largest EU markets Germany (Deutsche Post DHL), France (La Poste Group) and the UK (Royal Mail Group) and their respective pan-European parcel networks, DHL Parcel, DPD and GLS (mainly providing deferred parcel delivery services), and the global integrators DHL Express, UPS and FedEx/TNT (mainly providing express delivery services) are the market leaders in Europe with an estimated market share of around 66%.¹⁰⁷

3.3.2 Even small e-retailers may benefit from business tariffs and letter services provide a low-cost alternative for cross-border parcels

With emerging cross-border B2C e-commerce, many carriers in the European delivery industry have improved their services since the start of the discussions on more regulation. There are indications that parcel and express carriers have reduced their prices. Many national and international carriers introduced lower online tariffs for domestic and cross-border parcel services. Moreover, micro and small e-retailers are increasingly eligible for business accounts that provide access to lower shipping rates. Volume thresholds for business accounts vary significantly among carriers and can be fairly low as the following examples illustrate:¹⁰⁸

- DHL Parcel offers business accounts to e-retailers with a minimum volume of 200 parcels per year in Germany, 300 parcels per year in Austria or 10 parcels per working day in Belgium (i.e. around 200-300 parcels per year to get access to business tariffs).
- Hermes Germany offers such accounts to e-retailers with 300 parcels per year and DPD Germany with 10 parcels per month.

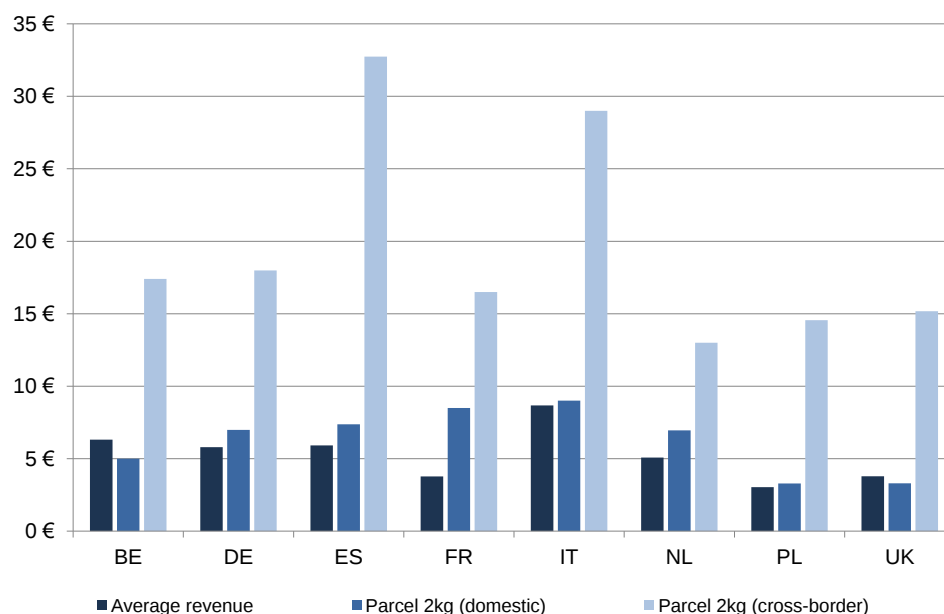
¹⁰⁷ See Apex Insight (2018), European Parcels Market Insight Report 2018 – Summary, p. 5.

¹⁰⁸ Based on company websites and public price lists.

- Hermes UK offers online access to e-retailers with up to 150 parcels per week and individual solutions to e-retailers sending more than 100,000 parcels per year.
- For international shipments Royal Mail requires a minimum revenue of GBP 5,000 or a minimum of 1,000 items to get a business account with lower shipping rates.
- PostNL provides access to bulk mail tariffs for customers with an annual volume of 1,000 letter box parcels and access to individual tariffs with an annual volume of more than 10,000 letter box parcels or more than 1,000 cross-border parcels.

There is only little information available with respect to business discounts. Published tariffs usually refer to single-piece items. Single-piece tariffs, however, give an indication on the upper price limit. Business customers have either access to non-public price lists or individually negotiated tariffs and conditions. Usually, business tariffs vary with the size of the e-retailer regarding the number of shipments, their size and weight, and other criteria (e.g. peak / off-peak period). In some MS regulators and associations publish data on parcel revenues and volumes that provide indications regarding the level of average revenues per item. Although this is a highly aggregated figure a comparison of average revenues with single-piece tariffs for selected parcel products gives a rough evidence on the scale of business discounts.

Figure 24 Revenues per parcel and list prices for single-piece parcels (2017)



Source: WIK-Consult based on market data published of national regulatory authorities, an association (BIEK, DE) and public price lists of USPs.

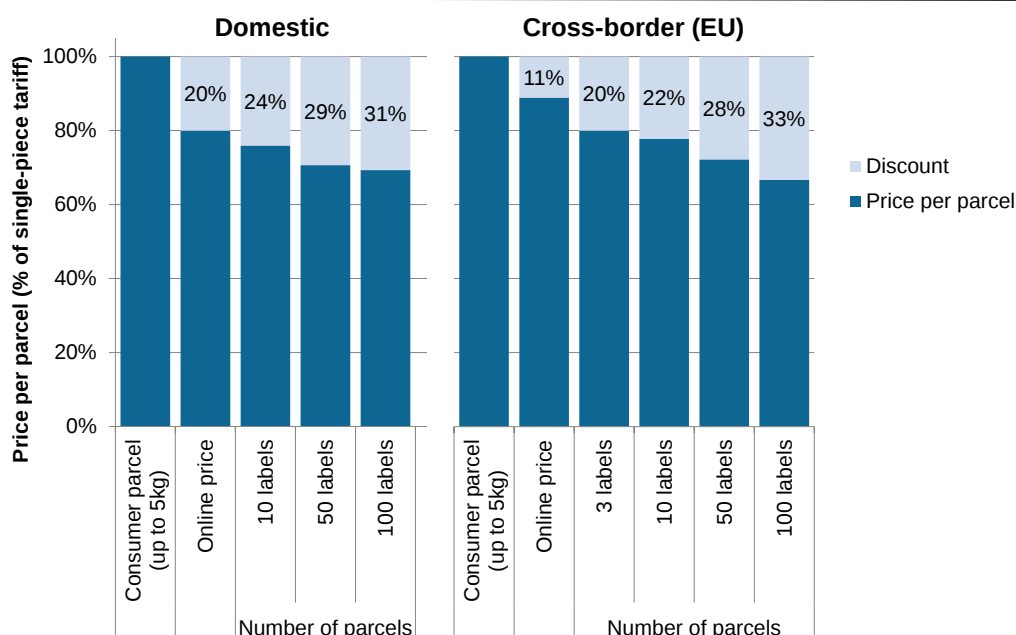
Notes: Prices refer to USPs' lowest price for home delivery of a 2 kg deferred single piece parcels. Prices for cross-border parcels for European Union, lowest pricing zone. Prices as of 31.12.2017. The average revenue per item is based on publicly available revenue and volume data (excluding letter post items)

Figure 24 shows the average revenues in selected MS with publicly available data on revenues and volume of domestic and cross-border parcel and express services and list prices of the USPs' single piece parcels, separately for domestic and cross-border. The list prices refer to the lowest price of a universal service parcel weighing 2 kg. The average revenues refer to domestic and cross-border parcel and express services (except for France) for items weighing up to 31.5 kg (depending on the country). In six countries (except for Belgium and the UK) the average revenues were below the single-piece tariff for light-weight, domestic parcels in 2017. Therefore, business tariffs were most likely considerably lower than universal service tariffs for single-piece parcels.

Following examples suggest that even micro e-retailers may benefit from significant discounts.

- DHL Parcel Germany offers small senders volume discounts for pre-paid parcel labels that can be used for parcels weighing up to 5 kg. In 2019, these discounts range from 20% (for the online tariff of EUR 5.99 instead of EUR 7.49 for a hand-manually filled parcel label) up to 31% (100 parcel labels resulting in an average price of EUR 5.19) for domestic deliveries. For cross-border parcels within the EU the discounts range from 11% (for the online tariff of EUR 15.99 instead of EUR 17.99 for a manually filled parcel label) to 33% (100 parcel labels; average price of EUR 11.99).

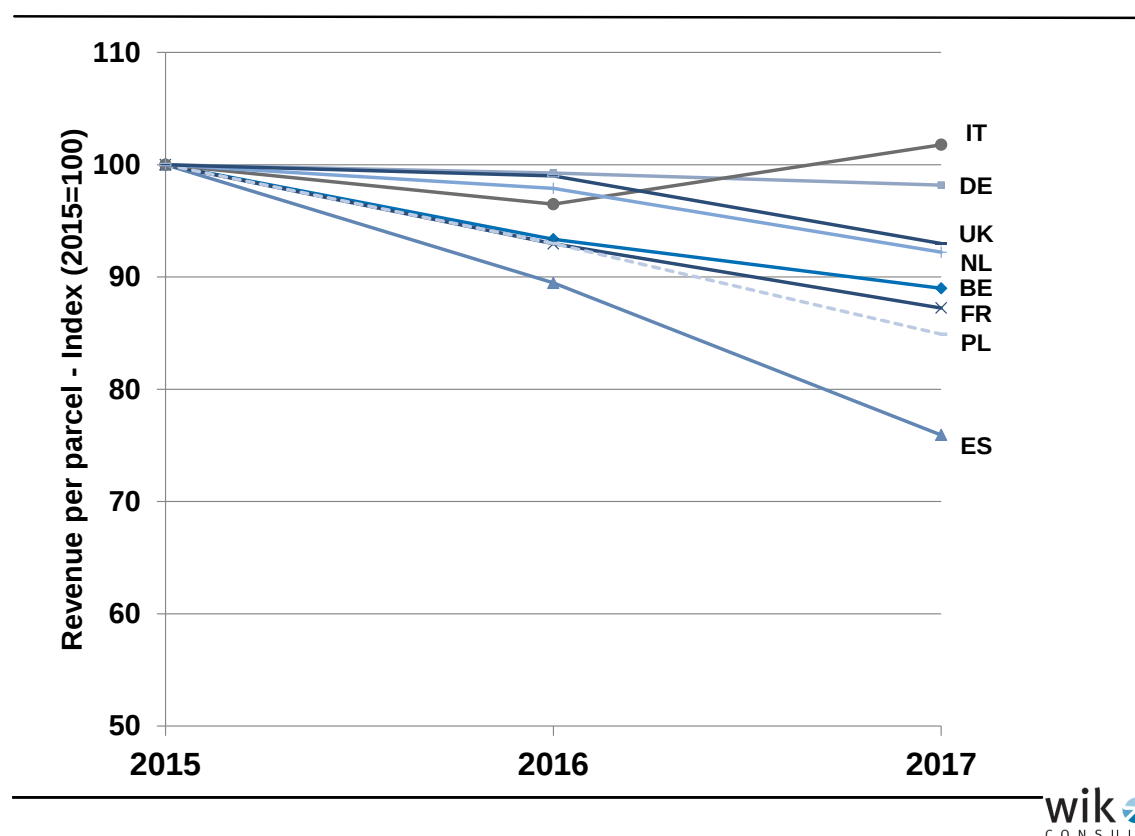
Figure 25 Example: Volume discounts for domestic and cross-border parcels (Deutsche Post, 2019)



- In 2017, media reported that DHL charged Amazon on average only EUR 2.55 for domestic delivery i.e. less than 50% of the list price for a domestic single piece parcel weighing 2 kg) and EUR 2.97 to e-retailers on Amazon's marketplace.¹⁰⁹
- PostNL's public price list includes some prices for business customers. In 2017, domestic letter box parcels up to 2 kg were offered at a discount of around 5% (EUR 3.32 per item instead of the online price for a single-piece item of EUR 3.50) to customers with 1,000 to 2,500 items per year and a discount of around 11% (EUR 3.10 per item) to customers with 2,500 to 5,000 items per year. PostNL listed a price of EUR 8.50 for export parcels to other European countries up to 2 kg (with a minimum quantity of 5 items per consignment. The equivalent price of an equivalent single piece item send within the first pricing zone in Europe was listed with EUR 13. Hence, the bulk mail price provided a discount of around 35%.¹¹⁰

The published time series data on parcel revenues and volume additionally inform about the development of revenues per item over time (see Figure 26).

Figure 26 Revenues per parcel (index, 2015=100)



Source: WIK-Consult based on market data published of national regulatory authorities and an association (BIEK, DE).

¹⁰⁹ See Handelsblatt, So abhängig ist die Post von Amazon, published on 24 June 2018, <https://www.handelsblatt.com/unternehmen/dienstleister/paketgeschaef-so-abhaengig-ist-die-post-von-amazon/22724300.html?ticket=ST-448126-Y2z0WmNaoDYyI1X3WfSU-ap6>.

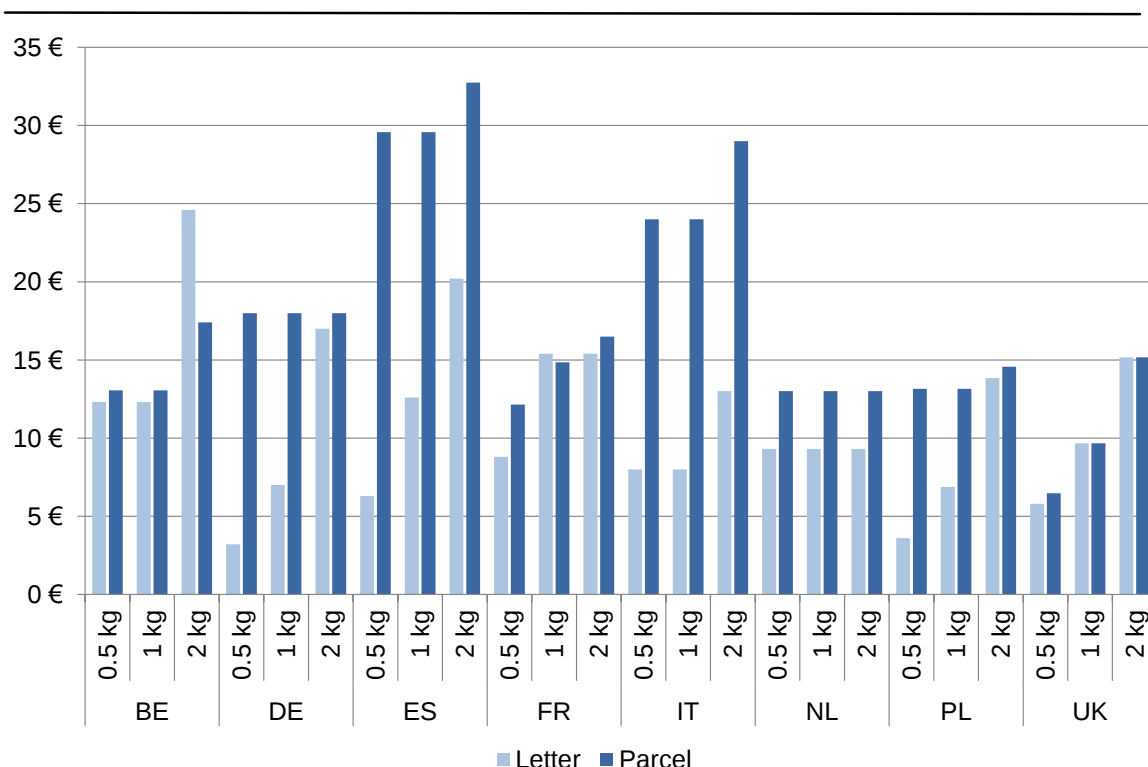
¹¹⁰ WIK based on PostNL Postal rates as of January 2017.

Figure 26 shows the development of the indexed revenues per item and highlights that in most of these MS the average revenues have declined, in part by more than 10% (ES and PL). Possible reasons are (1) a shift from more expensive express to deferred parcel delivery services due to improved quality of service (next-day delivery, tracking, re-direction, etc.), (2) a shift to more light-weight, small-sized parcels, (3) competitive pressure from established and emerging new players in the delivery markets, and (4) increasing demand power from large senders (notably large e-retailers that account for significant share of total parcels).

Average revenues are a quite general indicator because they include domestic and cross-border parcel as well as express delivery services. Cross-country comparisons are therefore difficult because they should take into account differences in the volume and revenue mix differs among MS. The implementation of the EU Cross-border Parcel Regulation is expected to be a major step forward to improve transparency on volumes, revenues and price trends for domestic and export parcel delivery services in the MS.

Additionally, reported average revenues often exclude small packets delivered across borders.

Figure 27 USPS' list prices for cross-border letter and parcel products (2017)



Source: WIK-Consult based on public price lists of USPS.

Notes: Parcel tariffs refer to USPS' lowest price for home delivery of a 2 kg deferred single piece parcels, first pricing zone. All prices as of 31.12.2017.

Figure 27 demonstrates that the public prices for cross-border small packets are usually significantly lower than single-piece tariffs for respective parcel products especially for items weighing 1 kg or less. Additionally, senders can choose between different weight steps below 2 kg regarding small packets while the lowest weight category for parcels is typically 1 kg or 2 kg. As discussed in Section 3.2.3, a significant share of (cross-border) e-commerce items are light-weight and small-sized. Consequently, letter products provide e-retailers a low cost delivery option for this category of goods. In response to this development and to provide e-retailers delivery options that better fit their demands, carriers introduced new services for letter-sized merchandise with (light) tracking and insurance options tailored for e-retailers.¹¹¹

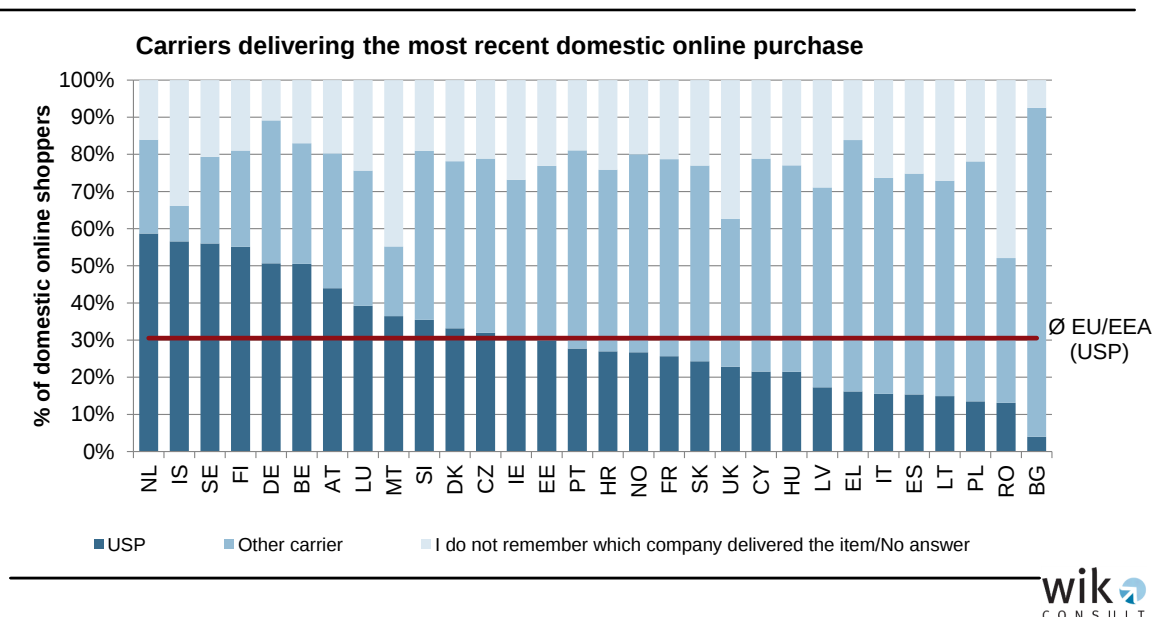
3.3.3 USPs are important B2C players, particularly for cross-border deliveries

USPs traditionally provide nationwide domestic and cross-border letter and basic parcel services to the public. In light of declining use of letter services for sending correspondence or advertisements and significant growth potential in e-commerce deliveries, many USPs have been expanding their business to B2C e-commerce deliveries, domestically and cross-border.

Historically, USPs have a first-mover advantage in B2C e-commerce deliveries. They provide delivery services for letters and parcels nationwide, have dense networks of postal outlets and have the opportunity to jointly deliver parcels and letter post at least in less populated areas. Therefore, USPs are principally better-positioned for growing B2C deliveries than their competitors with origins in the B2B delivery business.

¹¹¹ See Section 3.3.7 for more details and examples.

Figure 28 Carriers delivering the most recent domestic online purchase



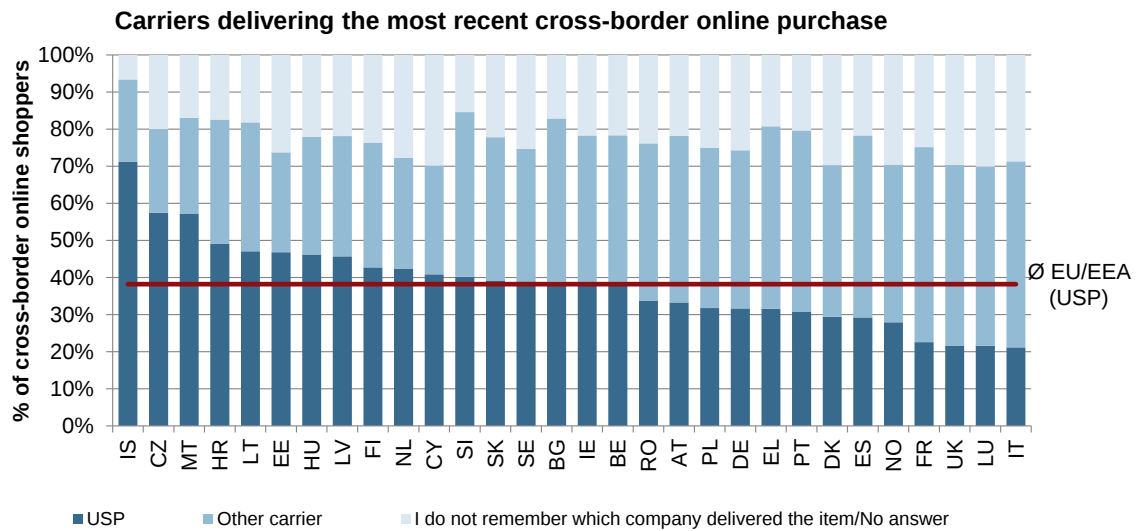
Source: WIK consumer survey

Notes: N=15,403. Question: Which company delivered the item you last purchased from an online shop or a seller on an online marketplace in the country you currently live in? Single choice.

Figure 28 shows that on average 30% of the most recent domestic online purchases were delivered by the USP. In all MS but Bulgaria, USPs are among the TOP3 carriers in B2C delivery in their domestic market. However, there are significant differences in their role across countries: Belgian bpost, Deutsche Post, PostNL, Icelandic Pósturinn, PostNord Sweden and Finnish Posti appear to have a very strong position in their domestic markets because they delivered more than half of the most recent domestic purchase. While in most MS, the USP was the TOP1 carrier, parcel and express carriers played an important role in Bulgaria, Cyprus, Denmark, Greece, Spain, Hungary, Italy, Lithuania, Latvia, Norway and Romania. In contrast, Spanish Correos, Lithuanian Lietuvos Pastas, Poczta Polska, Poșta Română and Bulgarian Post delivered less than 15% of the most recent domestic online purchase in their countries as reported in the WIK consumer survey.

In some MS, the share of online shoppers not remembering which carrier has delivered their purchase is particularly high in Iceland, Malta, Romania and, notably, in the UK. This might indicate that carriers become more and more invisible from the viewpoint of online shoppers.

Figure 29 Carriers delivering the most recent cross-border online purchase

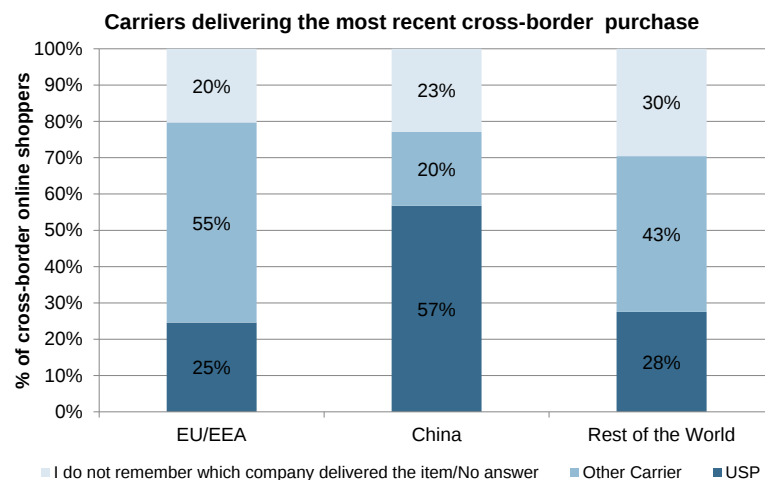


Source: WIK consumer survey

Notes: N=8,212. Question: Which company delivered the last item you purchased from an online shop or a seller on an online marketplace in a country other than the one you currently live in? Single choice.

USPs are even more important in the context of cross-border purchases: As presented in Figure 29, on average nearly 40% of the most recent cross-border purchases were delivered by the USP. Even the providers with comparably weak positions in the delivery of domestic items, i.e. Spanish Correos, Lithuanian Lietuvos Pastas, Poczta Polska, Pošta Română and Bulgarian Post, were named by at least 30% of the recipients in their country.

Figure 30 Relevance of imports from China for USPs



Source: WIK consumer survey.

One explanation for the higher share of USPs in cross-border deliveries is their importance in the delivery of small packets that form part of the cross-border letter post stream.

In the WIK consumer survey, more than one third of the last cross-border purchases have been done from Chinese e-retailers. Figure 30 shows that USPs deliver nearly 60% of all imports from China but only around one quarter of cross-border purchases from other EU MS and other countries outside the EU/EEA. The growing e-commerce flows from China to Europe do not only have an impact on the perceived delivery quality of USPs but some USPs consider it as an opportunity to act as a 'gateway' to Europe for Chinese e-retailers:

- Hungarian Magyar Post, for example, started a joint venture with two Chinese logistics firms in 2017 with the aim of speeding up the delivery of goods from China to Europe by setting up a European logistics base aimed at processing parcels sent from China to Hungarian clients and other European destinations. In addition to the transport infrastructure, the joint venture will introduce technologies to provide tracking of items. The joint venture aims at significantly increasing the revenues for Magyar Post and at providing the postal operator an opportunity to grow into a leading player on the goods shipment market in East-Central Europe.¹¹²
- In 2015, Eesti Post, operating under its brand Omniva, launched a joint venture with China's largest private courier company SF Express that is closely related with the biggest Chinese online marketplace Alibaba and its logistics arm Cainiao. The joint venture's activities mainly include handling of e-commerce items from China to Europe to shorten the delivery time significantly compared to the transit times in the traditional postal network. In the joint venture, SF Express is responsible for transporting the packets and parcels from China to Europe, using charter flights with different cargo airlines. For its part, Omniva organises transport and delivery to other European countries from a range of carriers. In addition, Omniva is cooperating with Alibaba for some logistics flows from Hong Kong to Europe, and is now operating terminals in London, Frankfurt and Tallinn.¹¹³
- PostNL has also established the "PostNL Gateway to Europe" for Chinese orders as "single point of entry for all your small parcels destined for the European Union" under its label Spring Global Delivery Solutions. It provides light-tracked, relatively fast end-to-end delivery services in 4-7 working days including an integrated return solution.¹¹⁴ This service is for example used by the Chinese online marketplace AliExpress to deliver online orders to Dutch consumers.¹¹⁵

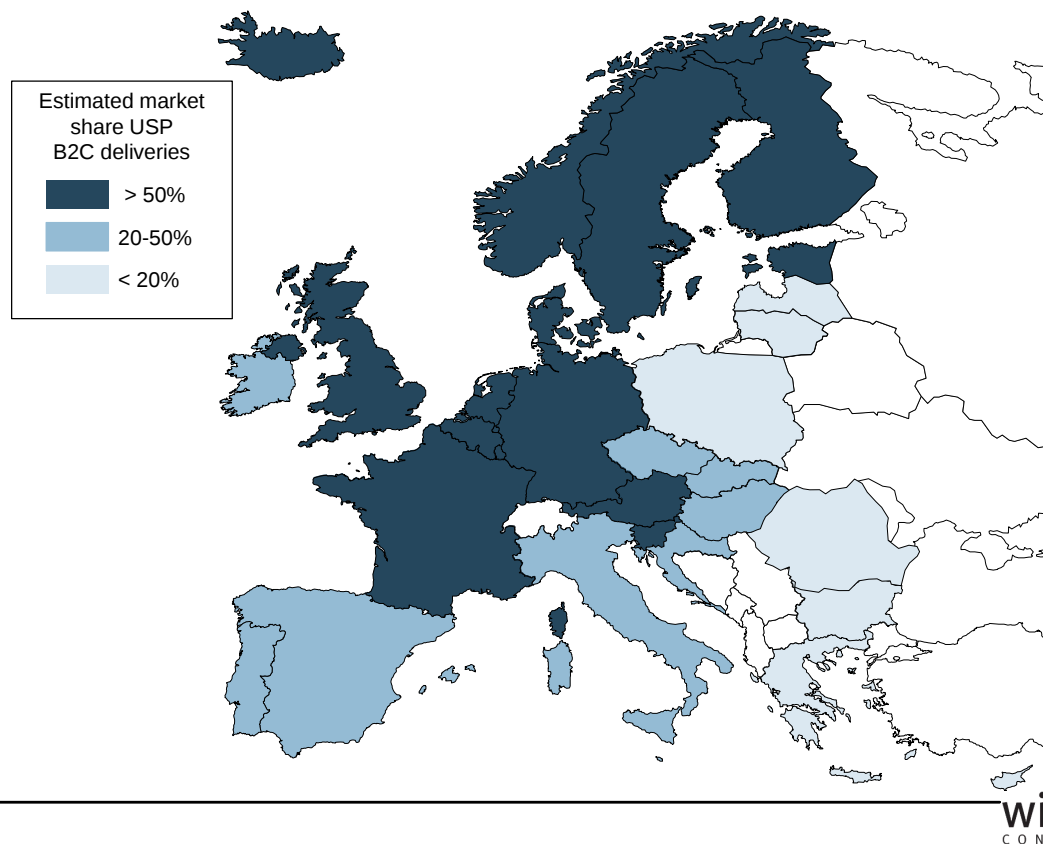
¹¹² See Budapest Business Journal, Chinese shipments to be delivered faster from 2018, published on 28.11.2017, https://bbj.hu/business/chinese-shipments-to-be-delivered-faster-from-2018_142202.

¹¹³ See CEP Research, Posts target cross-border e-commerce boom through Chinese partnerships, published on 29.3.2018.

¹¹⁴ PostNL, PostNL Gateway to Europe, accessed on 7 December 2018, <https://www.spring-gds.com/e-commerce-solutions/small-packet/postnl-gateway-to-europe/>.

¹¹⁵ See Spring, PostNL delivers packets of the Chinese AliExpress in the Netherlands, press release 11 May 2017.

Figure 31 Importance of USPs in B2C delivery services



Source: WIK-Consult

Figure 31 illustrates the importance of the USPs in B2C parcel deliveries. In most MS, they have estimated market shares above 20 per cent in their domestic market (in terms of volume). In the Western and Northern EU MS USPs deliver more than half of B2C parcels. In these MS they traditionally played a significant role in the delivery of B2C parcels sent by mail order or distance selling companies in the 1990ies. Orders were made by phone or mail based on information provided on TV channels and in catalogues. In MS with well-developed distance selling businesses, domestic B2C delivery services have been successfully established not only by the USPs but also delivery companies founded by large mail order companies (e.g. in France, the UK, or in Germany). This competition has further pushed the efforts of USPs to improve their B2C delivery services.

In the Southern and many Eastern EU MS, where a similar mail order industry had not emerged in the past the USPs were often not fit for purpose to match the service requirements of e-retailers and online shoppers and have started much later to adapt and improve their delivery services. This delay allowed local, more commercially-minded parcel and express carriers to successfully expand their operations from B2B to the B2C delivery services. In these MS, USPs therefore compete with well-positioned local parcel and express carriers (in terms of quality of service and customer orientation) and have not yet managed to reach significant market shares in the delivery of B2C parcels.

Despite of these structural differences between Western/Northern and Southern/Eastern European delivery markets all USPs have put significant efforts to participate in the growth of B2C e-commerce at least in their domestic markets. They generally consider growth in e-commerce driven B2C deliveries of small packets and parcels as an opportunity to offset declining letter post volume, at least in their domestic markets. Additionally, USPs follow individual strategies to participate in the growth of cross-border e-commerce:

- USPs have the opportunity to develop customised cross-border delivery services by taking part in the International Postal Corporation (IPC)'s Interconnect programme which aims to facilitate cross-border parcel shipping with a seamless e-commerce delivery platform (see Case study 3 on the IPC Interconnect programme).¹¹⁶ In mid-2018 IPC launched a cross-border shopping platform ("Dynamic Merchant Platform") which enables e-retailers, especially SMEs, to offer their customers wide range of (cross-border) postal delivery solutions including reliable end-to-end delivery times; track and trace; simple return solutions; delivery choice, and improved customer service processes.¹¹⁷

¹¹⁶ See IPC, <https://www.ipc.be/services/support-customer-groups/interconnect>.

¹¹⁷ CEP Research, Interview – New IPC cross-border shopping platform "offers integrator features at postal prices", published on 25 April 2018, <https://www.cep-research.com/news/interview--new-ipc-cross-border-shopping-platform-offers-integrator-features-at-postal-prices>.

Case study 3: IPC Interconnect programme

The IPC Interconnect initiative started in 2013 and the long-term aim is to offer a 'Premium' service for high-value goods, with features such as day-definite delivery, full end-to-end tracking and reception signature, a 'Standard' service for medium-value goods with tracking and predictable delivery times, and an 'Economy' service for low-value goods with predictable delivery times but no tracking. The programme was largely set up in response to political pressure on the postal industry from the European Commission, which is determined to expand cross-border e-commerce as part of its Digital Single Market strategy.

It resulted in an integrated IT platform, known as IPC Data Hub, which has been launched in 2016 with 31 participating Posts, including posts from America, Asia Pacific and Europe. Tagged as 'the global postal e-commerce network', the Interconnect programme consists of several solutions that aim to address customers' needs for cross-border tracking, delivery choice, cross-border customer service and easy returns. Another element is the launch of a harmonised label to get rid of the current 'over-labelling' of international parcels and helping to improve tracking and tracing, quality and transit times. The label incorporates a single barcode based on a common postal standard, standardised address data, a dedicated section to include the e-seller's specific elements and a dedicated section for relevant operational instructions, represented by standardised symbols.

The most successful element of the platform appears to be the integrated return solution that allows online shoppers to return unwanted goods in each postal outlet of participating USPs. However, the overall success of the IPC Interconnect programme appears to be limited, so far. Holger Winklbauer, CEO of IPC, highlights in an interview in Spring 2018: "Interconnect is one of the big programme achievements. It was delivered on time but did not pick up at the beginning. In the last six months, though, participation has picked up." (CEP Research, 25 April 2018)

Sources: WIK-Consult (2014), Design and development of initiatives to support the growth of e-commerce via better functioning parcel delivery systems in Europe;
 CEP Research, Interview – New IPC CEO hails "brand, trust and quality" as key postal USPs, published on 28 October 2016;
 CEP Research, Interview – New IPC cross-border shopping platform "offers integrator features at postal prices", published on 25 April 2018;
 IPC (2017), IPC Return Platform hits 6 million items.

- Many USPs are expanding their delivery networks to neighbouring countries, either by launching own regional networks or by acquiring operators in other countries. For example, PostNord offers cross-border and domestic B2C services under the branding 'MyPack' in Denmark, Finland, Norway and Sweden.¹¹⁸ PostNL offers parcel delivery services across the Benelux and invests in parcel processing and distribution centres in Belgium.¹¹⁹ Omniva (Eesti Post) provides postal and logistics services in Latvia and Lithuania and operates the largest parcel locker network in the Baltics.¹²⁰ In 2017, Austrian Post acquired a major stake in the Czech parcel service provider 'IN TIME' to be represented in the fast-growing parcel market in the Czech Republic.¹²¹
- Some USPs have dedicated subsidiaries or are active in joint ventures to handle international mail and small parcels. For example, PostNL's subsidiary Spring launched the "PostNL Gateway to Europe" with delivery solutions for Chinese

¹¹⁸ See PostNord Sweden website (www.postnord.se/en/sending/parcels-business/mypack-home).

¹¹⁹ See PostNL, Annual Report 2017, p. 26.

¹²⁰ See CEP Research, Omniva's Baltic parcels business grows 20%, published on 2.8.2018.

¹²¹ See Austrian Post, Austrian Post acquires 31.5% stake in the Czech parcel service provider "IN TIME", published on 31.8.2018, <https://www.post.at/en/21099.php/presse/details/id/1265676>.

e-retailers.¹²² La Poste offers shippers and hubs solutions for international shipping and injection into the domestic distribution networks via Asendia, a joint venture with Swiss Post.¹²³

- The USPs of the largest e-commerce and delivery market in Europe, Deutsche Post DHL, La Poste Group and Royal Mail Group, have expanded their activities in cross-border e-commerce through their road-based parcel networks DHL Parcel, DPD and GLS with major investments and the introduction of new services tailored to e-retailers as outlined in the Section 3.3.5 in this chapter.

3.3.4 International integrators target the high value e-commerce segment

The three international integrators DHL Express, UPS, and FedEx / TNT Express operate on a global scale and have full operational control on all transportation assets, including an air network with scheduled flights.¹²⁴ They also have integrated IT networks for data handling in place that allow for example the close tracking of parcels across borders. The integrators are able to provide international end-to-end deliveries within their own network and can provide highly reliable, guaranteed day and time definite domestic and cross-border delivery services based on standardised processes.

In Europe, DHL Express is the leading player in the European express market with a reported market share of 44% of revenues for TDI (time definite international) items, followed by UPS with a share of 24% and FedEx / TNT with a combined share of 21% in 2017.¹²⁵ Originating from the B2B delivery segment, the international integrators have expanded their operations into the B2C segment in response to growth in e-commerce with target the high value segment of the international e-commerce market given the high quality (and high costs) of their services. Among the three integrators, UPS and DHL Express have clear ambitions to grow in B2C e-commerce deliveries in Europe while FedEx/TNT still have their priority on the B2B business. On the next two pages we introduce the activities of DHL Express and UPS in more detail.

DHL Express (brand of Deutsche Post DHL group)

DHL Express is the express division of Deutsche Post DHL Group with a main focus on TDI express services on global scale. In the TDI segment, DHL Express' global revenues were EUR 15,049 million in 2017 of which 44% (EUR 6,696 million) are attributable to its European operations. Services with pre-defined delivery times accounted for 85% of total revenue.¹²⁶

¹²² See Post NL, Annual report 2017, p.55.

¹²³ See La Poste, Registration Document 2017, p. 27.

¹²⁴ The importance of air transportation networks is illustrated by the fact that DHL acquired interest in US freight airline ABX („Airborne“) in 2003, when DHL entered the domestic US market.

¹²⁵ See Deutsche Post DHL, Annual Report 2017, p. 30.

¹²⁶ See Deutsche Post DHL, IR Statbook 2017 Q4/2017; Deutsche Post DHL, Annual Report 2017, p. 30.

In the recent years, DHL Express has faced a significant increase in TDI volumes. While the majority of volume is still generated from the B2B segment and mainly driven by GDP development, the relevance of the B2C segment has increased with the growth in e-commerce. In the last five years, DHL Express' total e-commerce shipments have grown at high single-digit rates and cross-border growing-commerce shipments at about 20-25%. The share of B2C TDI items increased from 10% in 2013 to more than 23% in 2017.¹²⁷

DHL Express considers the B2C segment as an additional growth engine and introduced dedicated services to target small and medium-sized e-retailers. For example, they launched a global campaign in 2018 that helps e-retailers to gain access to global marketplaces and provides website checks, whitepapers on e-commerce and consultancy services to grow its e-commerce business.¹²⁸ The MyDHL+ shipping platform enables e-retailers of any size to book shipments and pickup services with integrated e-billing and to track and trace all shipments.¹²⁹ At the same time, DHL Express has expanded its services for recipients in selected European markets, by offering delivery notifications, alternative delivery locations, and extended delivery times in some countries, for example in France and Finland.¹³⁰

Deutsche Post DHL is expanding its cross-border international through organic growth. While the express division mainly grows in the TDI segment for high value e-commerce items, the segment of deferred cross-border parcel services in Europe is covered by DHL Parcel Europe. For this purpose (parts of) subsidiaries of DHL Express are reassigned to the parcel division to expand their B2C operations in selected MS.¹³¹

¹²⁷ See Deutsche Post DHL, Capital Markets Day Presentation 2018, 8. May 2018, p.44; CEP Research, Interview - DHL Express CEO eyes closer Amazon cooperation as e-commerce volumes soar, published on 26.2.2018, <https://www.cep-research.com/news/interview---dhl-express-ceo-eyes-closer-amazon-cooperation-as-e-commerce-volumes-soar>.

¹²⁸ See CEP Research, DHL Express orders 14 B777 freighters to support cross-border e-commerce growth, published on 16.7.2018, <https://www.cep-research.com/news/dhl-express-orders-14-b777-freighters-to-support-cross-border-e-commerce-growth>; Deutsche Post DHL, Capital Markets Day Presentation 2018, 8. May 2018, p.41 sqq.

¹²⁹ See CEP Research, Interview – E-commerce boom powers 2-digit growth for DHL Express in Germany, published on 9.7.2018, <https://www.cep-research.com/news/interview--e-commerce-boom-powers-2-digit-growth-for-dhl-express-in-germany>.

¹³⁰ See CEP Research, DHL Express France expands B2C services as online orders head for 50% of imports, published on 26.4.2017; <https://www.cep-research.com/news/dhl-express-france-expands-b2c-services-as-online-orders-head-for-50-of-imports>; CEP Research, DHL Express delivers through R-kiosks in Finland, published on 26.8.2018, <https://www.cep-research.com/news/dhl-express-delivers-through-r-kiosks-in-finland>.

¹³¹ In 2017, for example, DHL Parcel Iberia (Spain), Danzas (Spain) and DHL Parcel Portugal were reassigned from DHL Express to the PeP division.

United Parcel Service of America, Inc. (UPS)

In 2017, UPS's revenues reached USD 65,872 million in its three segments 'U.S. Domestic Packets', 'Supply Chain and Freight', and 'International Packet'. The International Packet segment, which includes small packet operations made up 20% of total revenues. Approximately half of international revenue (around EUR 6 billion) are attributable to European operations which comprise express time-definite services, deferred and guaranteed day-definite services, and cross-border road-based packet delivery services.¹³²

UPS sets its focus primarily on higher-margin business such as B2B e-commerce, international markets and healthcare logistics. In response to the fast growth of e-commerce, UPS is expanding its B2B services, especially for SMEs, while growing its B2C services organically throughout Europe. In the recent years, UPS has expanded its infrastructure in Europe. As part of its USD 2 billion investment in its European network and infrastructure between 2014 and 2019, UPS enhanced its European road-based network to ensure fast and reliable cross-border delivery services. For this purpose, UPS expanded existing and built new facilities by investing in new parcel sorting centres and hubs, for example in Belgium, France, the Netherlands, Italy and the UK.¹³³ The investment in the road-based network and major facilities sped up deferred deliveries and reduced in-country transit times across European countries allowing UPS to reach more than 80% of Europe's population within two business days. Road-transit times were significantly lowered, for example, from Germany to 13 different European countries (including France, Italy, Spain and Sweden) or from the UK (for example to Bulgaria, the Czech Republic, Hungary, Romania, and Slovakia). Additionally, UPS improved its express services in North-Western Poland and Lithuania allowing for time-definite express shipping services to and from the Czech Republic, France, Germany, Hungary, Italy, the Netherlands, Romania, Russia, and the UK.¹³⁴

UPS provides dedicated B2C delivery services in selected markets. In 2012, UPS acquired Kiala and its network of PUDO points in Belgium, the Netherlands, Luxembourg, Spain and France and expanded its European PUDO network since then, for example with the recent acquisition of the Irish parcel carrier Nightline Logistics and its parcel locker network called "Parcel Motel". UPS further expanded its B2C activities in Europe by adding more cross-border delivery options for e-retailers and consumers in major markets, for example with the introduction of the 'MyChoice' service which gives recipients more

¹³² See UPS, Annual Report on Form 10-k, p.3.

¹³³ See CEP Research, UPS opens new facility in Belgium, published on 12.2.2018, <https://www.cep-research.com/news/ups-opens-new-facility-in-belgium>; CEP Research, UPS expands in Italy with new Tuscany centre, published on 12.11.2018, <https://www.cep-research.com/news/ups-expands-in-italy-with-new-tuscany-centre>; CEP Research, UPS opens \$100m Paris hub to expand French network, published on 26.6.2018, <https://www.cep-research.com/news/ups-opens-100m-paris-hub-to-expand-french-network>.

¹³⁴ See CEP Research, UPS speeds up deferred deliveries across Europe, published on 16.2.2017, <https://www.cep-research.com/news/ups-speeds-up-deferred-deliveries-across-europe>; CEP Research, UPS gives European businesses eight hours more time, published on 20.9.2018, <https://www.cep-research.com/news/ups-gives-european-businesses-eight-hours-more-time>

options over parcel delivery.¹³⁵ To better target micro and small senders UPS has launched an international online offer under the brand UPStoday powered by parcel2go in six languages (Dutch, English, German, Italian, Polish and Spanish).

3.3.5 Pan-European road-based networks expand into B2C delivery

There are basically four pan-European road-based parcel delivery networks in Europe. While two of these networks have their origins in the traditional B2B delivery industry the development of the other two networks are driven by B2C parcel deliveries. Three of the networks are closely related to the USPs of the three largest delivery markets in France, Germany and the UK.

The first two road-based networks with origins in B2B delivery are La Poste's subsidiary Geopost (under the DPDgroup branding) and Royal Mail's GLS. Both networks have their origins in co-operations of German freight forwarding companies ('German Parcel' and 'Deutscher Paketdienst') that built up international links to other European countries in the 1980ies. Royal Mail and La Poste continued the European strategy of the parcel networks after their acquisition in 1999 and 2001, respectively.¹³⁶ Both, DPD and GLS provide domestic as well as cross-border parcel and express services in most European countries and used to focus on B2B deliveries.

In 2014, Deutsche Post DHL launched the brand DHL Parcel Europe to offer dedicated cross-border B2C delivery and return services. The network is built on a combination of intercompany transformation (for example reassignment of parts from DHL Express to DHL Parcel for example in Spain), acquisitions (in the UK), newly established operations (greenfield approach in Austria, Slovakia and Switzerland) and co-operations (in many countries with USPs) with a standardised product offer under the label DHL Parcel Connect – but still separated from dedicated letter products for sending merchandise.

In contrast to the other carriers, Hermes Europe is not associated with a USP but a subsidiary of Otto Group, the largest distance selling company in Germany.¹³⁷ Founded as an independent home delivery carrier in Germany in 1972, Hermes started to build up its own parcel shop network in the 1990s and expanded its activities to other European countries, starting in Austria, in the noughties.¹³⁸

Although, all operators report that they provide parcel and express services across Europe, the scope of services varies between the countries from import to full-range parcel services including domestic, import and export delivery services. Moreover, along with the shift to tailored B2C delivery service for e-retailers delivery services become more

¹³⁵ See Section 3.3.7.

¹³⁶ See DPD website, https://www.dpd.com/master/home/about_dpd/the_company/history;

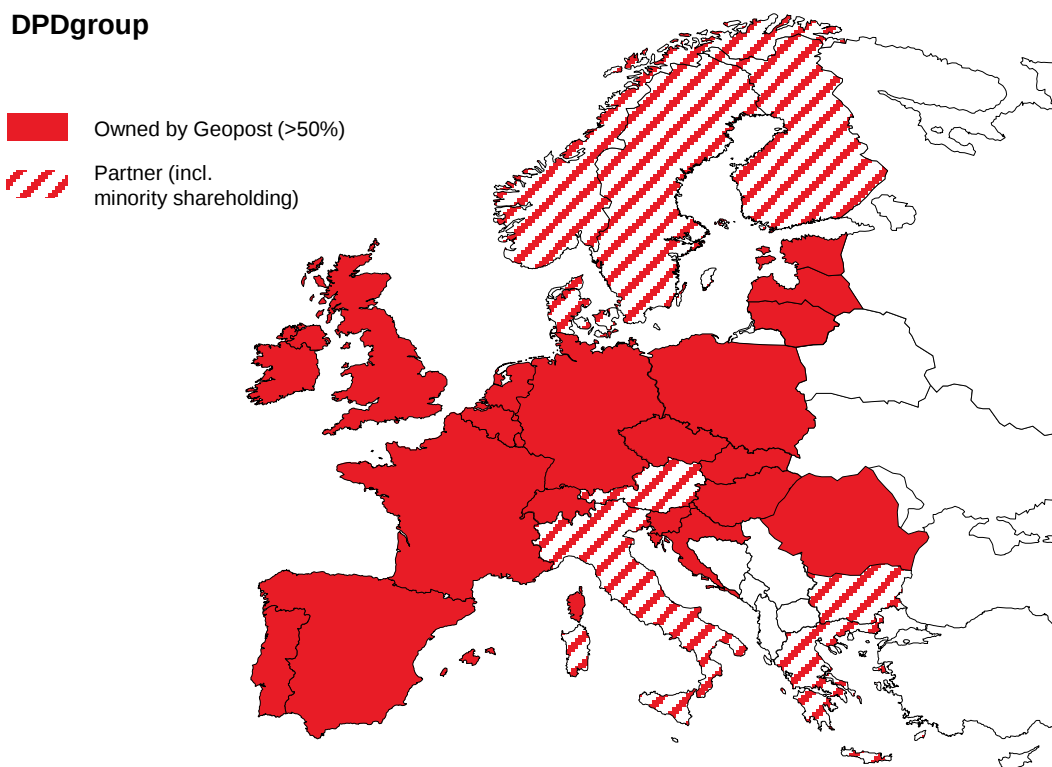
¹³⁷ See Ecommerce News Europe, 19 European companies in global top 50 of biggest e-tailers, published on 23.2.2016, <https://ecommercenews.eu/19-european-companies-global-top-50-biggest-e-tailers/>.

¹³⁸ See Hermes Website, <https://www.hermesworld.com/en/about-us/history/current-decade/#>.

country-specific i.e. operators increasingly take account of local delivery features and delivery preferences of local consumers.

In the last five years the carriers have expanded their footprint. On the one hand, DPD and GLS as traditional B2B carriers have put significant efforts to expand to B2C deliveries in Europe by investing in first and last mile solutions in their target markets. While GLS follows a more selective approach without a dedicated European-wide B2C delivery strategy¹³⁹, Geopost/DPD has launched such a strategy under the European parcel brand DPDgroup in 2015.¹⁴⁰ Deutsche Post DHL and Hermes Europe have built dedicated B2C delivery networks and expanded their networks across Europe.

Figure 32 The pan-European parcel delivery network of Geopost / La Poste (DPDgroup including the brands SEUR and Chronopost, 2018)



Source: WIK-Consult based on company websites, annual reports and press releases.

La Poste's subsidiary Geopost follows a clear strategy to promote European B2C delivery services and to grow in cross-border and domestic B2C deliveries. In March 2015, Geopost launched DPDgroup as brand of its European parcel delivery network. GeoPost/DPDgroup operates in both, the deferred and the express parcel market and

¹³⁹ See Rico Back (2017), GLS – Divisional Update, Transcript, 18 May 2017.

¹⁴⁰ See dpdgroup (2015), GeoPost presents its development strategy and launches its new international brand identity : DPDgroup, press release published on 18 March 2015.

realised revenues of EUR 6,816 million in 2017 of which 78% are attributable to operations outside France.¹⁴¹ The B2C segment represented 37% of Geopost/DPDgroup's revenues and nearly 40% of its 1,228 million parcels in 2017.¹⁴² La Poste claimed that DPD is the second-largest operator in the European parcel and express market (behind Deutsche Post DHL) with an estimated market share of 12.9% by volume in 2016 and the leader for intra-European road-based delivery services with an estimated market share of around 20%.¹⁴³

In 23 European countries, operations are based on wholly-owned or controlled subsidiaries, mainly under the DPDgroup brand, under the Chronopost brand (France, Portugal) and under the SEUR brand (Spain). In Austria, Bulgaria, Romania, and Italy DPD operates via capital and industry partnerships and in other European countries through commercial partnerships, e.g. in the Nordic countries in cooperation with PostNord.¹⁴⁴ In order to expand its regional coverage and improve its footprint in B2C deliveries, DPD acquired (stakes in) local carriers, e.g. the Polish Siódemka (2014), the British logistics service provider wnDirect for global e-commerce delivery solutions (2017)¹⁴⁵ and a 37.5% stake in the Italian BRT (2017). In Germany, DPD invested in tiramizoo, a delivery platform for city couriers (same-day delivery).¹⁴⁶

DPD has taken several measures to modernise and expand its production capacity in order to manage volume growth in the B2C delivery market. Besides the introduction of peak surcharges for the November/December period¹⁴⁷, DPD invested significantly in its infrastructure to increase the capacity in national operations, e.g. in a new parcel sorting centre in Germany¹⁴⁸, in a new distribution centre in the Netherlands¹⁴⁹, in delivery depots and city hubs in Austria¹⁵⁰, and in a new operational centre in Spain.¹⁵¹ DPD reports that they have access to a European network of PUDO points which comprise

¹⁴¹ See La Poste, Registration Document 2017, p.34

¹⁴² See La Poste, Annual results 2017 Le Groupe La Poste

¹⁴³ See La Poste, Registration Document 2017, p.36; CEP RESEARCH, DPDgroup plans new innovative services as B2C volumes soar, published on 21.11.2017.

¹⁴⁴ See La Poste, Registration Document 2017, p.37.

¹⁴⁵ GeoPost/DPDgroup took full control of UK-based wnDirect at the start of 2017. Asendia, a joint-venture between La Poste and Swiss Post, is to acquire wnDirect and will be merged to Asendia UK in 2019 (See CEP Research, Asendia to acquire global e-commerce delivery specialist, wnDirect, published on 30 November 2018),

¹⁴⁶ See La Poste, Registration Document 2017, p.34, p.146; CEP Research, DPD Germany to launch same-day delivery through stake in tiramizoo, published on 31.7.2013.

¹⁴⁷ See CEP Research, DPDgroup plans new innovative services as B2C volumes soar, published on 21.11.2017.

¹⁴⁸ See CEP Research, DPD Germany posts strong volume and revenue growth in 2017, published on 23.2.2018.

¹⁴⁹ See CEP Research, DPD has started the construction of a new distribution centre in Eindhoven, published on 8.2.2018.

¹⁵⁰ See CEP Research, DPD Austria posts solid 2017 growth and expands its leading positions in B2B and export segments, published on 8.3.2018.

¹⁵¹ See CEP Research, SEUR expands in Catalonia with new Barcelona centre, published on 5.6.2018.

32,000 parcel shops in 26 countries and around 1,000 parcel lockers (mainly in France, Germany, the UK, Poland, Spain, and the Benelux).¹⁵²

DPD introduced new domestic and cross-border services to target the fast-growing European B2C parcels market. They have invested heavily in recipient-oriented services such as Predict (delivery notification with a one-hour delivery time window), Follow My Parcel (live tracking), Precise (customer-selected delivery time) and Flex (last minute change of the delivery day), available in some but not yet in all countries. Additionally, DPD is developing a portfolio of premium B2C services, including same-day, instant and Sunday deliveries in selected countries. Additionally, DPD introduced alternative return solutions (Predict for Collection Request) that collects parcels from customers' doorsteps.¹⁵³ DPD is particularly successful in the most advanced e-commerce market in Europe, in the UK. They managed to increase their market share from 8 to 10% by revenues and from 5 to 7% by volume between 2014-2016¹⁵⁴ in a highly competitive environment establishing itself as the leader at the high end of the B2C segment in the UK.¹⁵⁵ Overall, DPD appears to be one of the most innovative carriers for e-commerce parcel deliveries in the UK.

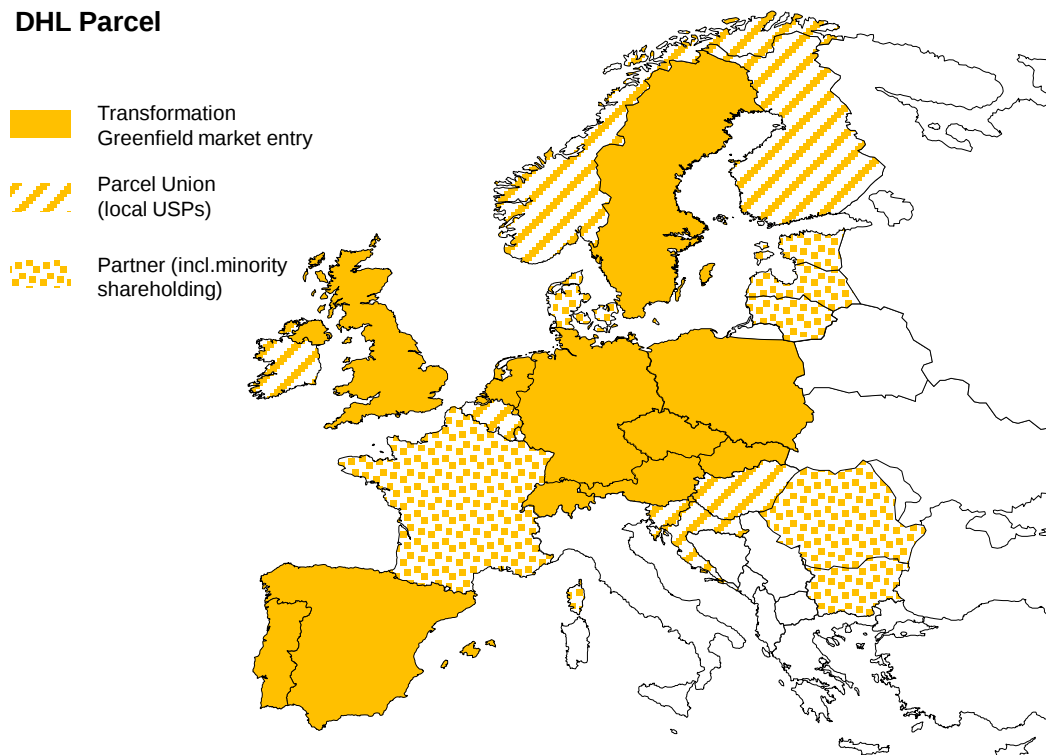
¹⁵² See CEP Research, DPDGroup extends Pickup parcel shop network to over 20,000 locations in Europe, published on 17.9.2015; La Poste, Registration Document 2017, p.38.

¹⁵³ See CEP Research, DPDgroup plans new innovative services as B2C volumes soar, published on 21.11.2017; CEP Research, DPD launches same-day and in-night services in Poland, published on 9.10.2018, Post & Parcel, Can DPD's doorstep returns really work?, published on 31.7.2018; Post & Parcel, DPD launches returns collection service Predict, published on 17.7.2018, .

¹⁵⁴ Based on Royal Mail Group, Analyst presentations .

¹⁵⁵ See Apex Insight (2018), UK Parcels: Market Insight Report 2018 – Summary, September 2018.

Figure 33 The pan-European parcel delivery network of Deutsche Post DHL (2018)

DHL Parcel

Source: WIK-Consult based on company websites, annual reports and press releases.

In 2014, Deutsche Post DHL started building up a European network for B2C cross-border parcel services under the label DHL Parcel Europe.¹⁵⁶ To date this network covers 26 countries in the European Union and Switzerland. So far, neither Italy nor Greece are part of the DHL Parcel network (in these countries parcels are delivered either by the USP, e.g. by SDA the express subsidiary of Poste Italiane, or by DHL Express).¹⁵⁷

DHL Parcel Europe has nearly tripled its revenues since 2014, from EUR 676 million to EUR 1,882 million. DHL Parcel Germany reached revenues of more than EUR 5 billion in 2017. According to Deutsche Post DHL, the market share of DHL Parcel Germany has been steadily grown in the last years from less than 40% to more than 45%.¹⁵⁸

The target groups for parcel services of DHL eCommerce Solutions vary between countries. In some countries, only business customers can access our services (e.g.

¹⁵⁶ DHL Parcel was part of the Post - eCommerce – Parcel (PeP) division. Deutsche Post DHL announced the break-up of the PeP division for January 2019 by creating one division comprising the German letter and parcel activities and a separate one for the international parcel and e-commerce business ('DHL eCommerce Solutions'). See CEP Research, DHL restructures for European B2C parcel growth, published on 12.11.2013, and, Analysis – Is Deutsche Post going 'back to the future?', published on 17.9.2018.

¹⁵⁷ DHL (2018), Länderinformationen DHL Paket International, January 2018.

¹⁵⁸ See Deutsche Post DHL, Annual Reports.

France: if e-tailers send more than 300 parcels per year). The full range of services, i.e. domestic as well as export parcel services, is available in a number of countries (e.g. in the Netherlands, UK and Spain) where DHL has built up appropriate capabilities. In these countries, DHL offers domestic as well as cross-border delivery services to consumers and to business customers. In the other countries the major purpose of the cooperation is the delivery of import parcels from Germany.¹⁵⁹

In order to expand their geographic footprint, DHL Parcel followed a mixed strategy. Deutsche Post DHL acquired UK Mail and a 27.5% stake in French last-mile operator Relais Colis, both in 2016.¹⁶⁰ DHL Parcel launched delivery operations from the scratch in Slovakia, Austria and Switzerland.¹⁶¹ Sometimes, parts from other business units of Deutsche Post DHL were assigned to DHL Parcel, for example the service point network from DHL Freight in Sweden, or from DHL Express.¹⁶² Finally, DHL Parcel Europe cooperates with USPs, for example in Hungary, Slovenia, Finland, Croatia, Ireland and Romania, but also with local parcel carriers, for example with Rapido in Bulgaria.¹⁶³

In order to establish European-wide standardized B2C parcel delivery services, DHL defined service standards that have to be matched by the local delivery partners. The European delivery services are coordinated via a separate IT platform. The service requirements as well as the requirements for the technical integration are pooled in the DHL Parcel Connect standard. Service requirements are for example Saturday delivery, service level standards for the local delivery time (from the office of exchange in the destination country), nationwide delivery and a nationwide network of PUDOs and a unified Parcel Connect label to avoid relabelling in the office of exchange. The integration of new delivery partners takes time, up to two years, until new partners are able to meet the technical and service level requirements.¹⁶⁴

DHL Parcel has access to a European-wide network of pick-up and drop-off points. The network of more than 50,000 shops is complemented by the roll-out of parcel lockers in selected European countries, for example in Austria, Germany, Sweden, and the Netherlands.¹⁶⁵

¹⁵⁹ Interview Deutsche Post DHL, October 2018.

¹⁶⁰ See CEP Research, DHL targets French B2C market with Relais Colis stake, published on 11.1.2016 and CEP Research, Deutsche Post DHL Group completes UK Mail acquisition, published on 22.12.2016.

¹⁶¹ See CEP Research, DP DHL European parcel, e-commerce strategies on track despite profitability drag, published on 9.5.2018; CEP Research, DHL Parcel enters Swiss domestic market, published on 3.9.2018.

¹⁶² See Post & Parcel, DHL integrates Sweden into its European parcel network, published on 3.12.2015; CEP Research, DHL restructures in Spain and Portugal, published on 2.1.2017.

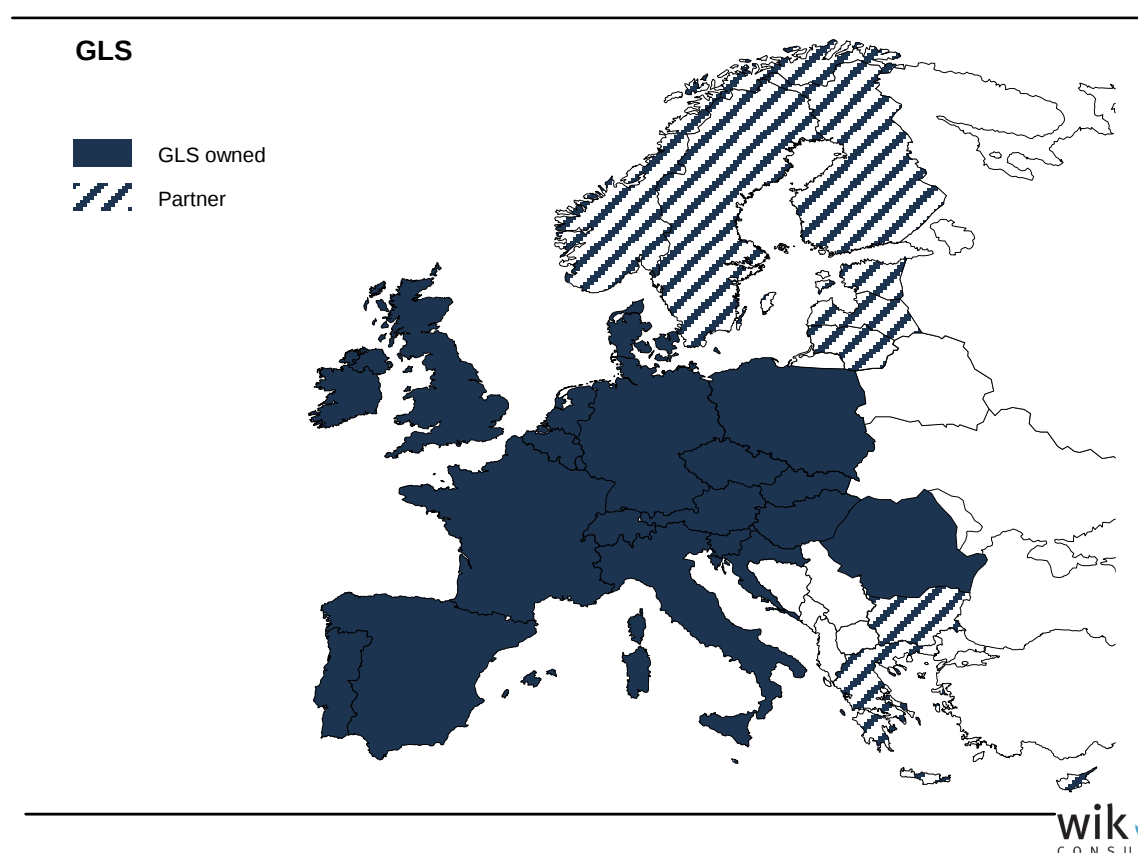
¹⁶³ See Deutsche Post DHL, DHL extends its European parcel network to include four additional countries. Press release, published on 9.4.2017; Deutsche Post DHL, DHL expands European parcel network to include Hungary and Slovenia, Press release, published on 22.9.2016.

¹⁶⁴ Interview Deutsche Post DHL, October 2018.

¹⁶⁵ See CEP Research, DHL Parcel launches parcel lockers in rapid Austrian market rollout, published on 25.11.2015; DHL Express signs parcel locker deal in Sweden and invests in new facility in Austria, published on 31.10.2016; DHL increases locker deliveries by 35% in Sweden, opens Dutch shipping centre, published on 26.1.2017; DHL launches smaller parcel lockers in the Netherlands, published on 1.11.2017.

DHL has made substantial investments in its infrastructure. This includes for example, a sorting centre in the Netherlands between Amsterdam and Eindhoven to process up to half a million e-commerce shipments a day to serve the Netherlands, four new sorting centres across Germany, each with a sorting capacity of 50,000 shipments per hour, as well as a new sorting centre close to Warsaw to respond to the rapid growth in e-commerce in Poland. Additionally, DHL invests in new hubs and depots in Austria, Switzerland, Poland and the Netherlands.¹⁶⁶

Figure 34 The pan-European parcel delivery network of General Logistics Systems B.V. (GLS, 2018)



Source: WIK-Consult based on company websites, annual reports and press releases.

Royal Mail's pan-European parcel business GLS operates a road-based networks for deferred and express delivery of parcels in Europe. GLS provides a whole range of B2B and B2C services across continental Europe.¹⁶⁷ In the financial year 2017/18 (ended 31 March), GLS realised revenues of £ 2,557 million and shipped 584 million items.¹⁶⁸

¹⁶⁶ See CEP Research, DHL Parcel Poland builds new distribution centre near Warsaw, published on 6.3.2018; DHL Parcel will build €84 million e-commerce sorting centre in central Netherlands, published on 9.4.2018; Interview - DHL Parcel Germany plans more innovative services and capacity expansion, published 2.5.2018; DHL Parcel opens €35m Amsterdam sorting centre to increase Dutch capacity, published on 24.9.2018; DHL Parcel will raise prices in 12 European markets from January, published on 22.10.2018.

¹⁶⁷ See Royal Mail, Annual Report and Financial Statements 2017-18.

¹⁶⁸ See Royal Mail, Royal Mail plc Full Year 2017-18 Results, Analyst Presentation.

The share of B2C items in total volumes is around 30% whereas there are significant differences between the countries. For example, while around half of the parcels delivered in Hungary are B2C items, the share of B2C deliveries in Germany is only around 25%. In contrast to other pan-European ground-networks, GLS follows a decentralised strategy based on a profit centre philosophy at country level with emphasis on the key markets in Germany, France and Italy. Moreover, GLS is rather focussed on the B2B segment and only selectively on the B2C segment. GLS aims to compete against the international integrators by providing high value B2C services.¹⁶⁹

Currently, the GLS network covers 41 European countries via 18 national subsidiaries and partner companies and GLS aims at strengthening their geographic footprint in the local markets. While Germany, France, and Italy are the key markets, with a 60% revenue share, GLS recently increased their activities in Spain by acquiring the express parcel companies ASM in 2016 and Redyser in 2018 which allows GLS to expand into the national delivery market in Spain.¹⁷⁰

Generally, GLS is investing in its European network to expand its capacity substantially, particularly in its key markets (Germany, France and the UK) and in emerging markets in Eastern Europe. The investments comprise the construction of new hubs and depots as well as expansion or modernisation of existing facilities.¹⁷¹ Regarding the B2C segment, GLS follows a mixed strategy tailored for the different national markets. Only in a few selected countries, GLS has invested in dedicated B2C activities. For example, GLS has launched parcel lockers in Eastern Europe. After pioneering its first lockers in Slovenia in October 2014, GLS expanded its parcel locker network in Hungary, Slovakia and Romania.¹⁷² In Belgium, GLS use the 170 parcel lockers of Cubee, a carrier agnostic parcel locker network owned by bpost.¹⁷³ In Germany, GLS introduced a new service to deliver letter-sized tracked packets in letterboxes which facilitates the delivery of small e-commerce orders (letterbox packets).¹⁷⁴

The different degrees of GLS engagement in the B2C segment is also reflected in the geographic scope of GLS' B2C services for cross-border items: In 2012, GLS launched the FlexDeliveryService, which allows recipients to choose when and where to take deliveries. Currently, this service is available for cross-border parcels in 19 countries and further expansion to five additional countries is planned. In 2008, GLS introduced the ShopReturnService as part of extended B2C development strategy. The service allows recipients to drop off returns at any GLS or GLS partner parcel shop and to return parcels

¹⁶⁹ See GLS (2017), GLS – Divisional Update, Q&A Session Transcript, 18.5.2017, London.

¹⁷⁰ See CEP Research, Acquisitions and organic growth drive GLS 2017-18 revenue and profit growth, published on 17.5.2018.

¹⁷¹ See CEP Research, GLS invests over €100m in European network capacity expansion, published on 23.11.2017.

¹⁷² See CEP Research, GLS expands parcel terminal network in Eastern Europe to four countries, published on 17.2.2017.

¹⁷³ See CEP Research, GLS expands Belgian delivery network with 170 Cubee parcel terminals, published 15.5.2018.

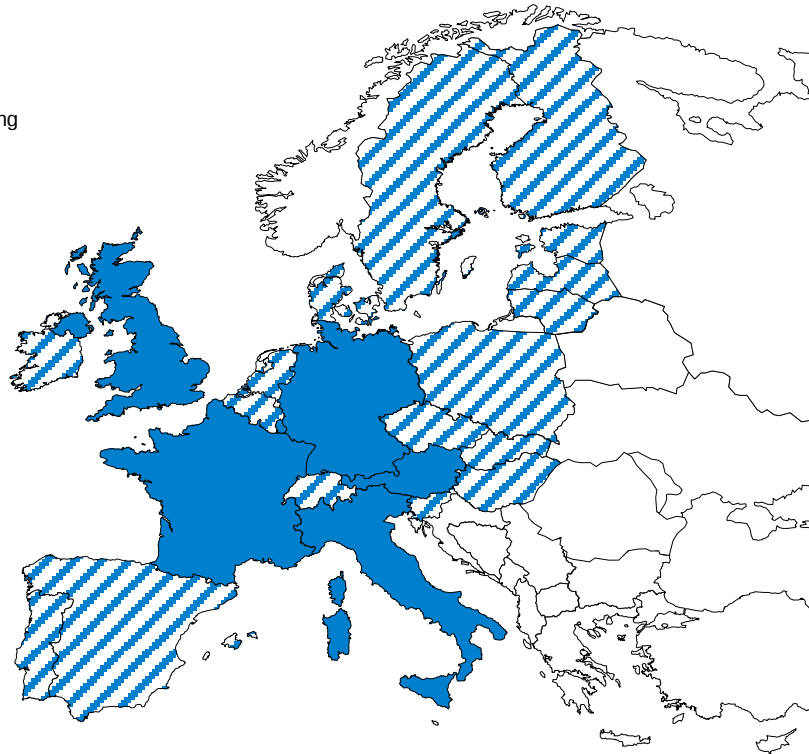
¹⁷⁴ See CEP Research, GLS delivers small e-commerce orders to German home letterboxes, published on 30.10.2018.

free of charge. Today, the service is available for cross-border parcels in only 7 countries across Europe and there are no plans for expansion to other countries. The ShopDeliveryService allows senders to choose parcel shops as alternative delivery locations and is available for cross-border parcels only in 11 countries across Europe. GLS intends to expand this service in two additional countries in future.¹⁷⁵

Figure 35 The pan-European parcel delivery network of Hermes (2018)

Hermes

 Hermes branding
 Partner




Source: WIK-Consult based on company websites, annual reports and press releases.

Hermes Europe is a subsidiary of the Otto Group, one of the largest e-retailers in Europe, and was initially founded as a B2C delivery company in Germany in the 1970s. In 2017, Hermes Europe revenues were about EUR 2,660 million and they delivered around 766 million X2C-parcels of which 20% were generated from Otto Group's various e-retail businesses, and 80% from external customers (including Amazon which accounts for around 20% of Hermes' parcel volume in Germany).¹⁷⁶ Hermes Europe is active in Germany, UK, France, Austria, Italy and Russia and has stakes in several smaller businesses, for example the German same-day delivery firm Liefery and an international e-commerce delivery specialist BorderGuru which manages i.a. cross-border online sales

¹⁷⁵ See Royal Mail, Royal Mail Half Year 2017-18 Results, Analyst Presentation.

¹⁷⁶ See Deutsche Verkehrszeitung (DVZ), Kay Schiebur: "Hermes wird auf der letzten Meile kooperieren und die Preise anheben", Interview with Kay Schiebur published on 16 July 2018 and on 31 July 2018.

to China.¹⁷⁷ Since 2014, Hermes offers cross-border delivery and return solutions to 20 European countries. The carrier only offers B2C deliveries and relied on co-operations with local carriers and USPs, for example with PostNL and PostNord.¹⁷⁸

Hermes Europe has invested more than EUR 130 million in 2017 on extra capacity, the final mile, customer experience and digitalisation. By 2020, Hermes plans additional investments of around EUR 500 million across all business units, including the remaining investments within the ongoing EUR 300 million programme in Germany.¹⁷⁹ The investments shall expand Hermes' sorting and delivery capacities, improve service quality (e.g. next-day delivery in Germany) and upgrade its software landscape in Germany and the United Kingdom.¹⁸⁰

Hermes Europe has significant parcel shop and home delivery capabilities in the major e-commerce markets in Germany, France and the UK, and smaller ones in Austria (with Austrian Post as delivery partner) and in Italy. In Germany and the UK, Hermes is the second largest carrier in terms of volume delivered. In France, the newly-consolidated Hermes France Group achieved significant volume growth in the private client segment and an increasing public awareness of the brand. Hermes France Group basically consists of Mondial Relay which is part of Hermes France since January 2017. Mondial Relay is a French B2C delivery specialist founded 1997 by Groupe 3SI (subsidiary of Otto) and operates parcel shops in France, Belgium, Luxembourg, Spain and Portugal. Mondial Relay cooperates not only with Hermes but also with other carriers, e.g. GLS¹⁸¹, Colis Privé in which Amazon holds a 25% stake¹⁸², DHL Express, and IMX.¹⁸³ In total, Hermes has access to around 32,000 PUDOs via Hermes' own operations and via its local cooperation partners.¹⁸⁴

Compared to the other pan-European networks, Hermes plays a smaller role in the cross-border segment but is committed to participate in the growth in cross-border parcel delivery in the future. In the beginning of 2018, the Hermes International business unit was established within Hermes Germany to consolidate all international activities of Hermes and to promote the development of cross-border parcel services. A first step towards international growth was a partnership with US-based SEKO Logistics and the takeover all SEKO's German operations. SEKO focus on international forwarding and logistics including omni-channel logistics, two-man-handling-solutions, international air

¹⁷⁷ See CEP Research, Hermes targets more cross-border business after double-digit growth in 2017/18, published on 11.4.2018.

¹⁷⁸ See WIK-Consult (2014), Design and development of initiatives to support the growth of e-commerce via better functioning parcel delivery systems in Europe.

¹⁷⁹ See Hermes, Hermes Group achieves record sales and grows successfully in core European markets, Press release, published on 11.4.2018.

¹⁸⁰ See Otto Group, Annual Report 2017/18, p.97.

¹⁸¹ See CEP Research, GLS France launches ShopReturnService for returns of online orders, published on 27 October 2016.

¹⁸² See CEP Research, Mondial Relay and Colis Privé in co-operation agreement, published on 9 July 2018.

¹⁸³ See Mondial Relay (2017), The largest European network for e-commerce delivery, published on 22 February 2017, <https://de.slideshare.net/SafeShops/mondial-relay-presentatie-van-christian-legein>

¹⁸⁴ See CEP Research, Hermes targets more cross-border business after double-digit growth in 2017/18, published on 11.4.2018.

and ocean freight, demand chain solutions and warehousing, that broadens the international growth potential for the Hermes Group.¹⁸⁵ In September 2018, Otto Group announced that it is seeking a strategic investor to buy a stake in Hermes to promote and further speed up its international growth and support the forthcoming 500 million Euro investment program.¹⁸⁶

Hermes offers standardised cross-border delivery services for small business and private senders and customised solutions for large e-retailers, for example with the European delivery service Hermes EuroParcel. The service is available in 20 countries across Europe and includes delivery against signature, track and trace, return options, and two to four delivery attempts. Additional services like delivery notifications are only available in half of the countries.¹⁸⁷

3.3.6 Domestic operators expand their activities to neighbouring countries

Online shoppers increasingly buy cross-border particularly from neighbouring countries.¹⁸⁸ This is reflected in the efforts of USPs and other carriers to expand their activities to neighbouring countries to provide better-tailored cross-border B2C parcel services on a regional scale and thus to benefit from growth in cross-border e-commerce.

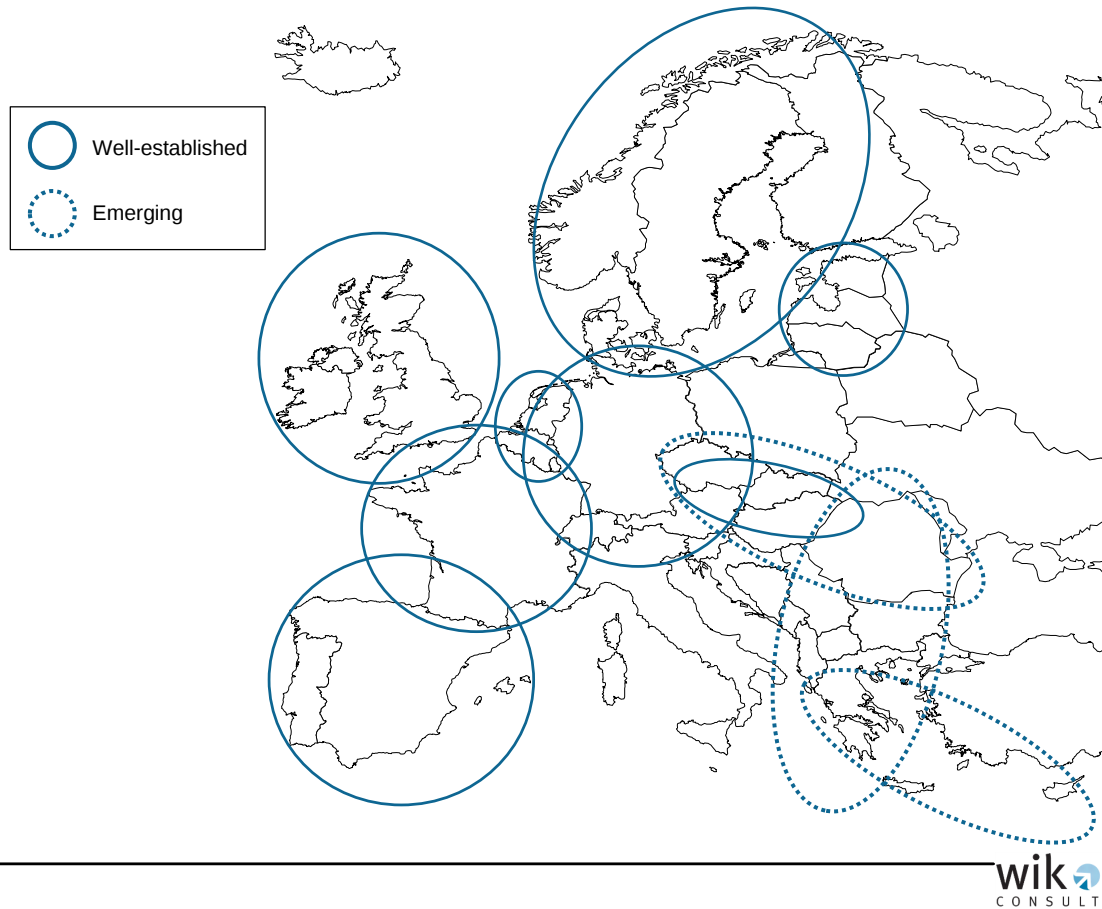
¹⁸⁵ See CEP Research, Hermes partners with SEKO Logistics for international growth, published on 28.8.2018,.

¹⁸⁶ See CEP Research, Otto Group seeks strategic investor for Hermes, published on 4.9.2018.

¹⁸⁷ See Hermes Website.

¹⁸⁸ See Section 4.2.3.

Figure 36 Emergence of regional clusters in e-commerce and delivery



Source: WIK research.

Figure 36 illustrates the emergence of regional clusters of e-commerce and delivery networks in Europe. In some regions, there is a long-standing tradition in regional trade, e.g. in Benelux, Iberia, UK and Ireland or the DACH-region (Germany, Austria, Switzerland) and e-commerce and delivery clusters are well-established while in other regions these clusters are currently emerging. USPs as well as parcel and express carriers drive the establishment and consolidation of regional clusters across national frontiers. This is also reflected in the tariff structure for cross-border parcel deliveries (where publicly available) with lower tariffs for delivery services to neighbouring countries compared to more distant countries.¹⁸⁹

Many USPs have domestic and cross-border parcel services to specific / neighbouring countries, either by launching own regional networks or by acquiring operators in other countries. For example:

- Eesti Post established the brand Omniva for its market expansion from Estonia to Latvia and Lithuania in 2014. All subsidiaries in Estonia and abroad were drawn

¹⁸⁹ Examples are ACS (Greece) with a special offer for deliveries to Cyprus, DPD Slovenia with a special offer for deliveries in Croatia, DPD Czech Republic with a special offer for deliveries to Slovakia.

together under the unifying new brand name and Omniva provides a one-stop-shop for logistics and e-commerce solutions in the Baltics.¹⁹⁰ Today, Omniva provides the largest parcel locker network in the Baltics¹⁹¹ and serves as a gateway for Chinese e-commerce items to Europe.¹⁹²

- PostNL offers (B2C and B2B) parcel services across the Benelux. In 2012, PostNL significantly strengthened its presence in the Benelux market for consolidated parcels with the acquisition of trans-o-flex's activities in Belgium and the Netherlands¹⁹³. Since then, the activities and services were successively expanded to benefit from growth in e-commerce in Benelux, for example by providing additional services and by investing in infrastructure facilities.¹⁹⁴
- In 2014, PostNord unveiled an updated corporate strategy that puts e-commerce and logistics in the Nordic region at the centre of its future growth plans.¹⁹⁵ PostNord offers its B2C parcel services under the brand 'MyPack' in the Nordic countries Denmark, Finland, Norway, and Sweden. In partnership with DPD, PostNord started to broaden the service in 2016 to cover Nordic e-commerce exports to other countries in Europe.¹⁹⁶
- Austrian Post acquired a major stake in the Czech parcel service provider 'IN TIME' in 2017 to be represented in the fast-growing parcel market in the Czech Republic. Austrian Post announced investments to support IN TIME's development to a leading provider of B2C and B2B services in the Czech market.¹⁹⁷ Generally, Austrian Post is focusing mostly on profitable growth in neighbouring countries for its relatively small parcel businesses.¹⁹⁸
- CTT Correios is active in the Spanish parcel market via its subsidiary Tourline in order to respond to the 'Iberisation' phenomenon. According to Correios, e-retailers increasingly view the Iberian market as one and addressing their requirements, including last-mile solutions for B2C deliveries, at this level.¹⁹⁹

¹⁹⁰ See CEP Research, Eesti Post to re-brand under international name 'Omniva', published 2.6.2014.

¹⁹¹ See CEP Research, Omniva's Baltic parcels business grows 20%, published on 2.8.2018.

¹⁹² See CEP Research, Posts target cross-border e-commerce boom through Chinese partnerships, published on 29.3.2018.

¹⁹³ See CEP Research, PostNL buys Dutch, Belgian trans-o-flex activities from Austrian Post, published on 15.3.2012.

¹⁹⁴ See CEP Research, PostNL expands Benelux parcel services with parcel shops, Sunday deliveries, published on 31.7.2014; CEP Research, PostNL adds morning deliveries for food, to invest €40 million in two sorting centres in Belgium, published on 16.7.2018; PostNL, Annual Report 2017, p. 26.

¹⁹⁵ See CEP Research, PostNord improves profits and targets e-commerce and logistics growth, published on 21.2.2014, <https://www.cep-research.com/news/postnord-improves-profits-and-targets-e-commerce-and-logistics-growth>.

¹⁹⁶ See CEP Research, PostNord launches Nordic-Europe B2C parcel service as e-commerce bolsters Q1 results, published on 29.4.2016.

¹⁹⁷ See Austrian Post, Austrian Post acquires 31.5% stake in the Czech parcel service provider "IN TIME", published on 31.8.2018, <https://www.post.at/en/21099.php/presse/details/id/1265676>.

¹⁹⁸ See CEP Research, Austrian Post offers deferred deliveries as Q1 parcel revenues rise 12.9%, published on 16.5.2018.

¹⁹⁹ See CTT Correios, Annual report 2017, p.7 sqq.

Additional to the USPs, parcel and express carriers have expanded their networks to neighbouring countries to provide regional cross-border parcel delivery services. For example:

- The parcel delivery markets in Ireland and the United Kingdom traditionally build a regional market. British parcel delivery firm Yodel extended the network of services it provided to UK clients already in 2009 to Ireland (when the company's name was Home Delivery network). The other way around, Irish parcel carrier Nightline, which was acquired by UPS in 2017, already extended its services to the UK in 2011.²⁰⁰
- Speedy Express Delivery Services, a major parcel and express carrier in the Bulgarian parcel market, expanded its geographic footprint into neighbouring markets successively. In 2014, Speedy expanded into the Romanian market by acquiring DPD's operations in exchange for a 20% stake in the company and the option for GeoPost/DPD to buy a major stake in 2020. In 2017, Speedy entered the Greek parcel market and announced plans for the acquisition of the Bulgarian parcel carrier Rapido Express and Logistics Ltd (delivery partner of DHL Parcel Europe), to strengthen its market position.²⁰¹

3.3.7 Carriers put significant efforts to improve delivery options in B2C delivery

The more than expected growth in B2C e-commerce has affected nearly all traditional players and that has driven the emergence of many new services. Many established parcel and express carriers as well as USPs have invested in better B2C e-commerce solutions and adjusted their services to the requirements of e-retailers and recipients.

Carriers identify and target small and medium e-retailers as customer group

National and international carriers increasingly seek not only to attract large senders but micro- and small e-retailers by facilitating access to their services. They developed and introduced web portals to provide e-retailers a better access to their services, for example MyDPD, GLS One or GLS EasyStart, MyDHL Parcel or MyDHL+, UPS Today, myHermes, MySpring, etc. Typically, these web portals provide micro and small-sized e-retailers with easy online access to the full range of delivery services. For medium- and large-sized e-retailers the web portals are extended by standardised application programming interfaces (APIs), which enables them to link their enterprise resource planning system directly with the services of the carriers. Often, the web portals include lower priced online

²⁰⁰ See CEP Research, Home Delivery Network expands services into Ireland, published on 15.9.2009; CEP Research, Nightline targets UK parcels with GFS partnership, published 14.4.2011.

²⁰¹ See CEP Research, Bulgaria's Speedy to buy DPD Romania as GeoPost take minority stake, published on 21.3.2014; CEP Research, DPD Bulgarian franchisee Speedy wants to buy DHL partner Rapido, published on 22.5.2018.

tariffs for domestic and cross-border parcel services at standardised rates and lower, negotiated tariffs for account member.²⁰²

Many parcel operators provide access to business accounts at relatively low volume thresholds, which also allow small and medium-sized e-retailers to benefit from lower delivery tariffs, monthly invoicing and other service components that facilitate the regular exchange of data between the carrier and the e-retailer (see Section 3.3.2 in this chapter). Some parcel operators also cooperate with delivery management platforms and parcel brokers for domestic and international deliveries to reach micro and small e-retailers. The delivery management platforms allow these e-retailers to manage their deliveries more easily and, in their function as parcel broker, provide access to delivery rates significantly lower than list prices of the operators.²⁰³

Some parcel operators provide detailed information and research papers to support e-retailers broadening their offers (and advertising their delivery solutions). For example, PostNord regularly publishes reports on the habits of online-shoppers in different countries²⁰⁴, DPD publishes its E-Shopper Barometer since 2016²⁰⁵, and Deutsche Post DHL published several reports covering different issues in (cross-border) e-commerce²⁰⁶. Additionally, some carriers and USPs complement their service portfolio by providing consultancy services to e-retailers to facilitate their (cross-border) e-commerce activities or by providing warehousing and fulfilment services to e-retailers.²⁰⁷ The Portuguese postal operator CTT Correios, for example, recently partnered with Dutch-based e-commerce logistics provider Shiptimize to integrate fulfilment services to retailers in Spain and Portugal in its service portfolio.²⁰⁸

Carriers improve their quality of service by investing in infrastructure facilities

Many carriers heavily invest in capacities in the backbone to handle the increasing volumes of e-commerce induced B2C items. This includes investments in modernizing / upgrading existing and constructing new sorting and delivery facilities. For example, Deutsche Post DHL has invested more than EUR 750 million in capacity expansion of its parcel delivery network in Germany in the recent years²⁰⁹ and is investing heavily in its European parcel network by constructing new hubs and depots in Austria, Switzerland,

²⁰² See for example PostNL, Annual Report 2017, p.56; CEP Research, Interview – E-commerce boom powers 2-digit growth for DHL Express in Germany, published on 9.7.2018.

²⁰³ See Case study 11 in Section 5.2.

²⁰⁴ See PostNord, <https://www.postnord.com/en/media/publications/e-commerce/>.

²⁰⁵ See DPD E-shoppers barometer, https://www.dpd.com/home/insights/e_shopper_barometer.

²⁰⁶ See DHL (2017), The 21st century spice trade; DHL (2018), The next industrial revolution.

²⁰⁷ See Deutsche Post DHL, Capital Market Day Presentation, London, 8.5.2018; Hermes, <https://www.hermesworld.com/int/our-services/full-service-e-commerce/global-e-commerce/global-e-commerce/>; bpost, Investor presentation – Second quarter 2018, 8.8.2018; PostNL, <https://www.postnl.nl/zakelijke-oplossingen/logistieke-oplossingen/fulfilment/>.

²⁰⁸ See CEP Research, CTT adds e-commerce partners and supports innovative start-ups, published 9.11.2018.

²⁰⁹ See CEP Research, Interview - DHL Parcel Germany plans more innovative services and capacity expansion, published on 2.5.2018.

Poland and the Netherlands.²¹⁰ French La Poste launched a 450 million Euro investment program to increase its parcel sorting capacity by 2020 with the construction of three new sorting hubs and an upgrade of 15 existing facilities to 'multi-flow' sorting centres that will handle both mail and parcels.²¹¹ At the same time, its subsidiary GeoPost/DPD expands the capacities of the pan-European network, for example with the construction of a new distribution centre in Eindhoven.²¹² Additionally, there are specific investments in infrastructure facilities close to the logistic centres and warehouses of large e-retailers to facilitate the shipment of items from these customers. For example, several operators build parcel hubs close to the Amazon's German fulfilment centres in Koblenz or Bad Hersfeld. In some cases, operators even build integrated sorting centres in the e-retailers warehouses, for example PostNL inside the facilities of the e-retailer bol.com's²¹³ or Hermes and QVC operate a joint location in Germany, close to the Belgian and Dutch borders.²¹⁴

Additionally, carriers look for ways to provide cost-efficient last mile delivery and to provide more consumer-oriented delivery options. Carriers put much effort to make delivery services more flexible and recipient-friendly by implementing smart delivery solutions like for example DPD Predict, GLS FlexDeliveryService or UPS MyChoice.²¹⁵ These services not only provide recipients a (SMS or e-mail) notification on the day of delivery but also the opportunity to reschedule the delivery to another day or address. Moreover, recipients receive detailed information on the estimated delivery time, may live track their item during the delivery process with an option for ad-hoc pick-up of the item from the delivery vehicle, or even choose specified delivery windows via mobile apps or web portals.

Many carriers also expanded their delivery days and delivery time windows. They extended their delivery time slots to the evening, for example, GLS and DHL in Germany, DPD in Austria, Posti in Finland, or Poste Italiane in Italy.²¹⁶ Other operators even introduced Sunday deliveries, for example, Royal Mail, Hermes, or DPD in the United

²¹⁰ See CEP research, DHL Parcel will raise prices in 12 European markets from January, published on 22.10.2018.

²¹¹ See CEP Research, La Poste unveils €450m investment in French B2C parcel sorting capacity, published on 13.4.2018.

²¹² See CEP Research, DPD Netherlands builds distribution centre and launches bikes deliveries in Eindhoven, published on 8.2.2018.

²¹³ See PostNL, Q4 & FY 2017 Results Presentation, 26.2.2018, p.22.

²¹⁴ See CEP Research, Teleshopping giant QVC extends Hermes Germany contract for 10 more years, published on 22.10.2013.

²¹⁵ See Companies websites:

DPD, https://www.dpd.com/de_en/versandmoeglichkeiten/unsere_zusatzleistungen/predict;

GLS, <https://gls-group.eu/DE/en/services-overview/flexdelivery-service>;

UPS, <https://www.ups.com/mobile/deliveryplanner>.

²¹⁶ See CEP Research, DHL Parcel Germany starts evening deliveries in Berlin for online retailers, published on 18.9.2013; CEP Research, GLS Germany expands evening and Saturday deliveries to two more cities, published on 12.8.2014; CEP Research, Posti to deliver later in the day, published on 20.4.2016; CEP research, Poste Italiane drives e-commerce strategy with Amazon deal, published on 14.6.2018.

Kingdom,²¹⁷ PostNL in the Netherlands,²¹⁸ or La Poste's subsidiary Chronopost in France.²¹⁹ For e-retailers, carriers started to extend their pick-up times in the evening hours and provide later cut-off times. The service enables e-retailers to offer their customers next-day delivery even if their orders come in later in the evening.²²⁰

Many USPs, particularly in the Western EU MS, have successfully benefitted from their first mover advantage and by improving their parcel delivery services including regular next-day delivery services and tracking & tracing for B2C parcels (for example Deutsche Post, PostNL, the Nordic postal operators, Austrian Post, or Belgian bpost). Additionally, same-day delivery increasingly become a mainstream option, mainly in urban areas and larger cities in countries with more developed e-commerce markets. In some countries, same-day delivery is estimated to account for significant shares of the parcel market in future. Besides the established parcel and express carriers, the market provides opportunities for smaller courier companies to benefit from growth in e-commerce via broker platforms that coordinate existing courier capacities and e-retailers' demand. Additionally, large retailers like Amazon provide services via own capacities or in cooperation with local courier companies.²²¹ In the recent years, larger operators are increasingly participating in this segment. Some operators introduce same-day delivery by own operations, for example PostNL in the Netherlands, Austrian Post in Austria or Royal Mail in the UK,²²² while others acquire stakes in start-ups and delivery platforms, for example DPD in the same-day delivery platform tiramizoo²²³ or Hermes in same-day delivery service Liefery.²²⁴

Carriers provide options for different delivery locations and expand their networks of pick-up and drop-off points

In order to provide recipients convenient delivery locations, carriers all over Europe built up networks of pick-up and drop-off points (PUDO) as alternative for home delivery. Besides providing consumers an alternative delivery location, the PUDO networks provide carriers cost-effective delivery options without the necessity for expensive home delivery.

²¹⁷ See CEP Research, Hermes launches nationwide Sunday deliveries in UK, published on 4.2.2014; CEP Research, DPD to launch nationwide Sunday deliveries in UK from July, published on 2.5.2014; CEP Research, Royal Mail Group launches Sunday parcel services, published on 21.5.2014.

²¹⁸ See CEP Research, PostNL expands Benelux parcel services with parcel shops, Sunday deliveries, published on 31.7.2014.

²¹⁹ See CEP Research, Chronopost launches Sunday deliveries across France, published on 15.9.2017,.

²²⁰ See CEP Research, UK Mail takes e-commerce orders up to midnight, published 24.10.2016; CEP Research, Hermes Germany officially launches overnight deliveries for "late" shipments, published on 6.9.2017; CEP Research, UPS offers later pick-up times in the UK, published 19.9.2018.

²²¹ See McKinsey (2014), Same-day delivery: The next evolutionary step in parcel logistics. See also Section 3.4.3 for more details.

²²² See CEP Research, PostNL launches same-day delivery in the Netherlands, published on 17.11.2015.; CEP Research, Austrian Post delivers Nespresso coffee to customers in Vienna, Graz and Linz on the same day, published on 18.6.2018; CEP Research, Royal Mail expands national same-day network through acquisition of eCourier, published on 18.11.2015;

²²³ See CEP Research, DPD Germany to launch same-day delivery through stake in tiramizoo, published 31.7.2013.

²²⁴ See CEP Research, Hermes Germany adds same-day service with 28.5% stake in start-up Liefery, published on 15.7.2015; CEP Research, Hermes Germany raises stakes in same-day start-up Liefery to 68%; published on 9.3.2017.

Moreover, the collecting points allow the storage of parcels which could not be delivered at first attempt and thereby decrease the costs of additional delivery attempts. Some USPs in smaller countries with high cross-border inbound volumes also provide alternative delivery addresses in foreign countries to consolidate cross-border items for local consumers in their country (see Case study 4).

Case study 4: Delivery location in foreign countries to facilitate e-commerce imports

Post Luxembourg

Post Luxembourg has successfully introduced a low cost collection service for online buyers to facilitate cross-border purchases by collecting online purchases in the country of origin (e.g. in Germany). Post Luxembourg thereby provides a delivery address in the country of origin, consolidates all items send to this address and delivers them to Luxembourg. The private customers of Luxembourg Post benefit from domestic delivery rates in the country of origin (e.g. free delivery by Amazon). Instead they have to pay a small mark up for the collection and delivery service of Post Luxembourg and save high cross-border delivery fees.

MaltaPost

MaltaPost offers a similar service ('SendOn') to private customers in Malta. In response to strong growth of e-commerce items from China, MaltaPost has built a hub in Hong Kong and consumers from Malta may forward their purchases from Chinese e-retailers to this hub at reasonable lower shipping cost. MaltaPost delivers the items to Malta within 10 working days.

USPs have also a first mover advantage in this context as they already have nationwide branch networks. However, many of them have expanded their networks with additional collection points as well as alternative carriers. These collection points are typically organised as 'shop-in-shop'-solution in brick-and-mortar retailer's shops. The European ground-networks DPD, GLS, and DHL Parcel follow a mixed strategy with cooperation with domestic providers to expand their delivery network in specific countries and investments in own 'shop-in-shop' pick-up points in several countries, either operated by franchise partners or subsidiaries.²²⁵ UPS extended its European B2C services with the acquisition of Kiala in 2012 and of Irish carrier Nightline Logistics and its parcel locker network in 2017.²²⁶ In addition to the collection points in stores, many carriers (mainly the USPs) expanded their PUDO networks with parcel lockers. For example, Poste Italiane launched a network of 287 parcel lockers throughout Italy in 2018 with the objective to install 420 lockers by 2020.²²⁷ PostNL installed the combined parcel and letter lockers in 2018 and reports plans to expand its network throughout the Netherlands since then.²²⁸ Eesti Post / Omniva opened up a locker network throughout the Baltics in 2016 and announced to invest more than EUR 20 million into expanding their Baltic parcel locker

²²⁵ See Company websites: GLS, <https://gls-group.eu/EU/en/services-overview/shop-delivery-service>; DPD, https://www.dpd.com/home/our_services; DHL Parcel, <https://www.dhlparcel.com/>.

²²⁶ See CEP Research, UPS targets European B2C parcels with Kiala acquisition, published 16.2.2012.; CEP Research, UPS drives European expansion with Nightline acquisition, published 3.5.2017.

²²⁷ See CEP Research, Poste Italiane drives e-commerce strategy with Amazon deal, published on 14.6.2018.

²²⁸ See CEP Research, PostNL installs first two parcel machines in The Hague and Amsterdam, published on 4.10.2018.

network until 2023.²²⁹ Correos is currently expanding its network of more than 4,000 parcel lockers in Spain.²³⁰ Malta Post installed parcel lockers at selected post offices in 2016 to enable recipient all to pick up their cross-border parcels.²³¹ Not only the USPs are investing in parcel locker networks but also other operators, for example GLS in some Eastern EU MS,²³² DHL Parcel in Austria,²³³ or the e-retailer Amazon in Germany, France, Spain, and the UK.²³⁴

In addition to the networks of the carriers, there are emerging carrier agnostic networks that provide pick-up and drop-off points to different carriers and e-retailers. For example Mondial Relay, which is part of Hermes France, serves as pick-up and drop-off point for several carriers, inter alia GLS or Colis Privé.²³⁵ Doddle, a joint venture of British Network Rail and Lloyd Dorfman founded in 2014, operates parcel shop located at train stations in the UK and cooperates with several carriers, inter alia Hermes and DPD.²³⁶ Another interesting example is Cubee, a parcel locker network in Belgium open to all couriers. Belgian postal operator bpost and its Dutch partner De Buren converted the former bpost-branded parcel locker network in 2016 into an open, independent system which is used by several carriers, for example DHL Parcel, DPD, and GLS, and e-retailers, for example, Bol.com, Fnac, and Zalando.²³⁷

USPs introduce letter-sized delivery products tailored for e-commerce items

In order to participate in the growth of domestic and cross-border B2C e-commerce, USPs have developed new products for e-retailers. Several operators launched products to deliver merchandise up to 2 kg in letter format. These products are tailored for small e-commerce items, for example, CDs, books, or technical accessories, and provide a low cost alternative to similar sized parcel products for domestic and cross-border deliveries. For example, PostNL introduced its small packet service 'brievenbuspakje' (letterbox parcel) in 2012, which is processed and delivered in the letter network. In 2016, PostNL introduced tracking of these items to improve visibility for online sellers and buyers.²³⁸ La

²²⁹ See CEP Research, Omniva's parcel locker network will double in size, published 24.11.2017.

²³⁰ See CEP Research, Correos invests in parcel lockers and new vans, published on 12.9.2018.

²³¹ See CEP Research, MaltaPost launches parcel locker network "Easipik" for convenient pickup of cross-border parcels, published 21.7.2016.

²³² See CEP Research, GLS expands parcel terminal network in Eastern Europe to four countries, published on 17.2.2016.

²³³ See CEP Research, DHL Parcel launches parcel lockers in rapid Austrian market rollout, published 25.11.2015.

²³⁴ See CEP Research, Amazon plans lockers in Germany, published 15.7.2016; CEP Research, Amazon launches parcel lockers and crowdsourced Flex deliveries in Spain as Black Friday orders rocket, published on 29.11.2017.

²³⁵ See CEP Research, GLS France launches ShopReturnService for returns of online orders, published on 27.10.2018; CEP Research, Mondial Relay and Colis Privé in co-operation agreement, published on 9.7.2018.

²³⁶ See CEP Research, Doddle, Nightline to expand click and collect networks, published 30.3.2015; CEP Research, Doddle joins DPD UK's Pickup parcel shop network, published 5.6.2015; CEP Research, Hermes UK expands parcel shop network with Doddle shops; published on 15.6.2016.

²³⁷ See CEP Research, GLS expands Belgian delivery network with 170 Cubee parcel terminals, published on 15.5.2018.

²³⁸ See WIK-Consult (2016), Future scenario developments in the Dutch postal market, p.22 and p.36; PostNL, <https://www.postnl.nl/versturen/brief-of-kaart-versturen/verzendopties/brievenbuspakje/>.

Poste introduced a tracked letter post product ('lettre suivie') in 2015 which allows items up to 2 kg for cross-border and up to 3 kg for domestic shipments.²³⁹ In the same year, PostNord Sweden introduced a similar product ('VaruBrev') for merchandise up to 2 kg and which is offered at two different routing times.²⁴⁰ Austrian Post introduced its letter product 'Päckchen' in 2017 which includes track and trace and insurance up to EUR 50.²⁴¹ Deutsche Post introduced its letter product 'Warenpost International' tailored for e-retailers in 2018 which is available for senders with at least five items per quarter. The service is provided for a uniform price and includes tracking and insurance up to EUR 20 in 25 EU MS and all EEA MS.²⁴² Some parcel operators are following this trend. DPD, for example, announced in mid-2018 to pilot a new service ('ParcelLetter') in the Netherlands via the letter box without signature.²⁴³

Carriers introduce return services to facilitate cross-border e-commerce

Since 2013 parcel and express operators as well as many USPs have developed dedicated services for returns (including cross-border returns) either as tracked or non-tracked low cost letter post service (only USPs) or as a more expensive parcel service.

The pan-European carriers introduced standardised return services for cross-border e-commerce items in a range of countries. For example, GLS extended its ShopReturnService, launched in 2008 as part of its B2C strategy in selected domestic delivery markets, to cross-border parcels in seven EU MS. Consumers in Austria, Belgium, Denmark, Germany, Ireland, Luxembourg and Poland can drop off their returns at GLS parcel shops free of delivery charge if the e-retailer participates in GLS' service and provides the return label.²⁴⁴ DPD launched an international return service that uses DPD's self-operated or partner networks of pick-up points in 13 European countries. It applies uniform standards and a harmonised system for cross-border return shipping.²⁴⁵ Deutsche Post DHL introduced its cross-border return service 'DHL Easy Return' already in 2012 in most European countries with a standardised return label which is created through a web portal.²⁴⁶ They provide return services as part of its service 'DHL Parcel Connect' in most European countries.²⁴⁷

According to the International Postal Corporation (IPC), USPs handle the bulk of cross-border border parcels with a share of 85% of all cross-border returns worldwide.²⁴⁸ Under

²³⁹ See La Poste, <https://www.laposte.fr/particulier/courriers-colis/produits-et-services/lettre-suivie>.

²⁴⁰ See PostNord, <http://pages.postnord.com/varubrev>.

²⁴¹ See Austrian Post, Price List 2017.

²⁴² See Deutsche Post, <https://www.deutschepost.de/de/b/briefe-ins-ausland/warenpost-international.html>.

²⁴³ See Post&Parcel, DPD piloting "ParcelLetter" service, published on 10.5.2018.

²⁴⁴ See CEP Research, GLS launches cross-border parcel return service in seven countries, published on 20.6.2017.

²⁴⁵ See CEP Research, DPD Germany launches new domestic and international return services, published on 15.9.2016.

²⁴⁶ See CEP Research, DHL Global Mail launches European parcel return service for online retailers, published on 17.9.2012.

²⁴⁷ See Sukowski (2018), Trends in cross-border e-commerce, presentation at the WIK Postal seminar, 7.2.2018.

²⁴⁸ See IPC, Cross-border e-commerce shopper survey 2017, p.19.

the umbrella of IPC, USPs and postal operators outside the EU (e.g. USPS in the USA) put effort to improve interconnectivity between the IPC members in order to support the development of reliable and tracked cross-border delivery and return services (see Case study 3). Through IPC's Common Return Platform (CRP), IPC enables the participating postal operators to offer e-retailers pre-paid return labels that facilitate the cross-border return process. In mid- 2018, 30 postal operators participated in the platform which managed the return of 8 million items.²⁴⁹

As an alternative to drop off returns at parcel shops or parcel lockers, some operators recently started to provide pick-up services for (cross-border) returns. For example, Austrian Post has launched a pickup service for returns for private customers. The service requires a registration at Austrian Posts web portal and costs EUR 2.50 for the pick-up of up to three parcels.²⁵⁰ In 2018, DPD has launched its service 'Predict Collection' in the Netherlands which allows consumers to order a pickup of returns at their premise within a one-hour time window.²⁵¹

3.4 Future trends in B2C delivery services

3.4.1 Growing e-commerce drives innovation in the delivery industry

Parcel markets are dynamically growing all over Europe driven by B2C e-commerce (see Section 3.2.1). Today, the e-commerce share in total retail revenues varies from 2% to 14% depending on the maturity of the e-commerce market.²⁵² This means, the other way round, that there would still be a theoretical growth potential of around 80-90% of total retail revenues that have not yet been transformed into e-commerce revenues. To this respect, it is not surprising that it is widely expected that B2C e-commerce will continue growing.

E-commerce drives a structural change in underlying retail supply chains from a "push-to-pull" model.²⁵³ Instead of businesses pushing goods to physical stores, e-commerce has consumers pulling customised baskets to their desired location. At the same time, consumers' expectations for convenient and more flexible delivery solutions are growing in terms of delivery speed, visibility, time and location.

Growing e-commerce means that more and more items have to be delivered to consumers. La Poste-owned Geopost estimates that the European B2C parcel volumes

²⁴⁹ See IPC (2018), <https://www.ipc.be/en/news-portal/e-commerce/2018/03/29/08/29/85-percent-of-cross-border-returns-handled-by-posts>.

²⁵⁰ See CEP Research, Austrian Post launches parcel pickup service for private customers, published on 7.2.2018.

²⁵¹ See CEP Research, DPD launches Predict collections in the Netherlands, published on 24.7.2018,.

²⁵² See IPC (2018), Cross-border E-commerce – Market overview and consumer preferences, presentation 8 June 2018.

²⁵³ See AT Kearney (2016), US E-commerce Trends and the Impact on Logistics.

will nearly triple from 5 billion in 2016 to 12-14 billion items in 2025.²⁵⁴ Deutsche Post DHL expects per capita B2C parcels between 15 in low and medium penetration markets and 30 in high penetration ‘mature’ markets by 2025²⁵⁵ amounting to around 11-12 billion B2C parcels. What is still future in Europe has already happened in China, the fastest growing e-commerce market worldwide with around 17% share in retail revenues²⁵⁶ and an estimated parcel volume of 40.1 billion items in 2017²⁵⁷, nearly 30 items per capita.

Moreover, delivery volume is not equally distributed over the year but there are peak and off-peak times in e-commerce demand and thus delivery volumes. Stakeholders at the experts panel highlighted that the relation between peak and off-peak volume has increased year-by-year. The overall growth requires significant investments in transport, sorting, and delivery capacities as well as more flexibility in delivery scale. Carriers are challenged by volume growth and peak demand and are simultaneously confronted with shortages in labour and space at least in the more mature e-commerce markets. Particularly parcel & express carriers experience increasingly declining profitability because of the transformation from high-margin B2B deliveries to low-margin B2C deliveries. B2B deliveries are characterised by a nearly 100% success rate in the first attempt delivery of usually several parcels per stop on five working days per week (Monday to Friday). In contrast, B2C delivery usually means the delivery of one item to the doorstep with much lower success rates in the first attempt delivery. Moreover, Saturday delivery is standard, and in some MS carriers even offer Sunday deliveries (e.g. PostNL in the Netherlands). The transformation from B2B to B2C deliveries and significant investments in capacity growth in combination with an increasing range of delivery options puts established carriers’ margins under pressure. This is also reflected in recently published announcements of DHL Parcel, DPD, GLS and Hermes (at least for selected markets e.g. in Germany) on general price increases for e-retailers, the introduction of peak surcharges and growing surcharges for bulky, oversized parcels.²⁵⁸

Finding a balance between cost-efficient last mile operations on the one hand and the growing expectations of online buyers on the other hand is a major drivers for innovations in the delivery industry. In light of expected growth in B2C e-commerce the question arises whether the existing parcel logistics will still be appropriate when e-commerce accounts for 20-30% of total retail revenues (or even more) and how delivery logistics may evolve in light of ever-increasing consumers’ expectations.

²⁵⁴ See CEP Research (2017), DPDgroup plans new innovative services as B2C volumes soar, 21 November 2017.

²⁵⁵ See Deutsche Post DHL (2018), Trends in Cross-border E-commerce, presented at WIK Postal Seminar, 5th -7th February 2018.

²⁵⁶ See IPC (2018), Cross-border E-commerce – Market overview and consumer preferences, presentation 8 June 2018.

²⁵⁷ See Apex Insight (2018), China Parcels Market, Market Insight Report 2018, Summary.

²⁵⁸ See CEP Research, DHL Parcel will raise prices in 12 European markets from January, published on 22 October 2018; DPD and GLS plan peak season surcharges and 2019 price increases in Germany, published on 8 November 2018;

Figure 37 Stylized delivery value chain

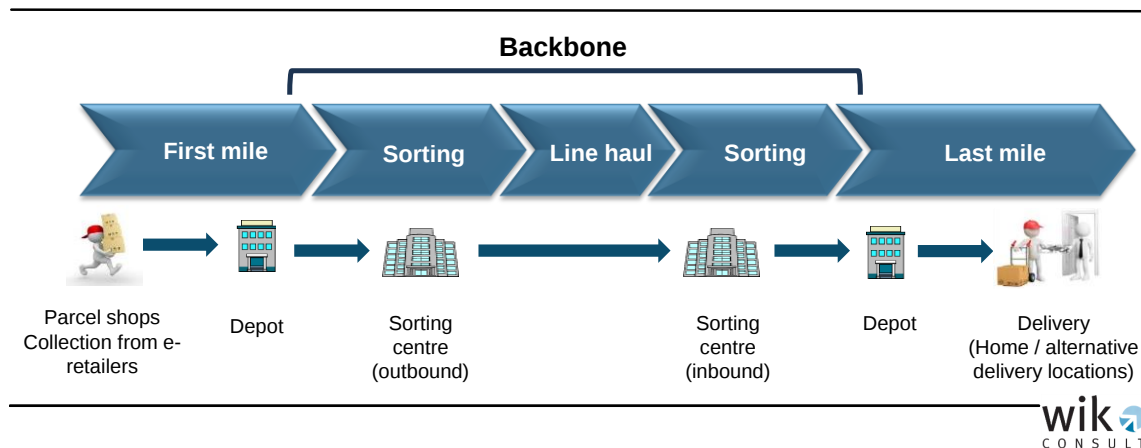
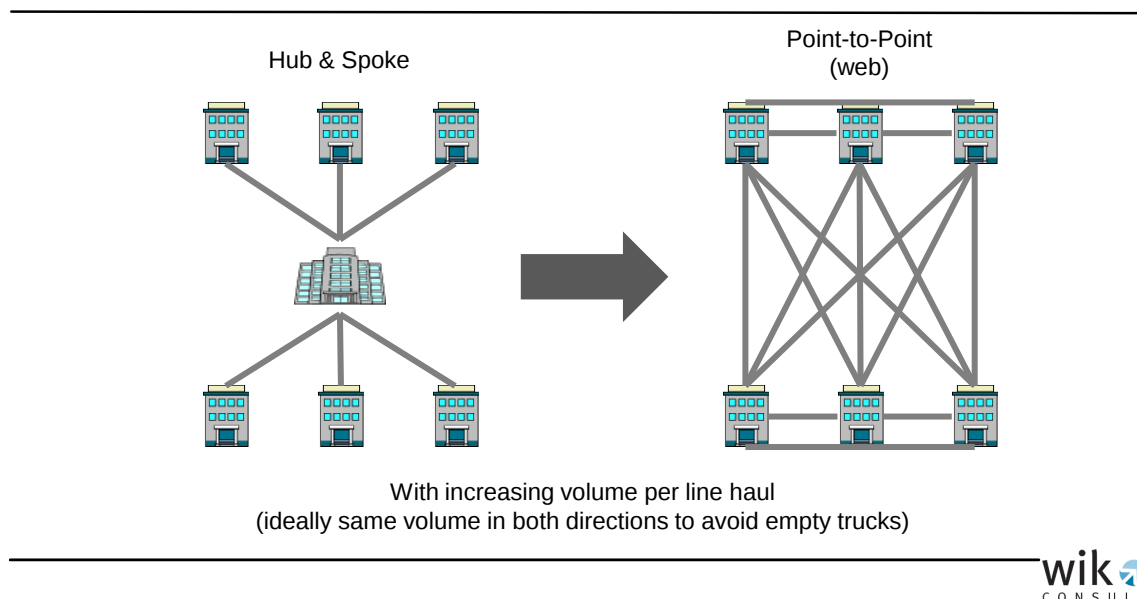


Figure 37 shows a stylized delivery value chain. In the next sections we discuss future trends in B2C delivery services for the two major elements, the backbone and the first/last mile, separately.

3.4.2 The 'backbone' of parcel logistics is under transformation

Domestic and cross-border parcels have constantly increased in the last years and are expected to grow further in the coming years. Generally, carriers consider that the scalability of the 'backbone' consisting of sorting hubs and centres and the transport relations between them (line haul) and to the delivery depots is a manageable task.

Figure 38 From hub & spoke to point-to-point transport (web structure)



We observe that in MS with high parcel volume carriers have reorganised or are going to reorganise their parcel logistics.

- PostNL, for example, decided in 2011 to re-invent their parcel logistics in light of growing e-commerce deliveries. Between 2012 and 2015 PostNL replaced the existing three parcel sorting centres plus delivery depots by a network of 18 combined sorting centres and delivery depots (NLI depots, “New Logistic Infrastructure”) based on a Greenfield approach.²⁵⁹ The traditional hub & spoke system has been transformed to a web structure with more direct transports between the NLIs (see the stylized model in Figure 38).²⁶⁰ This step allowed PostNL to introduce later cut off time for large e-retailers that hand over their parcels in one of the NLIs. The growing number of NLIs also increased the number of possible access points for large e-retailers and simultaneously reduced the average distance between the warehouses and the NLI. Additionally, point-to-point transports shorten the overall lead time from collection to delivery because they save two steps in the transport chain, the transport from the sorting centre to a hub and between the sorting centre to the delivery depot. By the end of 2018, PostNL increases the number of locations to 20 NLI depots and plan to build further seven in the next two years.²⁶¹ This shows that PostNL’s network is highly scalable and helps to reduce the average distance between the NLIs and the high-demand areas. The new structure allowed PostNL to launch new delivery options like same-day and evening delivery as well as delivery on seven days per week.
- Deutsche Post DHL has also re-organised and modernised its parcel logistics as part of a wider investment programme launched in 2011. The core elements were the modernisation of existing parcel sorting centres and the construction of delivery depots with parcel sorting equipment. The automation of delivery depots has increased sorting capacities and scalability to better tackle peak demand by temporarily upgrading the delivery depots into sorting facilities. Similar to the PostNL example the number of point-to-point transports between sorting centres as well as sorting centres and delivery depots has increased with growing demand. This again has sped up parcel delivery (next-day delivery as a standard) and shifted cut-off times. Large e-retailers have the possibility to hand over their items in one of the 34 parcel sorting centres of Deutsche Post.²⁶²
- Hermes Germany, the biggest competitor of Deutsche Post DHL in the German B2C delivery market, has launched its ‘Bluefield’ project in 2016. Hermes is going to transform their hub and spoke network by expanding the number of logistics/sorting centres from six to fifteen by the end of 2019. Additional to these centres Hermes is going to reduce the number of delivery depots from 50 to around 20. The reorganisation will increase delivery speed (more point-to-point

²⁵⁹ See PostNL (2015), Committed to sustainable delivery, the next phase; 3 November 2015.

²⁶⁰ See PostNL (2015), New Logistics Infrastructure: Parcels, <https://www.slideshare.net/primecompetence/new-logistics-infrastructure-parcel-expo-presentation-of-lars-pruijn-49447657>.

²⁶¹ See PostNL (2018), Q4 & FY 2017 Results, Accelerating transformation, Analyst presentation 26 February 2018, p. 33-34

²⁶² See Deutsche Post DHL (2011), Deutsche Post DHL erweitert Paketnetz in Deutschland für zukünftige Kundenanforderungen, published on 15 September 2011.

transports) and will shift cut-off times for e-retailers because they can hand over their items at more locations (in one of the logistics/sorting centres). In the today's infrastructure that follows strictly the hub and spoke principles delivery time is much longer. Amazon, one of the largest customers of Hermes (around 20% of total volume), has therefore an agreement with Hermes to hand over their parcels at Hermes' destination delivery depots.²⁶³

With growing e-commerce and parcel volumes in many MS we expect similar developments at least in those MS with sufficiently large and/or quickly growing domestic e-commerce markets (i.e. a growing number of e-retailers and some large e-retailers). With growing delivery volume the density of logistics networks (more delivery depots and more sorting facilities and combined sorting facilities/delivery depots) increases to expand the capacity in parcel delivery and to go nearer to the high-demand areas i.e. cities and metropolitan areas. This goes hand in hand with service improvements for local e-retailers and online buyers in terms of accessibility and delivery speed. In MS with less developed domestic e-commerce markets (only a low number of local and small e-retailers) but dynamically growing cross-border online purchases local and international carriers will also improve service provision but most probably starting in densely populated areas with high demand for e-commerce deliveries (i.e. in the capitals and large cities).

There are indications that large e-retailers grow more quickly than small and medium-sized e-retailers. This means that the concentration in demand will grow and the efforts of large e-retailers to gain more control on the end-to-end delivery process (from the warehouse to the customer) will increase. Large e-retailers and e-commerce intermediaries (fulfilment service providers) can achieve this goal by locating their warehouses nearer to the recipients. Particularly in case of cross-border e-commerce e-retailers can increase the speed of delivery when storing their goods in one or more local warehouses in the country of destination. For some product categories, e.g. quickly perishable goods like groceries or urgently needed goods like medicines short distances between warehouses and recipients are necessary to ensure prompt delivery.

E-retailers have basically two options to gain more control on the total supply chain up to delivery either by close cooperation with existing carriers and / or by performing delivery services themselves.

The first option results in a closer integration between e-retailers and carriers while the second option results in vertically fully integrated e-commerce companies at least for some parts of the delivery value chain. The vast majority of e-retailers still follows the first strategy and let carriers provide collection, sorting, transport and delivery services. However, the level of integration between e-retailers and carriers (as well as other fulfilment service providers) varies with the size of the e-retailer. With increasing size e-retailers (or their fulfilment service providers) can negotiate specific conditions with the

²⁶³ See DVZ (2018), So erfindet sich Hermes neu, published on 10 April 2018.

carriers in relation to delivery prices and conditions including the definition of access points, pre-sorting of parcels, cut off times etc. In case of very large e-retailers carriers have even invested in sorting facilities near or within warehouses of large e-ertailers (see examples in Section 3.3.7).

Case study 5: Amazon Logistics in the United States

In the first 10-15 years Amazon constructed fulfilment centres at different locations in the United States and basically relied on UPS and FedEx for outbound transportation and final delivery. In the winter season 2013/2014 Amazon experienced that the transport and delivery capacities of both carriers were not flexible enough to ensure the timely delivery of e-commerce orders in this peak time. To reduce the dependency on UPS and FedEx Amazon has invested in sorting centres. This network of dedicated sorting centres was complemented by smaller delivery stations.

Amazon currently operates a network of around 50 regional sortation centres across the United States to increase control over the outbound transportation of packets within its own distribution network. These buildings are key enablers to shifting shipping volume away from UPS and FedEx so that packets can be delivered by USPS, local couriers and independent Amazon Flex drivers. The purpose of these facilities is to sort packets by zip code to pallets that are then delivered to the post office responsible for each zip code for smaller packets. From there USPS performs the last mile delivery to the customer. Sortation centres also ship packets to Amazon's extensive delivery station network (more than 90) which represent the final node in the Amazon distribution network. This system was introduced to the U.S. in 2014 and has been instrumental in Amazon taking greater control over its outbound shipping costs. Sortation centres are typically, but not always, standalone buildings within the Amazon Network. Sortation centres can handle packets for a regional area on behalf of one or more fulfilment centres.

In late 2013, Amazon launched a build-out of its delivery station distribution network consisting of smaller facilities that are typically in the 60,000 to 100,000 sq. ft. range. These buildings are typically positioned within larger metropolitan cities across the country and quite often they are positioned near airports. The delivery station's primary role is to sort packets for outbound routes to enable last mile delivery (same day and next day deliveries) to customers within a tightly defined urban area. Often deliveries are performed by multiple local courier companies that are contracted by Amazon to service specific routes and also by independent Amazon Flex drivers. These deliveries may consist of multi-temperature fresh food totes being delivered on a same day basis to markets where Amazon Fresh is up and running.

Sources: http://mwpvl.com/html/amazon_com.html and
http://mwpvl.com/html/amazon_building_new_sortation_network.html

Large e-retailers like Amazon have the capacities to pre-sort and hand over parcels at the destination delivery depots of the carriers to speed up delivery. This is for example a common practice by Amazon in the United States (see Case study 5) but can also be observed in some EU MS. Such negotiated access agreements have for example been closed between Amazon and Hermes²⁶⁴, or, as mentioned by stakeholders, between Amazon and the Italian USP Poste Italiane. Such agreements allow Amazon to speed up the final delivery particularly if carriers are not (yet) able to sort and transport parcels quickly through their backbone.

²⁶⁴ See DVZ (2018), So erfindet sich Hermes neu, published on 10 April 2018.

Another ways to get maximum control on fulfilment and delivery services has been developed by the Chinese e-commerce giants Alibaba and JD.com.

- In China, Alibaba's logistics arm Cainiao orchestrates all stakeholders involved in the e-commerce supply chain including warehouses (self-driven or managed by third parties) and carriers via big data analytics (by using algorithms based on artificial intelligence). It operates a logistics data platform that leverages the capacity and capabilities of logistics partners to fulfil e-commerce orders. Cainiao was founded by Alibaba in 2013 with a consortium of delivery companies to create a logistics information platform that links a network of partners, warehouses and merchants. Cainiao applies digital technology to make parcel deliveries faster and more efficient. The company runs one of the world's largest databases, processing nine trillion records per day. Cainiao helps marketplace sellers to procure carriers, to manage carriers' performance and it supports logistics partners to manage operations, utilisation rates, route planning and order volume forecasts.²⁶⁵ With other words, Cainiao provides the logistics and delivery intelligence and determines the fulfilment and delivery standards while the connected stakeholders, warehouse providers as well as carriers, fulfil e-commerce orders as more or less invisible sub-contractors. In addition, Alibaba has minority stakes in three logistics partners, YTO, ZTO and Best to better align the operations. They and diverse other delivery companies provide physical collection, transportation and delivery of the e-commerce group's orders, with the overall logistics operation coordinated through Cainiao.²⁶⁶
- JD.com has been operating its self-owned logistics system since 2007, and established JD Logistics as a stand-alone subsidiary in April 2017 to raise additional capital (around 80% owned by JD.com). JD Logistics provides integrated warehousing services, express delivery services and logistics analytics services. Similar to Cainiao, JD Logistics has heavily invested in supply chain management technology. JD reports that they were able to deliver 90% of e-commerce orders in China the same or the next day and reached 99% of China's population.²⁶⁷ In 2015, JD launched a crowd-sourced delivery service for instant deliveries (JD daojia, after the merger with Dada renamed into New Dada in 2016). In 2016, JD opened their logistics services for online sellers on the JD platform and offers its logistics solutions to brand owners. The company operates a network of seven large regional warehouses and 479 medium-sized and smaller local warehouses in China additional to nearly 7,000 delivery and pickup stations. JD Logistics is thus increasingly developing into a competitor for leading private courier companies such as SF Express, STO, YTO, ZTO, Yunda and Best

²⁶⁵ See Walsh, Tim (2017), Strategic Implications of Changing Postal Markets, Conference of Commonwealth Postal Administrations, 12-14 October 2017 and Fung Business Intelligence (2017), Last mile delivery: a pain point of online shopping, March 2017.

²⁶⁶ See CEP Research (2018), Alibaba leads \$1.4bn investment in ZTO Express to deepen Chinese logistics network, published on 29 May 2018.

²⁶⁷ See CEP Research (2018), E-commerce giant JD.com enters consumer parcel delivery business, published on 18 October 2018.

Express. Several of these firms work closely with its top rival Alibaba through the latter's Cainiao logistics network.²⁶⁸

This second option, that delivery services are performed by e-retailers themselves, is not an invention of the e-commerce era. In the pre-internet era, one of the most important distance sellers in Germany, Otto, has founded its own delivery service Hermes (in 1972) because existing delivery solutions, including the ones of the postal administration Deutsche Bundespost, were not able to provide reliable low cost parcel delivery services to consumers at that time. A mix of both options, partnership and self-performance, can be observed in many MS. The most prominent example today is Amazon Logistics that has launched local delivery services in some EU MS (see Case study 9 in Section 3.4.3). At domestic level, the Czech e-retailer Alza is an example. This company has built up its own express service (AlzaExpres) to deliver time-critical orders.

The key question is whether the development of an all-embracing supply chain management technology in the style of Cainiao or JD Logistics is a likely scenario for European e-commerce and delivery services in the next five to ten years. While e-commerce experts consider such a development as conceivable European carriers do not share this opinion.²⁶⁹ However, the e-commerce and delivery markets in Europe are quite different compared to the Chinese one.

- Firstly, market concentration in the Chinese e-commerce market with only two big players is much higher than in Europe where the domestic e-commerce markets are much more fragmented even though the concentration in demand has increased and is expected to further grow. In Europe there are many potent large e-retailers that successfully compete with platforms like Amazon.
- Secondly, at the beginning of the e-commerce boom in China delivery services consisted of some local parcel and express carriers with focus on B2B delivery services, B2C delivery services had not played a significant role. These services have mainly been developed with the rise of e-commerce by Alibaba and JD. In Europe, delivery services particularly in Western and Northern EU MS are already quite well developed with parcel & express carriers as well as USPs providing highly reliable and increasingly flexible B2C delivery services. Moreover, as the analysis in Section 3.3 shows, the carriers are investing in appropriate domestic and cross-border B2C delivery services.
- Thirdly, in many EU MS appropriate fulfilment and delivery services have emerged independently from large platforms or e-retailers. They support and improve the business opportunities of SME e-retailers that have a choice how to sell (via own web shop or on one or more online marketplaces or a combination of several online sales channels) and how to fulfil their orders.

²⁶⁸ CEP Research (2018), JD.com raises \$2.5 billion for further logistics expansion, published on 14 February 2018, and CEP Research (2018), JD.com invests in Chinese logistics capacity as Q4 sales soar by 39%, published on 5 March 2018.

²⁶⁹ WIK Experts Panel on the impact of technology on delivery services, experts interviews.

Basically, the development of such an all-embracing national or even European platform is a matter of size and scale. Today, Amazon is the only player in Europe, so far, who has built up a network of fulfilment centres across several EU MS and has invested in a small number of sorting centres and delivery stations in selected, densely populated areas. However, Amazon Europe is not comparable by size, scale and power with its Chinese counterparts and it is still much smaller than Amazon in the United States. Other large international and national online marketplaces like Ebay, Allegro, Zalando, and others do not follow a similar strategy but still rely on available and emerging carriers and their delivery solutions. Overall, a similar development of such all-embracing supply chain management platforms like in China appears to be not likely in Europe with its highly fragmented and competitive delivery markets in the next years.

With growing volume in all countries carriers will further invest in additional sorting and transport capacities in the backbone and the structure of successful carriers will transform from a hub and spoke to a web structure. This web structure results in an increasing number of local delivery depots particularly primarily located near densely populated areas with high delivery volumes. Additionally, the number of warehouses will increase particularly in high-demand areas, i.e. in densely populated urban regions to reduce the distance between ordered goods and online buyers and be able to launch same-day and instant delivery services. These warehouses could be managed by different parties including large e-retailers, online marketplaces, e-fulfilment service providers as well as carriers. Overall, we expect that e-retailers, e-commerce intermediaries (like online marketplaces) and international and national carriers will cooperate more closely in the future. This may include the negotiated access of large e-retailers or consolidators (e-fulfillment providers) to carriers' delivery depots. In this process, standardisation of technical interfaces and product information / tracking data will play an important role. Additionally, we expect that we will observe more vertical integration within the e-commerce supply chain either downstream integration from e-retailers to provide tailored delivery services or upstream integration from carriers to offer e-fulfilment and warehousing services to e-retailers.

3.4.3 Last mile delivery will become more diverse particularly in urban areas

Basically, there are two key topics in the discussion on future delivery trends. The first topic is the role of logistics or delivery platforms to coordinate local delivery processes and services (also in the context of city logistics and sustainability). The second topic is the question to which extent e-retailers and online marketplaces will (further) invest in logistics related to the last mile to improve the customer experience and to attract and retain new customers.

All stakeholders agree that B2C e-commerce will continue growing driven by an increasing number of consumers buying online, a growing share of heavy online buyers, growing e-commerce purchases per capita and, last but not least, by the increasing range of product categories purchased online. Stakeholders expect that the variety of delivery

options in the last mile will increase particularly in urban areas. The growing variety of delivery options would go hand in hand with an increasing number of local operators in the parcel delivery market. The transformation is driven by customer convenience on the one hand, specific delivery requirements related to product categories and cost control by carriers on the other hand. While cost control drives the number of delivery options in terms of time and location to ensure a successful delivery at the first attempt more customer convenience means to give the online buyer more control on the delivery process by improved visibility and last minute flexibility and to develop consumer-friendly delivery solutions. The delivery process should be fully visible (particularly the last mile) and flexible i.e. allowing the recipient not only to choose the right delivery option but also to allow him to change delivery options during the process. This include emerging new players like crowd delivery services, growth in same-day and instant delivery in urban areas and cities, and more alternative delivery locations additional to home delivery.

As already outlined in the previous section experts see a general trend for logistics facilities located nearer to the recipients of e-commerce orders. In recent decades, logistics and distribution centres have moved from the cities to the outskirts, due in part to lower real estate costs and due to facilitate accessibility for line haul trucks. With increasing number of deliveries in urban areas, however, there are now more multi-tiered distribution systems, in which delivery depots are complemented by smaller logistic centres (micro hubs) in the city. With progress in big data analytics and growing online purchases not only delivery hubs would be located nearer to the recipients but also warehouses stocked with fast moving consumer goods (e.g. groceries, drugstore items, etc.). Amazon, for example, does follow such a strategy by launching city warehouses for same day deliveries in big cities (Amazon Prime Now). Another example for such a local delivery approach is the Dutch start-up Picnic that delivers groceries and drugstore articles (see Case study 6).

Today, many e-retailers even large ones deliver their orders from one centrally located warehouse to their customers. With growing demand and e-retailers' efforts to speed up delivery there is a general trend to decentralisation in warehousing to get nearer to the consumers. Warehouses at least for fast moving consumer goods and goods with significant demand are increasingly located in urban areas and city centres. The decentralisation of warehouses implies that e-retailers' demand for 'backbone' transport services of postal, parcel and express carriers to transport and consolidate single-piece items over long distances decline. On the other hand B2B traffic between producers, central warehouses and local warehouses increase (more line haul traffic). What still remains is a significant demand for last mile delivery services and the possibility of e-retailers and their fulfilment service providers to get access to appropriate delivery solutions in the last mile. Moreover, the last mile delivery services become more and more important for e-retailers and online marketplaces as a unique selling point in the competition with other e-retailers and platforms.

This will further drive innovations in the last mile, not only by established carriers but also by new models. E-commerce experts see the food delivery market as a potential blueprint for such emerging delivery models.²⁷⁰ In contrast to the 'standard' delivery of parcels and packets, there had not been any established last mile delivery services for restaurant food. To close this gap technology-driven companies developed highly scalable platform-based delivery services like Delivery Hero (UK), Lieferando (Germany) or Postmates (United States). They managed to launch such delivery infrastructures in urban and metropolitan areas in a fairly short period of time. They follow a light-asset approach that facilitates the expansion of such models driven by demand, usually starting in densely populated high-demand areas and then expanding step-by-step to smaller cities.

As a logical consequence, stakeholders expect that last mile delivery services will diversify to better match diverse consumers' needs and become more specific to different product categories by adding appropriate services.²⁷¹ In this framework there will be still a demand for basic delivery services (similar to the today's parcel & express services) but they will be complemented by a bundle of new delivery services. Examples for such delivery services with value-added elements are specific delivery services for oversized goods (furniture, appliances), delivery and installation of electronics and appliances (e.g. as offered by ao.com) or specific delivery services for groceries (see Case study 6 on the Dutch start-up Picnic).

²⁷⁰ Weiss, Marcel (2018), Exchanges #208: 10 Hypothesen für die Logistik von morgen, published on 1 October 2018 (excitingcommerce.de/2018/10/01/exchanges-208-10-hypothesen-fur-die-logistik-von-morgen/)

²⁷¹ Ibid.

Case study 6: Picnic – An innovative start-up to deliver groceries

Picnic is a Dutch start-up and was founded in 2015. It is a quickly growing pure online grocery player with integrated delivery service. They have developed an application that enables households to find and order grocery items through their mobile phone. Picnic sells food and non-food products including vegetables, fruits, meat, fish, sweets, snacks, drinks, dairy, bread, but also drugstore items. Picnic offers delivery services for example in Amersfoort, Almere, Leusden, Soest, Utrecht, Maarssen, Delft, Rijswijk, Voorschoten, Leidschendam, Veenendaal and Ede and has recently expanded to the German cities Viersen and Mönchengladbach (near Dusseldorf).

In contrast to on-demand food delivery services that mainly emerge in bigger cities Picnic focusses on medium-sized and small cities. Before starting the business they inform the households in the target area about their plans, launch their app and invite interested people to download the app and to register for the service. If there are enough registered users Picnic starts launching the business. The principle is that only those groceries are stocked in an appropriate warehouse that have to be delivered the next working day. Picnic cooperates with local producers and wholesalers that transport the ordered goods just-in-time to Picnic's warehouse during the night. The orders are delivered during daytime so that the warehouse is empty in the evening and can be prepared for next day. The orders are transported to local depots where the runners are loaded and start their delivery rounds. They manage five to seven deliveries per hour. The empty runner (with deposit boxes and bottles) goes back to the depot and is reloaded. The delivery is organised like the round of a milkman ('milkman 2.0'). This means that the 'runner' follows an optimised route with a fixed number of planned stops with guaranteed successful deliveries at the first attempt (latest order time 22.00h for next-day delivery).

Picnic does not target instant or same-day deliveries of groceries because they consider this type of delivery as too expensive. Consumers can select a one hour delivery time window and on the day of delivery they are informed when the 'runner' is exactly arriving (20 minutes time window). The 'runner' can be fully tracked via the Picnic app (live tracking) and the recipients are informed on the driver's identity (name and picture). Picnic has 100% electrical delivery vans specifically developed and branded for Picnic (they are smaller than usual vans which facilitates parking and is optimised for Picnic's delivery requirements). Picnic delivers with employed drivers who play an important role in their business model and brand because the orders are delivered into the kitchen. Customers can evaluate the Picnic drivers after delivery (element of Picnic's quality control). The minimum basket is 25 EUR and the delivery is free of charge. Picnic expects revenues of 250 million EUR for 2018.

Sources: Ngin food (2017), In den Niederlanden soll E-Food den Massenmarkt erorbern, published on 27 November 2017
Krisch, Jochen (2017), Wie Picnic mit 100 Mio. € die Foodbranche revolutionieren will, published on 26 June 2017 (excitingcommerce.de/2017/06/26/wie-picnic-mit-100-mio-e-die-foodbranche-revolutionieren-will/); Krisch, Jochen (2018), Crossover Exchanges #11: Picnic unter der Lupe, published on 9 September 2018 (excitingcommerce.de/2018/09/09/crossover-exchanges-11-picnic-unter-der-lupe/)

Retailers and carriers, both, are experimenting with on-demand delivery services including crowdsourced delivery providers similar to Instacart or Postmates in the US. On-demand delivery services create flexibility for logistics service providers and retailers by letting them temporarily expand delivery capacity. They can cover the baseload with their own fleets, and then use on-demand services to cover peak periods, as well as the most urgent and cost-insensitive delivery requests. That might be more cost effective than

owning a larger fleet that is less utilised most of the time (see Case study 7 and Case study 8).²⁷²

Case study 7: DHL Express cooperates with You2You in Paris

The Deutsche Post DHL subsidiary delivers on average 25,000 parcels to French homes daily, rising to as many as 40,000 parcels daily in the run-up to Christmas and expects these figures to grow rapidly in the years to come. B2C parcels now represent one in three of all DHL Express shipments delivered in France, a ratio which is set to increase to one in two parcels over the next five years. You2You's 'Relayed' offering allows DHL Express to funnel parcel flows into city centre-located last-mile parcel delivery points operated by the start-up's partners. Each morning, DHL vehicles drop off parcels at the outlets which are then delivered in the vicinity by self-employed couriers using a fleet of bicycles, the end customer having booked a specific delivery slot. The parcels are delivered from four points in Paris and its inner suburbs and also from Lille, in northern France. The objective is to have a minimum of 15 last-mile parcel delivery points in service by the end of 2018 with Bordeaux, Nancy and Marseilles joining the list of cities served by the DHL Express/You2You partnership. There are plans to extend the service to a further 15 French cities in 2019.

Source: CEP Research (2018), DHL Express partners French last mile delivery start-up, published on 23 October 2018.

²⁷² See Eric Brown (2018), E-commerce spurs innovation in last-mile logistics, MIT News, published on 4 September 2018.

Case study 8: DHL eCommerce & DHL Parcel Metro

After a 10-year break, DHL is returning to the U.S. domestic shipping space. The new DHL Parcel Metro delivery service is the carrier's pitch for a hotly contested market: low-cost next-day or same-day delivery to urban areas, utilizing an existing network of fulfilment centres and on-demand contract labour. DHL Parcel Metro utilises customised software that allows DHL eCommerce to create a 'virtual delivery network' of local and regional contract couriers and on-demand couriers, in the vein of Postmates, Uber Eats or DoorDash, to ensure maximum flexibility and capacity over the last mile. Retailers can offer a fully branded suite of delivery options to their customers. For consumers, the service creates a seamless experience: an online and mobile interface allows consumers to track shipments in real-time, communicate special instructions to their courier, reschedule a delivery and rate their delivery experience.

The DHL Parcel Metro service matches retailer delivery requirements with a virtual delivery network that leverages local and regional delivery vendors along with crowd-sourced vehicles. The use of established delivery vendors and crowd-sourcing will allow DHL to support standard volumes while economically flexing capacity to align with changing demand. DHL offers consolidation services, the software and technology platform, and the contractual backbone. The Parcel Metro software solution manages delivery vendors and drivers according to characteristics such as service level, capacity, and route. Consumers can select their desired delivery window including next day, same day, and (coming soon) two-hours. Online shipment tracking is available to consumers. The ability for consumers to rate their delivery experience is also included, and this is likely to enable DHL to track and manage the quality of services offered. The service also includes risk management features such as shipment value protection and geo-coded and photo supported point-of-delivery.

DHL eCommerce has recently opened an automated distribution centre close to New York. DHL eCommerce opened the \$20 million New Jersey facility, just in time to handle a flood of parcels generated by the long Black Friday – Cyber Monday online shopping sales. The business had been expecting to process about 200,000 items on the night of Cyber Monday but in fact received about 300,000 items. The new distribution centre, leased for 10 years, lies close to U.S. Postal Service entry points, allowing faster connection to the USPS's extensive final mile delivery network. Under the USPS workshare scheme, DHL eCommerce pre-sorts items by destination postal code and then contracts USPS for last-mile delivery. Apart from last-mile delivery by USPS, the company also offers a same-day or next-day local delivery service called DHL Parcel Metro, working in cooperation with sub-contracted regional or local couriers as well as 'crowdsourced' carriers. Spratt explained that DHL eCommerce wanted to offer a wide range of delivery services to US consumers. However, about 400 million of this year's expected 475 million items will be delivered by USPS on an 'Expected Delivery Day' basis. DHL is now in talks with the postal operator over a possible 'day-definite' delivery service as well.

Sources: Logistics Viewpoints (2018), DHL Parcel Metro Creates Critical Alternative for Last-Mile Delivery, published on 21 March 2018; CEP Research (2018), DHL USA automates e-commerce handling and invests \$300m on supply chain technology, published on 30 November 2018

The most prominent example that covers both topics is Amazon Logistics and its role in the last mile in the United States and, increasingly, in selected European markets as the next case study shows.

Case study 9: Amazon Logistics & Amazon Flex & Amazon Delivery Service Partner Initiative

Amazon uses a delivery platform to coordinate their so-called Flex drivers. The Flex delivery services have been launched in the context of Amazon Prime Now. Eligible goods available in local warehouses (Prime Hubs) are delivered within one or two hours. Amazon Flex primarily targets self-employed drivers. Amazon Flex was first implemented in the USA and is now available in selected European cities, such as Berlin and Munich in Germany; Paris; Milano, Roma and Torino in Italy; Barcelona and Madrid in Spain; as well as in several cities in the UK (e.g. in Liverpool, London, Manchester, New Castle, Portsmouth). The basic idea is to contract-out last mile delivery to self-employed carriers and small sub-contractors. While in the USA in order to be eligible for providing the service a starting capital of 10,000 dollars is required, for the European markets it is only necessary to dispose of a vehicle, a smartphone and being available for shifts ranging between one and four hours.

Country	Sorting centres	Delivery stations	Prime hubs
France	2	7	1
Germany	3 (inbound) 0 (outbound) / planned: 1	2 / planned: 2	4
Italy	1 / planned: 1	7	2
Spain	0	6	2
UK	1 (inbound) 3 (outbound)	43 / planned: 1	13
US	8 (inbound) / planned: 2 39 (outbound) / planned: 4	87 / planned: 7	53

Source: http://mwpvl.com/html/amazon_com.html, retrieved 3 December 2018.

The table above summarises Amazon's current and planned distribution infrastructure in Europe and the United States (excluding the fulfilment centres). In Europe, Amazon UK is mostly advanced in building up such an infrastructure with 3 outbound sorting centres and 43 delivery stations. In Germany, in contrast, Amazon has only two delivery stations, so far.

Amazon's delivery stations and Prime hubs are always located near the cities, i.e. in high-demand areas where peak demand most likely creates delivery bottlenecks. So far, Amazon has not launched nationwide delivery networks neither in the United States nor in any of its European markets.

In mid-2018, Amazon has announced it wants to engage small delivery companies to deliver the last mile in the United States. It seeks to attract people to become 'Delivery Service Partner' of Amazon and supports eligible entrepreneurs to launch their own small delivery business with 20 to 40 vans and 40 to 100 employees. Amazon offers interested parties deals on Amazon-branded vans, comprehensive insurance and industrial-grade handheld devices. It promotes this model as being appropriate for anyone, even for people with no delivery experience. Subcontractors will be able to use Amazon's technology and processes to set up and run their delivery businesses. This initiative has a different quality compared to Amazon Flex. Amazon Flex is a delivery platform for instant deliveries mainly targeting single drivers while this new model is more similar to the traditional model used by parcel carriers that mostly use sub-contractors (delivery partners) to manage the last mile.

Sources: http://mwpvl.com/html/amazon_com.html, accessed on 3 December 2018, Amazon website Amazon (2018), Wanted: Hundreds of Entrepreneurs to Start Businesses Delivering Amazon Packages, press release published on 28 June 2018.

These examples show that last mile delivery is a highly important topic with significant potential for innovations and improvements in efficiency. But they also show that most changes can be expected for urban and metropolitan areas while similar developments in rural areas would be less likely for different reasons. The developments are driven by

e-commerce demand which increase with population density. Moreover, the share of heavy online buyers will most probably higher in urban than in rural areas because the share of young people is higher in big cities and the broadband infrastructure (mobile and fixed) is usually better in urban than in rural areas. Finally, delivery is more costly in rural areas because of lower density and thus longer distances between delivery stops. Instant delivery within one or two hours would therefore be much more expensive. Delivery by foot or by bike would also be less appropriate and delivery by van is generally more expensive. For these reasons delivery platforms would have problems to attract enough drivers delivering in rural areas and it is not surprising that they start their operations in densely populated areas. Quality of service will become better in rural areas, too but more in the sense that delivery times become shorter. Choice between different delivery options in terms of location, time and flexibility will most probably remain smaller.

For established carriers and USPs with their end-to-end 'heavy-asset' delivery networks it is of utmost importance how they can position in this highly dynamic, e-commerce driven ecosystem in future. There will still be a need for basic delivery services in future. Basic delivery services mean the tracked delivery of e-commerce packets and parcels within one, two or three days nationwide even in very rural areas. But there will be an increasing number of additional delivery services with or without value-added elements particularly in urban areas that cover a wide range of delivery options in terms of location, time and speed. In contrast to light-asset, tech-driven start-ups, e-retailers and platforms, USPs and parcel & express carriers have to tackle the legacy challenge that makes it more difficult to adapt existing operations and to launch new IT-driven, app-controlled services. Many of them have already improved their services, expanded delivery options in terms of location and time and increasingly allow consumers more last minute flexibility and control on the delivery process. The developments in the past five years show that international, European and national carriers have taken up the challenge and made significant progress in the modernisation and re-invention of their delivery services.

3.4.4 Technology transforms networks and delivery services

Additional to these more fundamental organisational trends in the backbone and in the last mile of e-commerce delivery there are many technological innovations tested and implemented by carriers as well as by e-retailers that additionally affect the way how e-commerce items are handled, tracked and delivered.²⁷³

This include

- Robotics and autonomous ground vehicles used in high-end warehouses and sorting centres
- Autonomous and semi-autonomous delivery robots in the last mile

²⁷³ See also DHL Trend Research (2018), Logistics Trend Radar, Version 2018/19 for a summary of technology trends in the logistics industry.

- Drones
- Autonomous ground vehicles used in transport and delivery
- Stationary and mobile parcel lockers
- Trunk and in-home delivery

Additionally, internet of things (IoT) and big data analysis based on AI algorithms have already prepared the way for significant improvements in the efficiency of the e-commerce supply chain and are now migrating more and more into the delivery value chain. They promote the development of increasingly flexible delivery models away from the fixed daily route to a flexible route that can even be changed last minute by recipients' preferences (see Case study 10). As already highlighted platform-based delivery models are able to centralise the knowledge about consumers' delivery preferences, route planning, traffic and parking situation. In these models deliverers are informed in real-time about changes in the traffic situation and available delivery options given the recipient is not at home and wishes another delivery arrangements. They are informed via mobile applications and do not need specific delivery knowledge. These technologies therefore allow the combination and coordination of different delivery solutions within one platform which are better scalable in case of delivery peaks.

Again large, financially strong and technology-driven e-retailers like Amazon in the United States and Alibaba / Cainiao in China are testing many different forms of new technologies and are keen to automatise today's still labour intensive warehouse activities as much as possible.

- Amazon reports that it now has over 100,000 robots working inside its warehouses. Amazon uses its robots to carry stock around the expansive warehouse floors and group together all the individual items needed for a specific order. The robots facilitate the work of the pickers (shorter ways to go) and shall increase their productivity.²⁷⁴
- Alibaba's logistics arm, Cainiao, has opened a new, smart warehouse and has expanded its Internet of Things (IoT) systems right before the big 11.11 global shopping event in China. With 700 automated guided vehicles (AGVs) is the largest robotic smart warehouse in China. The IoT technology in the warehouse can automatically direct the AGVs to drive, load and unload. The system will plan the best routing for the AGVs to avoid collision and intelligently distribute parcels. Cainiao reports that 50% more orders can be fulfilled by the entire warehouse than that of a traditional one within the same time period.²⁷⁵

²⁷⁴ Mail Online (2018), Rise of the machines? Amazon's army of more than 100,000 warehouse robots still can't replace humans because they lack 'common sense', published on 5 June 2018.

²⁷⁵ See CEP Research, Cainiao turns to ever-smarter logistics in preparation for '11.11' shopping festival, published on 30 October 2018.

Case study 10: UPS' usage of Artificial Intelligence and Big Data

UPS' use of big data and artificial intelligence allows the company to operate its global logistics network including around 96,000 road vehicles that handle around 19 million items per day on average. Annually, UPS invests \$1 billion in technology to enhance efficiency and to improve customer services.

UPS Bot: UPS developed an AI-enabled tool that mimics human conversation. This chatbot can respond to customer queries, provide tracking information and information on shipping rates. The chatbot is able to recognise text as well as voice request (which allows the integration in virtual assistants like Amazon's Alexa or Google Assistant) and to take appropriate steps to respond to them. With each request, the chatbot collects data to improve its responses and actions in future operations. The chatbot is also implemented in UPS My Choice delivery notification system and thereby allows recipients to obtain further information about their incoming parcels.

ORION: UPS' Onroad Integrated Optimization and Navigation (ORION) tool uses advanced algorithms and big data analysis to create optimal routes for delivery drivers. ORION is based on UPS' Packet Flow Technology data infrastructure which was initiated in the late 1990s and created predictive models of the packet flows. UPS intends to expand the functionalities of ORION to provide real-time suggestions on routes for drivers based on data supplied by customers, drivers and the vehicles. The system will be able to alter routes in real-time, for example based on weather or traffic information or to consider deliveries that still need to be completed. Moreover the system will be able to make "dispatch" decisions, i.e. decide which driver serves which customer, and other areas, for example to automate and optimise city-to-city movements or inside-building movements.

EDGE & NPT: The Enhanced Dynamic Global Execution (EDGE) is the equivalent of ORION for internal operations. The tool informed by real-time data supports employees in decision making and optimise operations. UPS currently implements its Network Planning Tools (NPT) which aims at optimizing the flow of parcels and packets in the UPS network from the collection point to sorting facilities to the final destination. The tool will be based on real-time data, artificial intelligence and analytics to support employees in decision making and to improve efficiency within the network. NPT is expected to be fully deployed by 2020 and UPS estimates cost savings of US\$100-200 million with the intel this system will provide.

Sources: ZDNet (2017), Big data case study: How UPS is using analytics to improve performance, published on 28 September 2017, <https://www.zdnet.com/article/big-data-case-study-how-ups-is-using-analytics-to-improve-performance/>; Forbes (2018), The Brilliant Ways UPS Uses Artificial Intelligence, Machine Learning And Big Data, published on 15. June 2018, <https://www.forbes.com/sites/bernardmarr/2018/06/15/the-brilliant-ways-ups-uses-artificial-intelligence-machine-learning-and-big-data/>; ODBMS Industry Watch (2017), Big Data at UPS. Interview with Jack Levis, published 1. August 2017, <http://www.odbms.org/blog/2017/08/big-data-at-ups-interview-with-jack-levis/>.

Carriers and e-retailers are testing autonomous and semi-autonomous delivery robots as additional tool for last mile deliveries. Examples are delivery robots of Starship Technologies tested for example by Hermes in Hamburg, Germany and in London, UK²⁷⁶ or the semi-autonomous delivery robots PostBOT developed for Deutsche Post DHL.²⁷⁷ Drones or unmanned aerial vehicles are another tool tested for facilitating deliveries in very rural areas and those that are difficult to reach by other means. According to the DHL Trend Research²⁷⁸ this technology is still in its early stages with tests have been conducted for example by Amazon, JD, DHL, Swiss Post and others. Both, delivery robots

²⁷⁶ See Hermes (2017), Hermes startet Test mit Starship-Robotern in London, press release published on 13 April 2017.

²⁷⁷ See Deutsche Post DHL (2017), Neuer Zustell-Roboter unterstützt Postboten beim Austragen ihrer Sendungen, press release published on 4 October 2017.

²⁷⁸ See DHL Trend Research (2018), Logistics Trend Radar, Version 2018/19, p. 48.

and drones are considered to be complementary to existing delivery solutions and not appropriate for mass deliveries. Indoor drones are already used in warehouses for stock control and facility inspection. In such closed areas the use, control and coordination of robots, autonomous vehicles and robots is much easier to handle than outside in the free field where they face additional risks like theft, risk of accidents and damage.

Automation in the last mile is one of the major challenges for the future. The last mile is by far the most labour-intensive part of the parcel delivery value chain and in many countries carriers do not find enough drivers to deliver parcels during peak time. McKinsey (2018) considers that the automation potential in the last mile is high and that autonomous vehicles will become one important element in five to ten years.²⁷⁹ These vehicles are complemented or even combined with other delivery options, like parcel lockers or drones.

Stationary parcel lockers either located outside or inside of buildings and shops are already widely implemented in many countries. They are autonomous containers that can be used to either receive or send a parcel. They usually complement the network of alternative pick-up and drop-off points (PUDOs), mostly parcel shops. In Europe, most parcel locker systems are mostly either carrier or e-retailer specific.²⁸⁰ Many USPs have launched parcel lockers including Deutsche Post DHL, Correos (Spain), Austrian Post, Swiss Post, Omniva (in all Baltic MS), and PostNord Denmark. Carrier and e-retailer agnostic systems are still the exception (e.g. Cubee in Belgium, owned by bpost, InPost in the UK, Cleveron in Estonia). Examples for parcel lockers launched by e-retailers are the AlzaBox in the Czech Republic, JD smart lockers in China, and the Amazon lockers in France, Germany, the UK, and the United States. In China, there is one example for a very successful carrier-agnostic system called Hive Box. Hive Box was founded in 2015 by the Chinese carrier SF Express together with other Chinese express companies STO Express, ZTO Express and Yunda Express, as well as the logistics property GLP. Over 5,000 such intelligent lockers have been installed in Shanghai and about 60,000 nationwide according to SF Express, which led the Hive Box cooperation scheme.²⁸¹

More generally, the use of carrier-agnostic delivery solutions ('open networks') appears limited. As mentioned above, at some places such carrier-agnostic delivery solutions have emerged but their number and their spread is small compared to the existing number of carrier- or e-retailer-specific solution. Additional examples (to parcel lockers) of such carrier-agnostic 'open' networks are networks of parcel shops that serve as pick-up and drop-off locations, e.g. Kariboo (owned by bpost, Belgium), Mondial Relay (FR, BE, ES) and related solutions, like Parcelly (UK) and Doddle (UK).

²⁷⁹ See McKinsey & Company (2018), Fast forwarding last-mile delivery – implications for the ecosystem, July 2018.

²⁸⁰ See IPC (2018), Delivery choice – Parcel lockers, 2018 overview.

²⁸¹ See Shine.cn (2017), Intelligent courier locker offers 'last mile' solution, published on 28 August 2017.

Table 12 'Open networks' for delivery solutions: Pros and cons

Stakeholder	Pros	Cons
Carriers	Save costs in the last mile: Alternative or complement for expensive home delivery with high risk of non-delivery at the first attempt Save investment costs; carriers can expand their PUDO network without significant extra investments in infrastructure	Competition with proprietary networks PUDO networks of large carriers Carriers may lose visibility in the last mile (Delivery services as unique selling point) Carriers may lose end-to-end control of the delivery service
E-retailers	Customer satisfaction: Enhance convenience of e-retailers' customers (more customer-centricity)	Additional delivery costs: May have to pay for a service that can also be provided by the carrier
Online buyers	Enhance convenience because the online buyer can pick up parcels at one specific address	Additional costs: May have to pay for the service (per month, per transaction)

Table 12 compiles the pros and cons for using 'open networks' in the last mile. The major challenges of these business models are (1) to attract a critical mass of partners (e-retailers and/or carriers) and users (online shoppers) in a fairly short period of time that are willing to pay for this service to become economically viable; (2) to appropriately tackle capacity bottlenecks in case of peak demand without losing partners and users; and (3) competition with carriers that have proprietary PUDO networks (including competition for appropriate locations).

Collecting parcels from one or even more lockers that are not located in the direct neighbourhood is not convenient for consumers. Mobile parcel lockers (in combination with semi- and fully-autonomous vehicles) could be a more appropriate solution in the future not only for urban but also for semi-urban and rural areas. Another possibility is to locate parcel lockers inside apartment buildings (like the Amazon Hub). Again, this solution makes most sense if they are carrier-agnostic i.e. accessible for all carriers delivering parcels.

Other innovative delivery options to facilitate the successful delivery of parcels at the first attempt are trunk and in-home deliveries. Both options are still in their infancy. Trunk delivery requires a close cooperation between car manufacturers and carriers (including e-retailers active in delivery). There are several examples for such co-operations

- DHL launched co-operations with Daimler, Audi and Volkswagen for trunk delivery;²⁸²
- Amazon launched Amazon Key In-Car in the United States which is available to Amazon Prime members in 37 US cities for owners of 2015 or newer Volvo or

²⁸² See Deutsche Post DHL, First time in Germany: Car becomes mobile delivery address for parcels, published on 22 April 2015; DHL now delivers parcels to Smart car trunks, published on 25 July 2016; DHL now delivering to trunks of VW cars, published on 9 May 2017;

General Motors vehicles, including Chevrolet, Buick, GMC or Cadillac brands equipped with GM's OnStar or Volvo's On Call connectivity services.²⁸³

- JD.com launched In-Car Delivery Service with the leading electric vehicle company NIO in China.²⁸⁴

Overall, trunk deliveries as well as in-home deliveries are only pilots and in the testing phase. The majority of the participants at WIK's expert panel on technology trends estimate that neither trunk nor in-home deliveries will become a commonly used delivery option in the next five years. In contrast, the use of autonomous vehicles or robots in delivery as well as mobile parcel lockers are considered to become reality within the next five to ten years. All participants agreed that delivery with robot support could also be a solution that may become reality in the next five years.

Overall, technological innovations like robots, autonomous vehicles, drones and the emerging interconnection of things are appropriate to complement delivery options and services in the last mile. Particularly the vision of autonomous vehicles used for line haul and last mile deliveries could be an option to tackle the lack of drivers in future. The quickly evolving technologies like artificial intelligence algorithms and related platforms to coordinate different players in the e-commerce and delivery supply chain have the power to improve the efficiency, the scalability and the flexibility of e-commerce deliveries in future.

3.4.5 Global standards are a useful tool to facilitate interoperability between all stakeholders in the e-commerce supply chain

CEN is the EU standardisation body and the Technical Committee CEN TC331 is responsible for standards in the field of postal services. They used to work on standards related to letter post but with growing importance of e-commerce, a shift has taken place from letter to parcel delivery, particularly to cross-border parcel delivery. The fourth standardisation request of the European Commission M/548²⁸⁵ issued in 2016 includes a mandate to the European Standardisation Organisation (CEN) for the development of standards for cross-border parcels "in order to eliminate product and weight silos, to create a differentiation of postal items based on content (documents versus goods), to provide a seamless 0 – 31.5 kg weight range and to be compliant to security and customs clearance requirements for electronic advanced data in line with international standards adopted by the World Customs Organisation (WCO) and Universal Postal Union (UPU) and the WCO and UNECE [United Nations Economic Commission for Europe] Data model, and to promote interoperability of parcel-delivery operations and thereby contribute

²⁸³ See The Guardian, Amazon now delivers packets straight to car boots, published on 24 April 2018.

²⁸⁴ See CEP Research, JD.com launches in-car deliveries in China, published on 28 May 2018.

²⁸⁵ M/548 Commission Implementing Decision of 1.8.2016 on a standardisation request to the European Committee of Standardisation as regards postal services and the improvement of quality of service in support of Directive 97/67/EC of the European Parliament and of the Council of 15 December 1997, C(2016)4876 final.

to promoting the creation of a Digital Single Market for the European Union.” (Article 1, M/548).

Many standards and all technical specifications (TS) that CEN/TC 311 has developed are not mandatory. The acceptance of voluntary standards depends on the strength of economic incentives of involved stakeholders to apply a specific standard. Related to cross-border parcel delivery following technical specifications of the current work programme of CEN/TC 331 (following the mandate of the European Commission) are of interest:

- The harmonised parcel label (a technical specification on interfaces for cross-border parcels, CEN/TS 17073:2017)
- Electronic Advance Data exchange (a technical specification on the exchange of data amongst the e-merchant, logistic operators, cross-border agencies and other relevant parties)

The harmonised parcel label improves the traceability of parcel along the total supply chain from the manufacturer to the customer and, if necessary, back to the retailer or manufacturer in case of returns. The technical specification is the result of intense discussions among representatives from postal organisations, online retailers (represented by Ecommerce Europe), as well as express and parcel service providers and GS1, an international not-for-profit standardisation body.²⁸⁶ CEN/TS 17073 uses the GS1 Serial Shipping Container Code (SSCC) to uniquely identify parcels. This identifier enables interoperability between all stakeholders in the e-commerce supply chain including carriers involved. As the harmonised parcel label uses an open global standard, formerly closed networks can now be connected to create an end-to-end delivery network. The harmonised parcel label allows to add carrier-specific identifiers additional to the GS1 Item identifier. If the shipment is a UPU item collected by a designated postal operator (a USP of the Member State) then the UPU Item identifier (UPU S10 barcode) is mandatory. In that case the use of the GS1 Item identifier is conditional given that the shipment does not leave the postal network. The application of the carrier-independent GS1 SSCC in the harmonised parcel label is the major difference to IPC's harmonised label that only uses the UPU S10 barcode. In contrast to CEN/TS 17073, IPC's label can only be used by other USPs and is thus not open to any other parties involved in the e-commerce supply chain.²⁸⁷

The use of a global, widely accepted identifier for e-commerce parcels enables the development of new applications. Details of the shipment e.g. the address of the recipient, or details of the merchandise (weight, size, origin, peculiarities important for the transport etc.) can be linked to the global identifier so that the data can more easily be shared with third parties. Particularly, it provides the opportunity to combine different service providers

²⁸⁶ See GS1 (2018), Transforming the Last Mile.

²⁸⁷ See IPC (2016), International Post Corporation's harmonised label to simplify parcel processing and tracking, published on 15 December 2016.

in the same supply chain and it improves visibility of the shipment independently of the stakeholders involved. This can also facilitate the use of 'open networks' i.e. carrier-agnostic delivery solutions in future (see Section 3.4.4 for more discussion on 'open networks').

One important application of the global identifier is related to the second important technical specification that refers to the Electronic Advance Data exchanges (EAD). This specification is an important tool to facilitate customs and tax processing for e-commerce imports from non-EU countries presented by postal, parcel and express carriers and becomes highly relevant with the run out of the de minimis rule for VAT by the end of 2020 in the European Union (see Chapter 3.5 for more detail). Customs and tax authorities require a unique identifier (as defined in the harmonised parcel label) for each parcel that is linked to details of the shipment (e.g. the value and the nature of the shipment). While this is already common practice for shipments delivered by parcel & express carriers this is not yet applied by USPs in their role as designated postal operators in the UPU system. In cooperation with the UPU, CEN is working on the definition of the necessary data set in order to digitalise the contents of the paper-based UPU forms CN22/CN23 currently used by USPs for cross-border shipments including merchandise from and to non-EU countries.

3.5 Conclusions

Growth in European parcel markets is driven by B2C e-commerce

European parcel markets are growing, driven by growth in the B2C segment and C2X segments (including returns from consumers to e-retailers). Since 2013, total revenues increased by 4.3% per annum, reaching EUR 64.5 billion in 2017, and are expected to reach around EUR 73 billion in 2020. Given the growth in the B2C and C2X segments alongside the stagnation in the B2B segment, the composition of total revenues changed substantially. Furthermore, the B2C segment is expected to account for around 35% of total parcel revenues in 2020.

Based on publicly available data, we estimate that around 9.4 billion parcels, plus at least 1.7 billion small packets were delivered in Europe in 2017. Domestic parcel markets within the EU differ considerably in size (measured by the average number of parcels per capita), which indicates the varying stages of development in delivery services between these Member States. While the Western and Northern EU MS have high numbers of parcels per capita, and consequently a large share of B2C parcels, these figures are significantly lower in many Eastern and Southern EU MS. However, the Eastern and Southern European parcel markets exhibit notably higher growth rates than the more mature markets.

Time-series data on the quantity of parcels and the revenue it generates, as well as data on volume per weight class, are rather incomplete at Member State level. The available data indicate that: (1) growth in the number of parcels has generally outpaced growth in

revenue resulting in declining average revenue per parcel (e.g. in Germany, Poland, Spain and the UK); and (2) items weighing less than two kilograms constitute a significant share of total parcel volumes.

Available data on cross-border parcels are limited and underestimate actual volumes by definition

Unfortunately, there are no accurate statistics on cross-border parcels in Europe and the available data only provide indications on the developments in cross-border B2C parcel markets. Moreover, the data on cross-border parcels as published in statistics and market reports underestimate the actual volume of cross-border parcels by definition: Published data on cross-border items usually exclude parcels resulting from direct injection, while small packages in the letter post stream are typically not (fully) captured. However, different sources suggest that growth in cross-border parcel volumes is outperforming growth in domestic e-commerce markets. Furthermore, the major flows of cross-border parcels and small packages within Europe are mainly either between big e-commerce markets like Germany and the UK and other Member States, or between neighbouring countries with close economic relations, e.g. the Nordic countries (Denmark, Norway, Sweden and Finland).

The competitive landscape for cross-border B2C delivery services has become more diverse

Cross-border B2C delivery services have become more diversified reflecting the varying needs of e-retailers depending on size, weight, urgency and value of cross-border purchases.

International integrators like UPS and DHL Express increasingly target e-retailers to facilitate cross-border deliveries for time-critical, high-value e-commerce purchases within Europe, as well as between Europe and Asia or the United States.

Road-based B2B parcel networks have been expanding in conjunction with domestic and cross-border B2C e-commerce deliveries. While Royal Mail-owned GLS follows a more cautious expansion strategy, La Poste-owned Geopost has launched a dedicated strategy for B2C cross-border deliveries under the international brand DPD group, and Deutsche Post DHL launched its separate network, DHL Parcel, with focus on cross-border B2C e-commerce delivery services. These networks have own operations in most European countries and cooperate with delivery partners in various countries, typically with USP s.

Moreover, existing B2B delivery networks are transforming into B2C networks and domestic carriers expand their activities to neighbouring countries. Furthermore, new B2C networks are also emerging that are driven by either established carriers (e.g. cooperation of USP s via IPC Interconnect) or new players (e.g. Amazon EFN). As a result of growth in cross-border e-commerce, regional delivery clusters and carriers with European-wide delivery services will further develop into a single market for delivery services.

Universal service providers play a significant role in domestic and cross-border B2C delivery

In general, USP s have a first mover advantage when it comes to B2C deliveries due to their nationwide delivery networks for letters and parcels and their dense networks of postal outlets.

USP s are by far the leaders in cross-border deliveries of letter post items (including small packages). Sending merchandise by small package is a low cost alternative to more expensive cross-border parcel delivery services, particularly for light-weight and low-value goods. Among domestic and cross-border parcel delivery services, USP s in Western and Northern EU MS play a significant role while many of their counterparts in Southern and Eastern EU MS have a much smaller market share in parcel deliveries.

All USP s have put in significant efforts to participate in the growth of B2C e-commerce as an attempt to offset declining letter post volumes, at least in their domestic markets. Additionally, USP s follow individual strategies to participate in the growth of cross-border e-commerce, for example, by taking part in IPC's Interconnect programme that aims to facilitate cross-border parcel shipping and returns between USP s. The three largest USPs (Deutsche Post DHL, La Poste and Royal Mail) have established European-wide parcel networks with dedicated domestic and cross-border B2C delivery services in many Member States. Some smaller USP s have expanded their delivery networks to neighbouring countries, either by launching own regional networks or by acquiring operators in other countries, e.g PostNL, Omniva, PostNord and Itella. Additionally, some USP s have dedicated subsidiaries or are active in joint ventures that handle international mail and small parcels which also act as a 'gateway' to Europe for Chinese e-retailers, e.g. PostNL and Omniva.

...but this is independent of universal service obligations

All USPs are subject to the USO, usually by designation. The USO defines the level of universal postal services that must be provided and which specific postal services are considered as universal postal service. The first aspect basically means that the USP s ensure nationwide delivery at five days per week and that postal users have nationwide access to postal services (e.g. via postal outlets). Furthermore, Member States define the level of the minimum quality at which universal services have to be provided (e.g. density requirements for access points, number of delivery days per week and exceptions from nationwide delivery). Those service standards for the delivery of parcels and packets generally have not changed much since the adoption of the Postal Services Directive in 1997 (or later for the new Member States).

Almost all USPs have expanded service levels of universal service products, and introduced higher-quality products (shorter transit time, tracking, etc.) in order to meet demands from e-retailers, and in order to compete successfully for market volumes. In many Member States, USPs added tracking option to parcel delivery products, in some Member States even for standard consumer parcels. USPs launched new delivery

services and improved the quality of service for existing delivery services. They expanded their access networks by additional parcel shops and parcel lockers that allow the pick-up and the drop-off of parcels and small packets. These considerable service improvements were the result of market forces rather than regulatory standards for universal service.

Most e-commerce parcels are usually outside the scope of USO

The scope of products that are legally included in the universal service varies across Member States, e.g. regarding weight limits, quality requirements, and types of collection (single-piece or bulk). In most Member States, domestic and cross-border parcel services for businesses are outside the universal service. The same is true for small packets sent by businesses (including e-retailers) in many Member States. Although the vast majority of e-commerce items is sent in bulk (and therefore is outside the USO), micro e-retailers and consumers occasionally send goods as single-piece items. Only in those cases, universal service products are used by e-retailers, or by consumers for returns. Consequently, the role of universal service parcels for e-commerce is not very significant (neither for domestic nor outbound cross-border services).

The situation is different for a small, but growing segment: imports of small packets with e-commerce items from extra-EU countries, notably from Asia. These packets are generally imported under the UPU terminal dues systems, and often at prices significantly below rates for domestic service (see Chapter 6). Therefore, these products used by Asian retailers for imports to the EU may not be offered without a universal service obligation, or only at higher prices.

International carriers are challenged by different national regulatory requirements in the Member States

Member States apply very different criteria for defining universal service and express delivery. Consequently, international parcel carriers that expand operations to other Member States, may be considered, and regulated as, either universal parcels services or as (non-USO) express services in different Member States.

In the vast majority of Member states, NRAs have regulatory competences to deal with complaints, and USPs are obliged to publish information on complaint handling procedures.

European parcel carriers delivering e-commerce items across borders do not seem to be treated substantially different from domestic carriers as regards authorisation procedures and financial contributions. However, there are some Member States where authorisation procedures are burdensome for carriers, particularly small carriers.

While a third of EU and EEA Member States has chosen not to require contributions to NRA funding from carriers, carriers contribute to a compensation fund to finance USO net costs in very few Member States.

Carriers increasingly target small and medium-sized e-retailers as a customer group

National and international carriers increasingly seek not only to attract large senders but micro- and small e-retailers by facilitating access to their services. They develop and introduce web portals to provide e-retailers better access to their services. Some parcel operators provide detailed information and research papers to support e-retailers in broadening their offers (and advertising their delivery solutions), while other carriers develop new products and introduce new services tailored for e-retailers' needs.

For example, USPS have developed new products targeting the significant share of light-weight (cross-border) e-commerce items. These products provide a low cost alternative to similar sized parcel products for domestic and cross-border deliveries and include (light) tracking and insurance options to better satisfy e-retailers' and consumers' demands.

Even small e-retailers have access to business tariffs for e-commerce deliveries

Small and medium-sized e-retailers are often eligible for business accounts that provide access to lower shipping rates since volume thresholds for business accounts can be rather low. The discounts usually vary with the size of the e-retailers and their annual volumes, and the little information available indicate that even small to medium e-retailers are offered services at prices significantly below the published list prices for single-piece items.

Choice and quality of delivery services for (cross-border) B2C e-commerce is increasing

In the Northern and Western EU MS with a long-lasting tradition in distance sales, domestic B2C parcel delivery services have already been in place for decades. Growing B2C e-commerce, with its much more customer-centric approach (compared to the traditional distance selling business), propels carriers, USPS, as well as parcel and express carriers, to develop: (1) more recipient-friendly delivery and return services; (2) IT solutions that allow a smoother integration of their services in e-commerce applications of e-retailers; and (3) appropriate collection services for SME e-retailers with late cut-off times.

In Member States without such a tradition, comparable B2C delivery infrastructure had not been developed in the past but is now emerging in line with growing e-commerce (like in many Eastern and Southern EU MS). In these Member States, USPS and/or local carriers that are traditionally serving B2B markets, now expand into domestic B2C e-commerce delivery services.

Carriers invest in infrastructure facilities and transform the delivery value chain

With growing (cross-border) B2C e-commerce volumes in all Member States, many carriers are heavily investing in improved sorting, transport and delivery capacities.

Further investments in the backbone of successful carriers will transform the structure from a hub-and-spoke to a web structure. The web structure results in an increasing number of local delivery depots primarily located near densely populated areas with high delivery volumes. Additionally, the number of warehouses will increase particularly in high-demand areas. We expect that these trends will lead to more vertical integration within the e-commerce supply chain through either downstream integration from e-retailers to provide tailored delivery services, or upstream integration from carriers to offer e-fulfilment and warehousing services to e-retailers.

Last mile delivery will become more diverse particularly in urban areas

The growth in B2C e-commerce will likely not only increase the number of consumers buying online, but also the frequency of online shopping and the range of product categories purchased online. This will inspire a wider variety of delivery options in the last mile, particularly in urban areas, and will go hand in hand with an increasing number of local operators in the parcel delivery market. This development will be driven by customer convenience, specific delivery requirements related to product categories, and cost control by carriers. The general trend that logistics facilities are located nearer to recipients of e-commerce orders, alongside the increasing number of deliveries in urban areas, will foster more multi-tiered distribution systems, i.e. delivery depots are complemented by smaller logistic centres (micro hubs) in the city. However, a similar trend is less likely to follow in rural areas mainly due to lower population density and thus longer distances between delivery stops. We expect that quality of service will improve in rural areas, more specifically delivery times should reduce. However, the choice between different delivery options in terms of location, time and flexibility will most probably remain smaller in rural areas than in urban areas.

Technological innovations will further shape the delivery of e-commerce items

Big data analysis allowed for significant improvements in the efficiency of the e-commerce supply chain and are now migrating into the delivery value chain. This enables promoting and allowing the development of increasingly flexible delivery models with flexible routes that can even be changed last minute by recipients' preferences. Carriers and e-retailers are testing autonomous and semi-autonomous delivery robots and drones as additional tools for last mile deliveries which are considered important complementary elements to existing delivery solutions in the next five to ten years.

4 Consumers' experiences

4.1 Introduction

In the academic marketing literature the term 'service quality' is generally defined as the result of consumers' evaluation processes, in which consumers compare their expectations of what they think a service offered should be like and their actual perception of the service as they experience it.²⁸⁸ To analyse the service quality of delivery-related aspects of online purchases in Europe WIK conducted a survey among online shoppers in 30 countries (EU-28, Iceland and Norway).²⁸⁹ The main objective was to identify potential differences in service quality levels regarding delivery- and return-related aspects between domestic and cross-border online purchases. For this purpose, we selected 26 delivery- or return-related aspects that are tested in the consumer survey. These aspects are allocated to seven dimensions (information on delivery and return conditions before purchase, information on the status of delivery after purchase, charges for delivery and return, delivery time, delivery location, delivery quality, management of returns).²⁹⁰

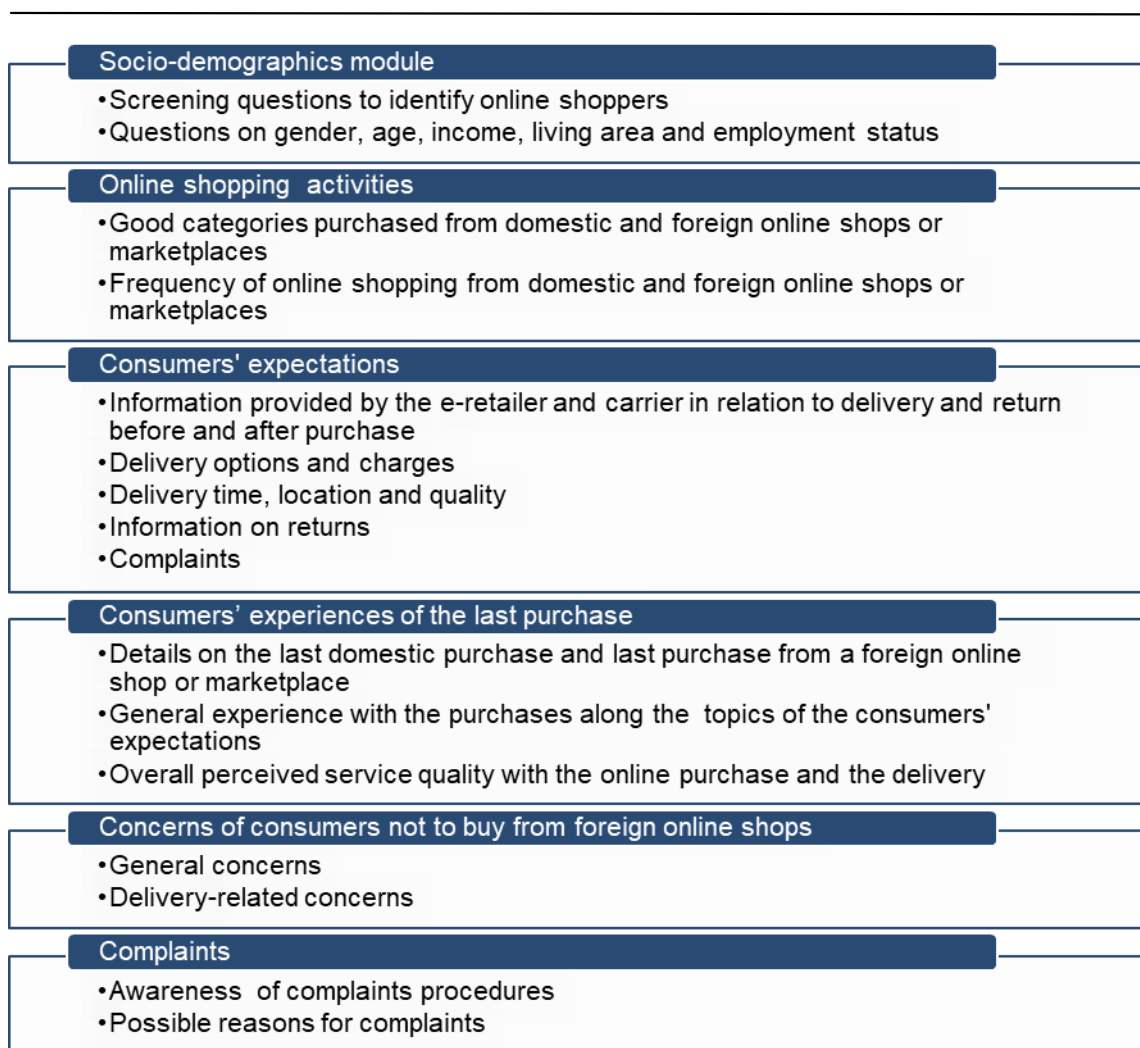
Furthermore, the survey sought to collect data about consumers' general online shopping behaviour and to identify consumer's general concerns and awareness of complaint procedures when purchasing online. Figure 39 provides an overview of the structure of the consumer survey.

288 See Parasuraman, A; Zeithaml, V.A & Berry, L.L. (1985), "A Conceptual Model of Service Quality and Its Implications for Future Research", *The Journal of Marketing*, Vol. 49, No. 4, p. 41-50; Parasuraman, A; Zeithaml, V.A & Berry, L.L. (1988), "SERVQUAL: A Multiple-Item Scale for Measuring Consumer Perceptions of Service Quality", *Journal of Retailing*, Vol. 64, No. 1. p.12-40. See Appendix B for more information on the methodology.

289 EU-28 Member States, and EEA Member States Norway and Iceland. Liechtenstein was not included in the survey because of the lack of adequate consumer panels.

290 For more information see Appendix B.

Figure 39 Elements of the WIK Consumer Survey



Source: WIK-Consult

We implemented the consumer survey with the support of a professional international market research firm providing us with access to representative online panels in the 30 target countries addressing the (online) population of the respective countries aged 18 years and older.²⁹¹ For each country, the official language(s) were used (in total 24

²⁹¹ It should be noted that the survey is not entirely representative for the online shopping population itself. One pragmatic way to produce representative results in practice is to apply quotas in the sampling process, i.e. to specify the number of respondents for each sub-group (e.g. by gender and/or by age groups). While this data is available for the total population, it is not available for the target groups in question (domestic and cross-border e-shoppers). Only in case that all individuals in a country are e-shoppers or the structure of e-shoppers actually reflects the structure of the population regarding gender, age and other relevant parameters, the sample could be representative for the total population. That said, the survey results are not representative for the e-shopper population in a country. However, they help to get indications on expectations on delivery aspects related to domestic and cross-border e-commerce purchases for each sub group.

languages). Between June and August 2018 a total of 17,037 interviews were completed. The exact sample size in each country is summarised in Table 13.

Table 13 Sample sizes by country

Country	Sample Size	Country	Sample size
Austria (AT)	518	Iceland (IS)	57
Belgium (BE)	521	Italy (IT)	1,040
Bulgaria (BG)	521	Lithuania (LT)	523
Cyprus (CY)	72	Luxembourg (LU)	102
Czech Republic (CZ)	522	Latvia (LV)	514
Germany (DE)	1,049	Malta (MT)	102
Denmark (DK)	524	Netherlands (NL)	524
Estonia (EE)	517	Norway (NO)	524
Greece (EL)	527	Poland (PL)	1,049
Spain (ES)	1,051	Portugal (PT)	518
Finland (FI)	520	Romania (RO)	519
France (FR)	1,045	Sweden (SE)	522
Croatia (HR)	523	Slovenia (SI)	520
Hungary (HU)	524	Slovakia (SK)	521
Ireland (IE)	519	United Kingdom (UK)	1,049

Source: WIK-Consult

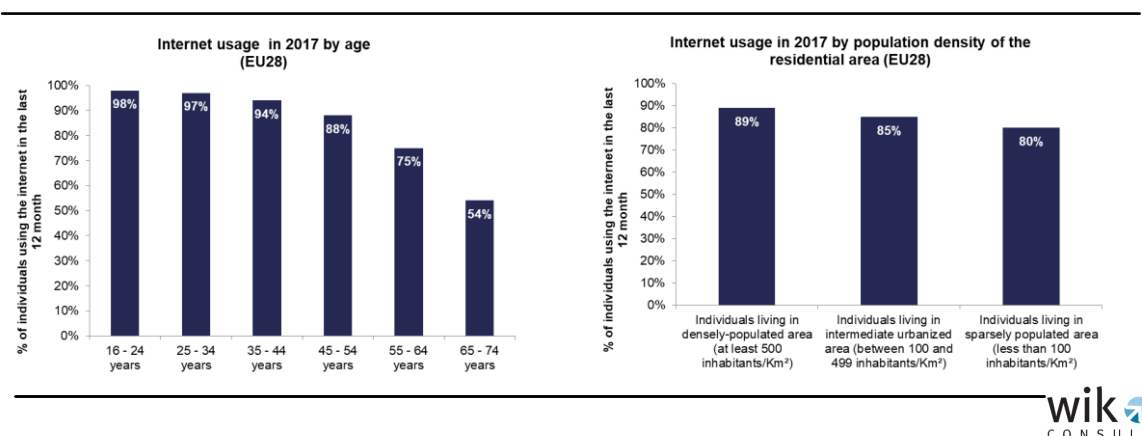
4.2 Online shopping intensity and preferences across Europe

4.2.1 The share of online shoppers is continuously growing

Since 2000 digitisation gained significant momentum. Improvements in broadband infrastructure is reflected in a steadily increasing share of individuals using the internet. In the EU internet usage increased from 77% to 85% of all individuals. While the shares have reached levels well above 90% in Northern European countries (Denmark, Finland, Iceland, Norway and Sweden) and half of the Western EU MS (Germany, Luxembourg, the Netherlands and the UK), many Southern and some Eastern EU MS still show average levels below 80%.²⁹² Moreover, the share of individuals using the internet varies with age and residential area: the younger the individuals and the more densely populated the areas, the higher the share internet users (Figure 40).

²⁹² Eurostat [isoc_ci_ifp_iu], retrieved on 20 June 2018.

Figure 40 Share of individuals using internet in the last 12 months by age and population density of the residential area (EU-28, 2017)



Source: WIK-Consult based on Eurostat, [isoc_ci_ifp_iu] extracted on 20 June 2018.

However, there are some exceptions to these generalised findings. In countries with overall high levels of internet usage like the Northern EU MS, Luxembourg and the Netherlands even more than 90% individuals aged between 55 and 65 have used the internet in the last 12 months.²⁹³ Moreover, in many Northern EU MS, the internet penetration in rural, sparsely populated areas²⁹⁴, is almost as high as in urban, densely populated areas^{295, 296}

In general, those high levels of internet use are linked to higher levels of e-commerce (Figure 41). While 60% and more individuals have purchased online in the last 12 months in all Northern and most Western EU MS (except for Ireland), most Eastern and some Southern EU MS (Malta and Spain) have reached levels between 40 and 60%. In the remaining Southern EU MS and three Eastern EU MS the share is still below 40%.²⁹⁷ This variety indicates that there are still different stages of developments in the demand for online purchases in Europe with internet access or usage being one factor determining the demand. However, it may not be the only factor since as Figure 41 indicate that not every consumer who uses the internet does shop online.

²⁹³ Eurostat, [isoc_ci_ifp_iu] retrieved on 20 June 2018.

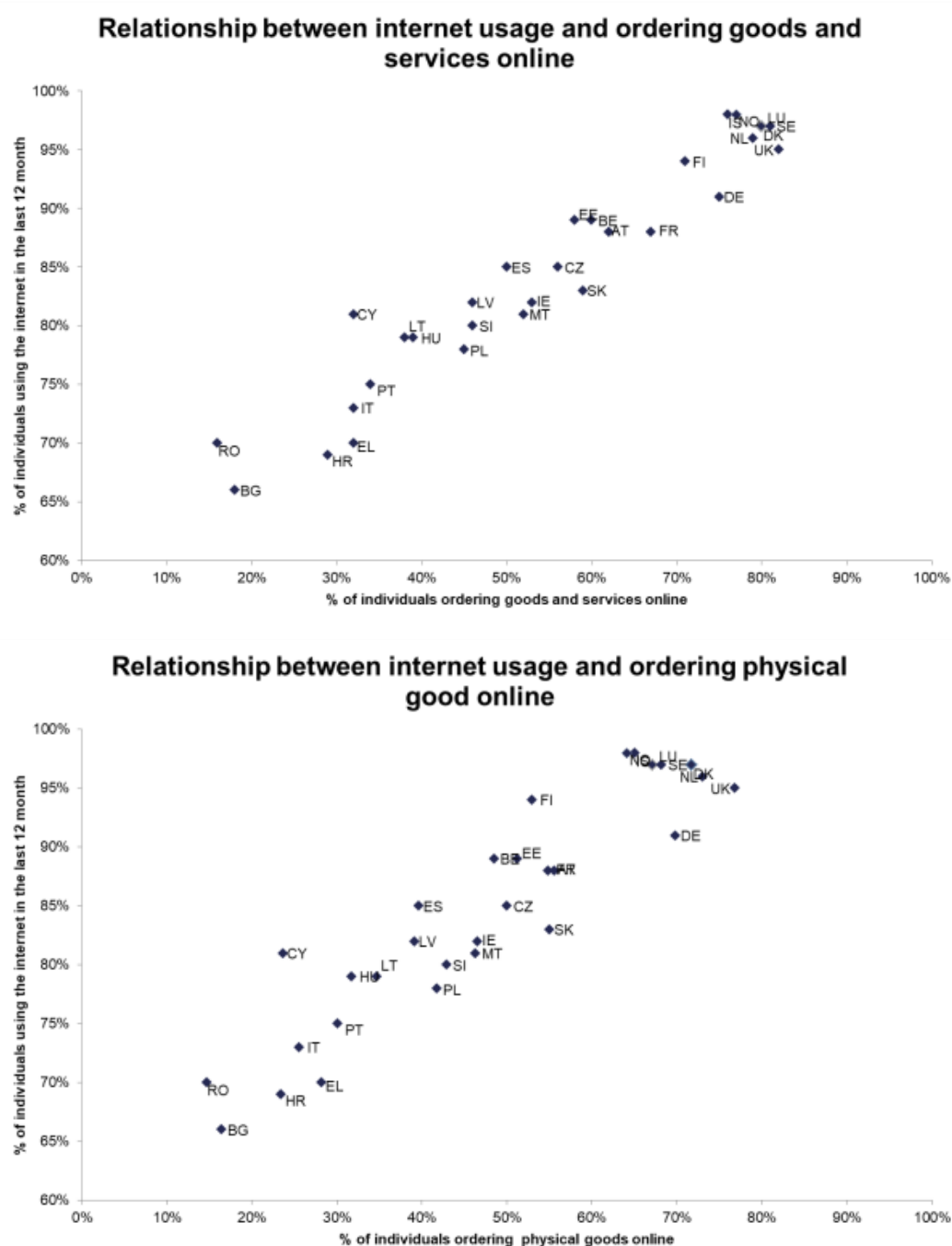
²⁹⁴ Definition according to Eurostat: Individuals living in sparsely populated area (less than 100 inhabitants/km²).

²⁹⁵ Definition according to Eurostat: Individuals living in densely-populated area (at least 500 inhabitants/km²).

²⁹⁶ Eurostat, [isoc_ci_ifp_iu] retrieved on 20 June 2018.

²⁹⁷ Eurostat, [isoc_ec_ibuy] retrieved on 20 June 2018

Figure 41 Share of individuals using internet and buying online goods and services in the last 12 months (EU-28, 2017)

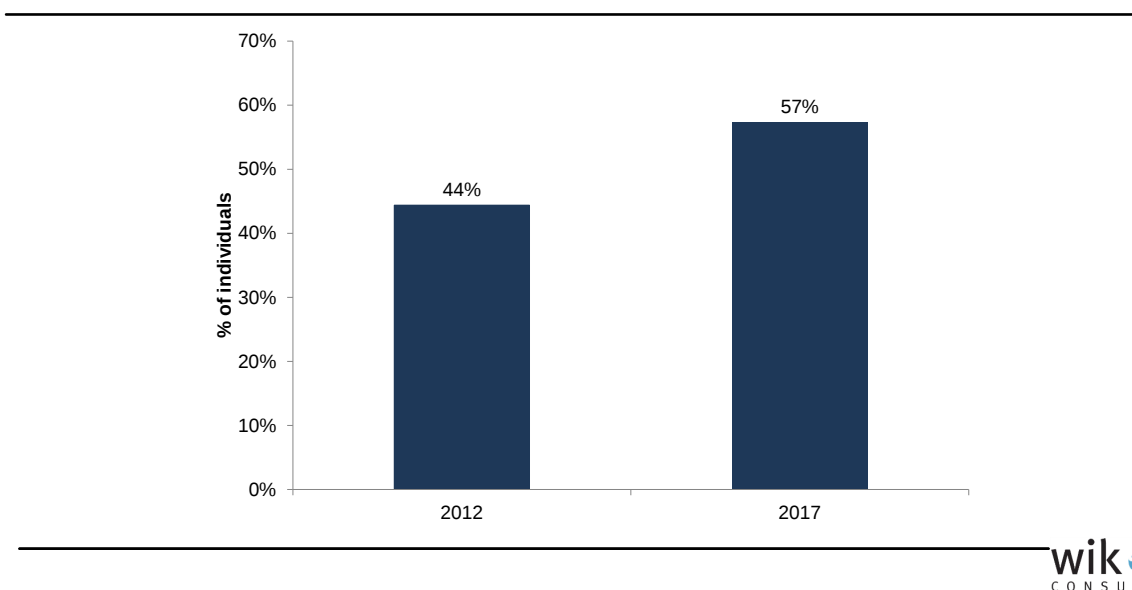


Source: WIK-Consult based on Eurostat, [isoc_ci_ifp_iu] and [isoc_ec_ibuy] , extracted on 20 June 2018.

4.2.2 Offline shoppers do not trust online shopping

Overall, the share of individuals buying online has been continually increased across the EU (Figure 42). In some MS the share of individuals has significantly increased, particularly in the Czech Republic, Estonia, Slovakia and Spain. In Estonia, the share has nearly tripled, from around 20 to nearly 60% since 2013.²⁹⁸

Figure 42 Share of individuals buying online goods and services (EU-28)



Source: WIK-Consult based on Eurostat, [isoc_ec_ibuy], extracted on 20 June 2018.

In 2017, about 60% of all individuals in Europe shopped online and 68% of all individuals using the internet.²⁹⁹ Even though, internet usage can be considered as essential factor determining the actual share of e-shopper, there are several other reasons for consumers to not shop online, as a large share of internet users still refrain from online shopping.

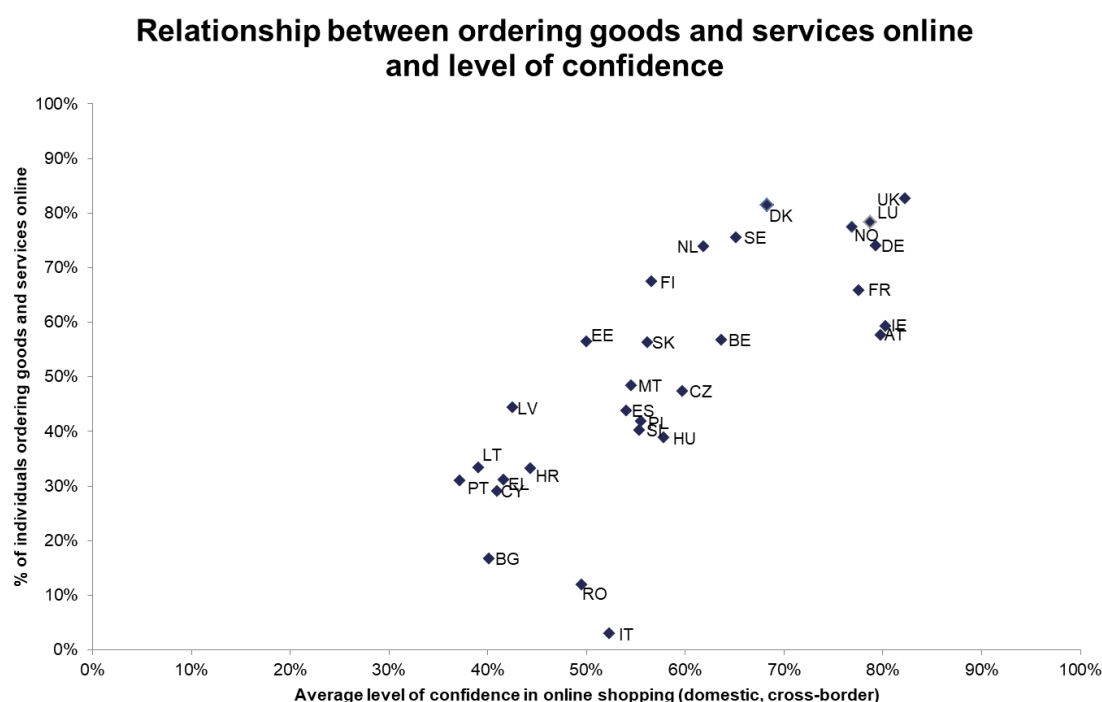
The GfK (2017)³⁰⁰ identified consumers' confidence in online purchases as a significant barrier to the growth of online purchases. Low confidence in online transaction is generally accompanied with few online shopping activities whereas consumer with high levels of confidence regarding online shopping shop online more frequently. Overall, consumers in Europe have a confidence level between 58 and 72% in cross-border and domestic online shopping. The GfK (2017) found that especially Northern and Western EU MS have very high levels of confidence in domestic and cross-border online purchases. Those MS also have a large share of online shoppers compared to MS in the south or east.

²⁹⁸ Eurostat, [isoc_ec_ibuy], retrieved on 20 June 2018.

²⁹⁹ Eurostat, [isoc_ec_ibuy], retrieved on 20 June 2018.

³⁰⁰ See GfK (2017), Consumers' attitudes towards cross-border trade and consumer protection 2016.

Figure 43 Relationship between ordering goods and services online and level of confidence (2016)



Source: WIK-Consult based on Eurostat, [isoc_ec_ibuy] extracted on 20 June 2018; and GfK (2017).

Confidence is strongly associated with trust – trust in the e-retailer, in consumer protection, in product safety and environmental claims. All of those categories significantly influence confidence and likelihood of the ultimate shopping decision. For example Cho et al. (2006) found that trust in e-retailer and online security and privacy have an impact on online shopping hesitation.³⁰¹ Furthermore, some authors argue that not being able to physically check the quality of the product and having no control over the safety of sensible data send when shopping online, create a type of risk some consumers are not willing to take (see Lee & Turban 2001³⁰², Perea et al. 2004³⁰³).

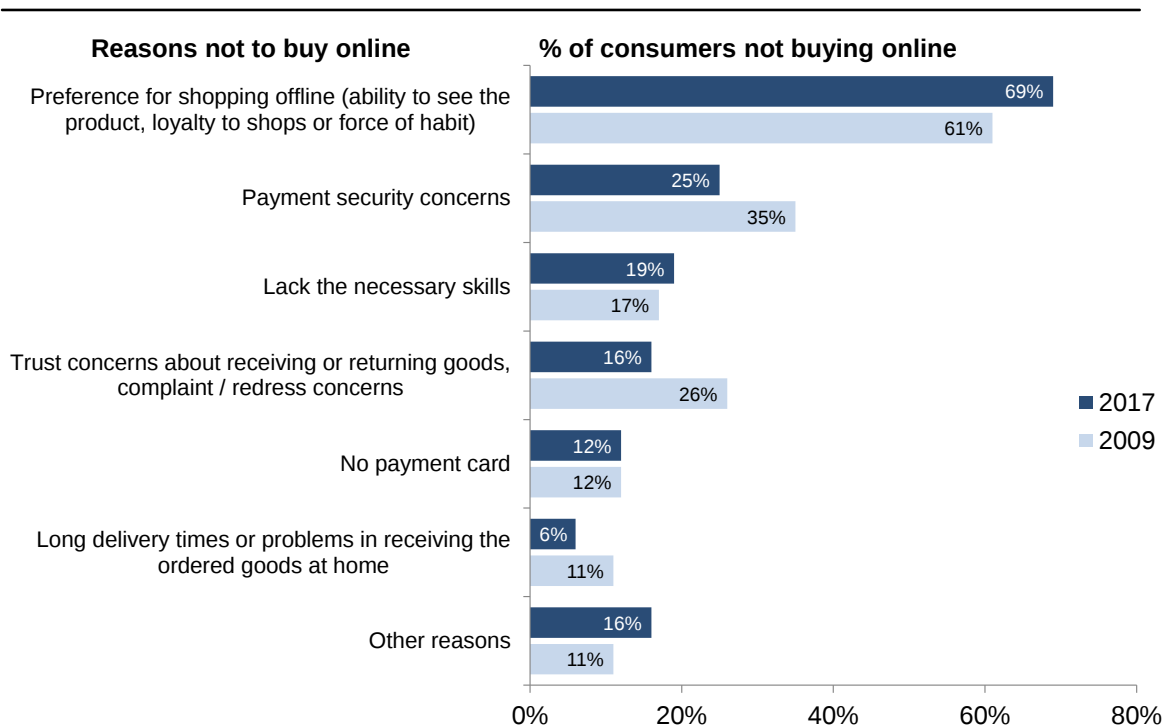
Survey data provided by the Eurostat supports this hypothesis (see Figure 44). Three of the most frequently stated reasons for not buying online are the (1) ability to see the product when shopping offline, (2) payment security concerns and (3) trust concerns.

³⁰¹ See Cho, C.-H.; Kang, J. & Cheon, H.J. (2016), "Online Shopping hesitation", *Cyber Psychology & Behavior*, Vol. 9, No. 3, pp. 261-274, p.271.

³⁰² See Lee, M. K. O. & Turban, E. (2001), "A Trust Model for Consumer Internet Shopping", *International Journal of Electronic Commerce*, Vol. 6, No.1, pp.75-91, p.77.

³⁰³ See Perea y Monsuwé, T.; Dellaert, B.G.C & de Ruyter, K. (2004), "What drives consumers to shop online? A literature review", *International Journal of Service Industry Management*, Vol. 15, No. 1, pp.102-212, p. 114.

Figure 44 Reasons for not shopping online (EU-28)



Source: WIK-Consult based on Eurostat, [isoc_ec_inb], extracted on 20 June 2018.

Interestingly, trust and security concerns are decreasing since 2009, which may indicate that online shops become more trustworthy. For most consumers refraining from online shopping, however, it is a personal choice not to shop online, because they simply prefer to shop offline in stores.

Similar results were found by Swinyard and Smith (2003).³⁰⁴ Their results suggest that fear, especially with regards to sending credit card information via the Internet, is the main reason for not buying online. Moreover, the authors find that online shoppers and online non-shoppers are two different types of people. They differ with regards to age, income, education, computer literacy, internet-related behavior and in their degree of fearfulness.

4.2.3 The majority of consumers still shop domestically or in neighbouring countries

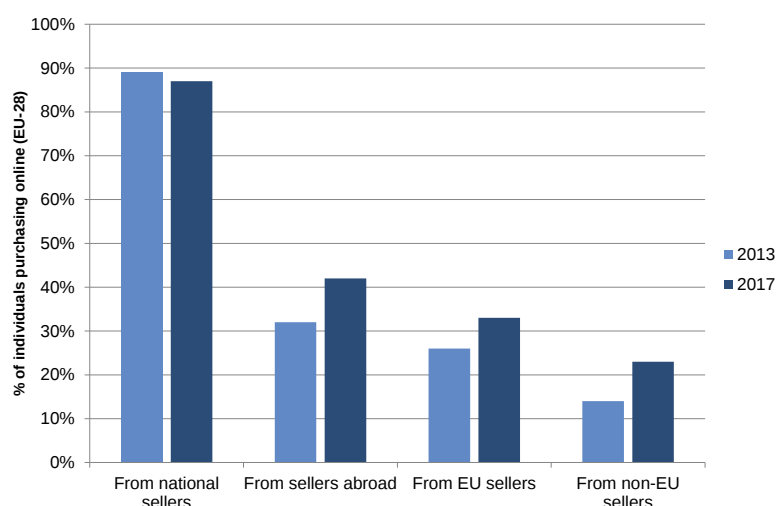
To date, online shoppers in the EU MS are generally more likely to have purchased items from online shops or seller on online marketplaces which are located in the country they currently live in than from another country. As consumers are likely more familiar with their

³⁰⁴ See Swinyard, W. R. & Smith, S. M. (2003), "Why People (Don't) Shop Online: A Lifestyle Study of the Internet Consumer", *Psychology & Marketing*, Vol. 20, No. 7, pp.567–597.

rights and security standards in their own country than the ones in other countries, they may prefer domestic purchases over cross-border purchases.³⁰⁵ Based on our survey, 87% of online shoppers across Europe stated that they have purchased an item from a domestic retailer³⁰⁶ within the last 12 months, whereas only 55% of online shoppers have bought an item from abroad.

However, historical data indicates a slow shift from national purchases to cross-border purchases in recent years (Figure 45). While the share of individuals purchasing online from national sellers has stagnated between 2013 and 2017 the share of individuals purchasing from sellers abroad has significantly increased from 32% to 42% of all individuals. Moreover, EU consumers apparently become increasingly confident in ordering from non-EU countries in recent years: The share increased from 14% to 23% in the same period and grew therefore more percentage points than the share of individuals purchasing from other EU MS. Nevertheless, purchases within the EU is still more important than purchases from outside the EU, today.

Figure 45 Share of individuals purchasing online from abroad (EU-28)



Source: WIK-Consult based on Eurostat, [isoc_ec_ibuy], extracted on 20 June 2018.

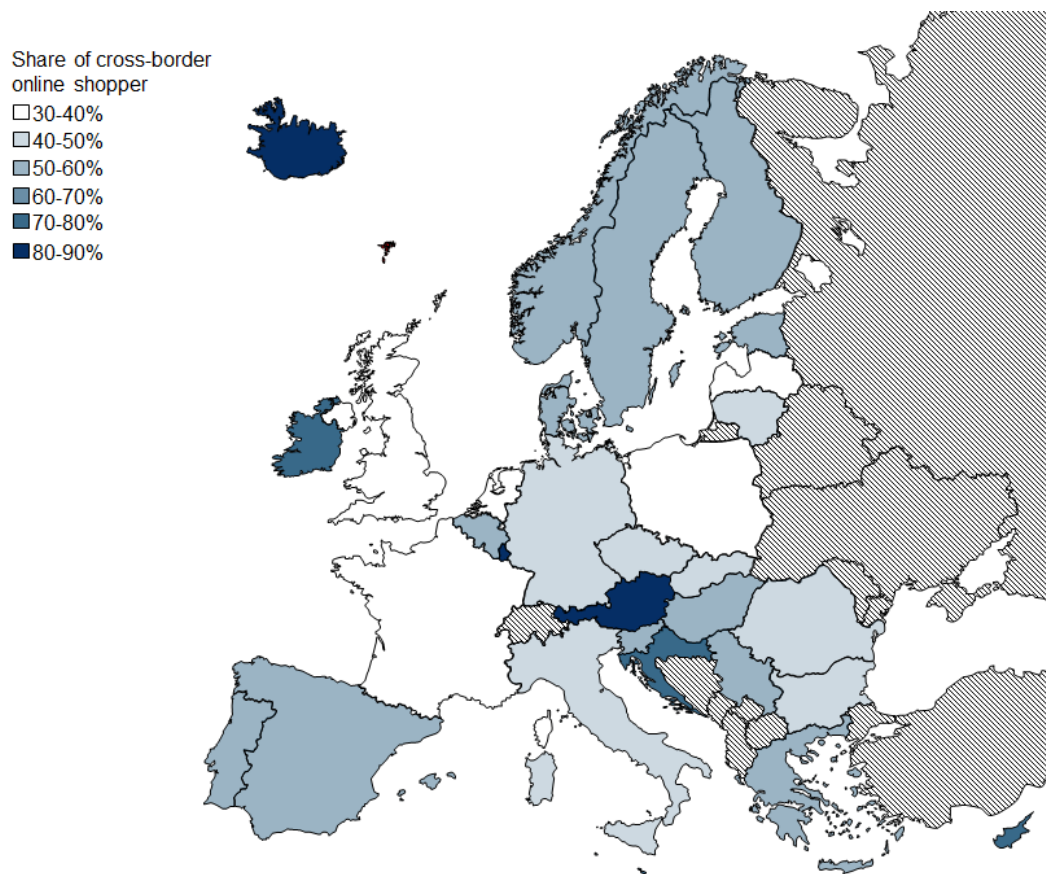
There is a wide variation in the share of cross-border online purchase at the country level (Figure 46). Countries with small e-commerce markets have a high share of consumers buying cross-border. In Austria, Iceland, Ireland, Cyprus and Croatia, more than 70% of

305 See also ANEC (2015), Cross-border Online Shopping within the EU, Section 5.4. The study highlights the importance of trust in shopping online and that consumers' trust in shopping online in another MS (and even more in a country outside the EU) is lower than in the own country.

306 A domestic retailer in our survey was defined as an online shop or seller with the same top-level domain as the country, in which the respondent is currently living. A domestic or national purchase in our survey was defined as an online purchase from an online shop or seller on an online marketplace with the same top-level domain as the country, in which the respondent is currently living in. Contrarily, a cross-border purchase was defined as purchases from an online shop or seller on an online marketplace with another top-level domain than that of the country the respondents is currently living in.

online shoppers have purchased cross-border within the last 12 month. But also, in general, more than 75% of online shoppers in each of these countries stated that they have bought a product from a local retailer within the same period of time. The share of cross-border shopper in Malta and Luxembourg is even higher. Both MS are also characterised by a small domestic e-commerce market and even the share of only online cross-border shoppers in both MS exceeds 50% by far, while only a few consumers shop domestically. Contrarily, in MS with rather large e-commerce markets like Poland, France and the United Kingdom, the share of online shoppers only purchasing domestically is as high as 70%. In those MS the share of only online cross-border shoppers is below 5%. The strongest predominance of domestic purchases is found in the Netherlands. Here, 97% have purchased online from a domestic source within the last 12 months, but just 33% have purchased items from abroad.

Figure 46 Share of consumers purchasing cross-border within the last 12 month



Source: WIK consumer survey. N=8,404.

In line with the data provided by Eurostat, our results further underscore the importance of inter-European cross-border purchases of consumers living in Europe, today. According to the WIK survey results, more than half of the most recent cross-border purchases registered in our sample were purchased from sellers located within the 30 countries

selected for this study. Moreover, consumers in most of the countries buy mainly from e-retailers located in countries adjacent to their home country (Table 14).

Table 14 WIK Consumer Survey: Who purchases where?

Ordered from a website in	By e-shoppers located in		
	TOP1	TOP2	TOP3
UK	MT	IE	CY
DE	LU	AT	SI
FR	BE	LU	PT
ES	PT	EL	IT
IT	FR	EL	DE
CZ	SK	HU	PL
NL	BE	DE	LU
SE	DK	FI	NO
PL	RO	LT	LV
AT	DE	SI	RO
BE	NL	FR	LU
DK	NO	SE	IS
BG	EL	RO	CY
EL	CY	BG	IS
FI	EE	LV	NL
HU	RO	SK	HR
EE	LV	LT	FI
SK	HU	BG	CZ
RO	BG	HU	NL
LT	IS	FR	RO
PT	ES	DE	EE
IE	LV	MT	IT
LU	FR	BE	UK
NO	DK	LT	PL
CY	LV	DK	IT
LV	IS	LT	EE
HR	DK	RO	BG
SI	IS	HR	RO
IS	UK	NL	LV
MT	FR	UK	DE
CN	CZ	HU	LT
US	UK	SE	NO

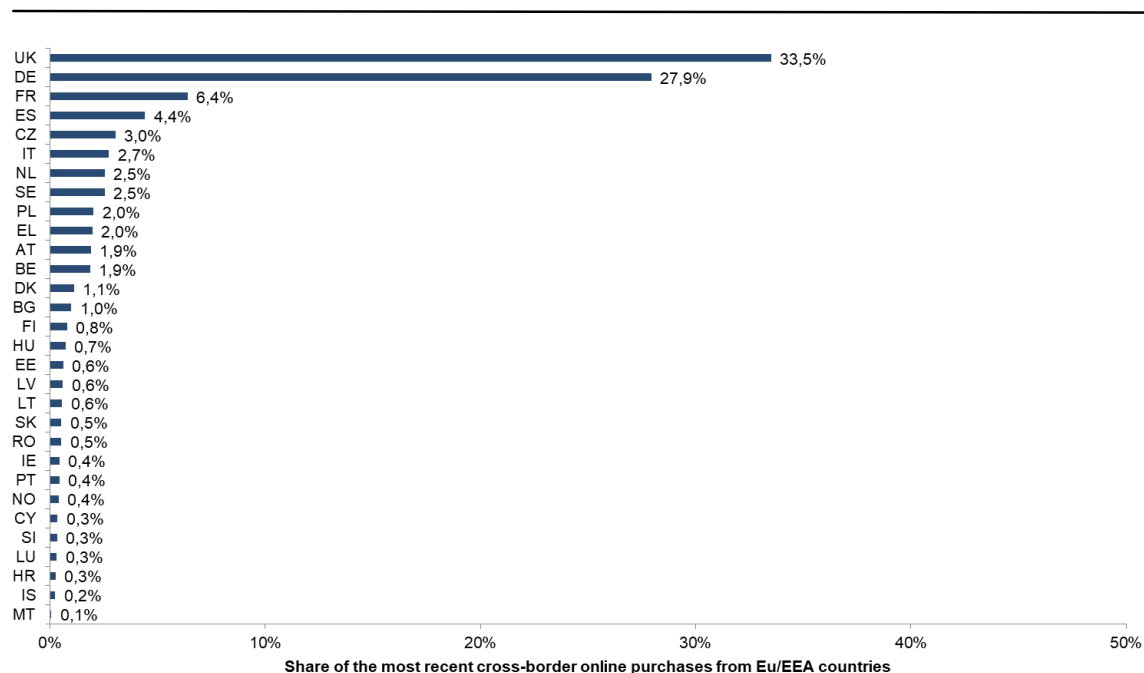
Source: WIK consumer survey (2018)

Note: Countries adjacent to the home country are highlighted in grey.

Regarding preferences for online purchases within the EU, Germany and the UK are the most preferred European countries for cross-border online purchases. In our sample, about two thirds of the most recent cross-border purchases within the EU came from the

United Kingdom or Germany (Figure 47). Studies conducted by the DPDgroup (2017)³⁰⁷ and IPC (2018)³⁰⁸ show similar results. Both studies indicate that the most preferred European countries for cross-border online purchases are the United Kingdom and Germany.

Figure 47 Share of most recent cross-border purchases from EU MS by country



Source: WIK consumer survey. N=8,404.

The strong role that countries outside of Europe play for cross-border shipments is exemplified by China. Sellers from China contribute about a third of the most recent purchases and corresponding shipments to the 30 surveyed countries.

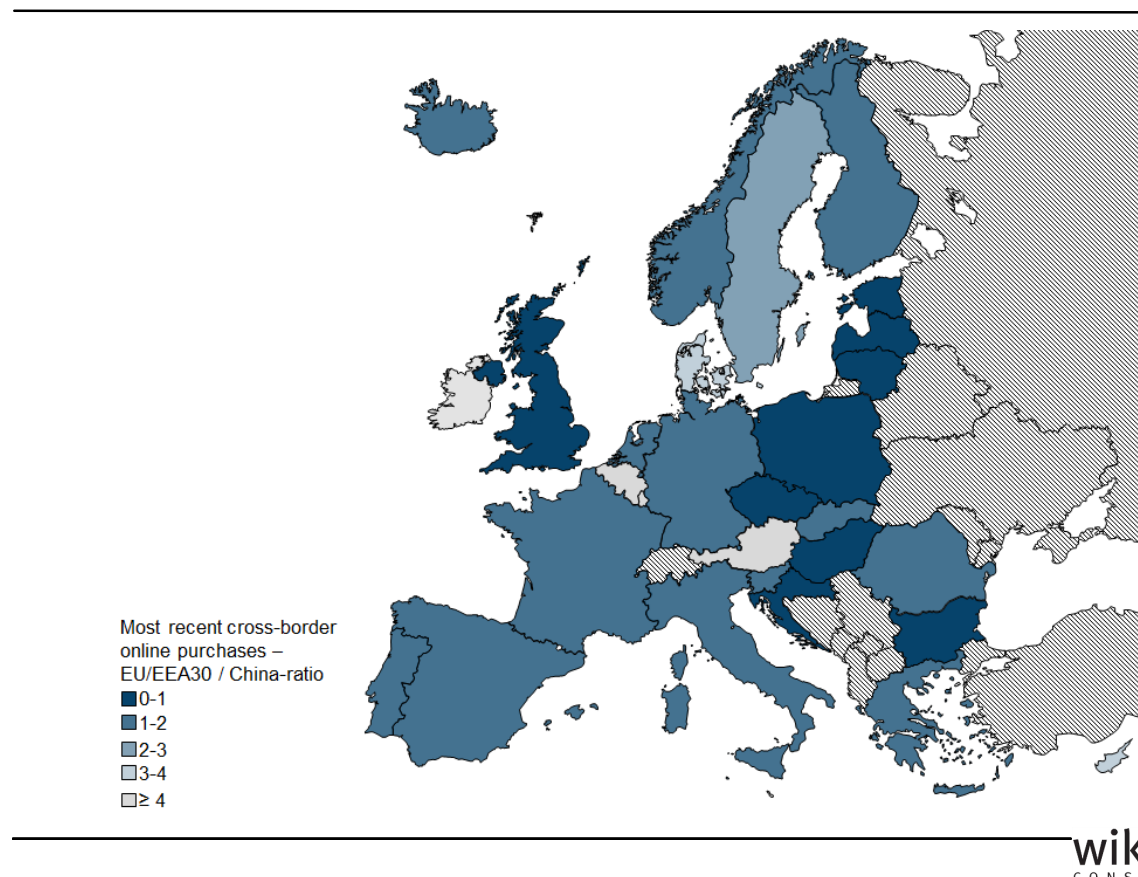
There are some regional differences (Figure 48). While online shoppers in many Western and Southern EU MS purchased mostly from other EU MS, a particularly high proportion of online shoppers from many Eastern EU MS used Chinese web shops for their last cross-border online purchases. DPDgroup (2017) reported a growing tendency towards cross-border purchases from China in recent years. Those consumers are mainly driven by the desire to find better deals for familiar European products or low prices in

³⁰⁷ See DPDgroup (2017), E-shopper barometer 2017: Global report – Europe. They conducted a survey in summer 2017 covering European e-shoppers aged 18 years and over across 21 European countries and Russia with 24,871 interviews in total.

³⁰⁸ See IPC (2018), Cross-Border E-Commerce Shopper Survey 2017. Their survey targets frequent cross-border shoppers who have bought physical goods online at least once in the last three months and have made a cross-border online purchase in the past year. The survey covered 31 countries, thereof 18 EU Member States (Austria, Belgium, Cyprus, Denmark, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Luxembourg, the Netherlands, Portugal, Slovenia, Spain, Sweden and the United Kingdom) plus Iceland and Norway. Field work took place from in September/October 2017.

general.³⁰⁹ Low prices, in conjunction, with a wide offering increases China's popularity among European e-commerce consumers.³¹⁰

Figure 48 EU/EEA and China ratio – Most recent cross-border purchase



Source: WIK consumer survey.

Question: Thinking of your most recent purchase from an online shop or a seller on an online marketplace in a country other than the one you currently live in, where was the online shop or seller located?

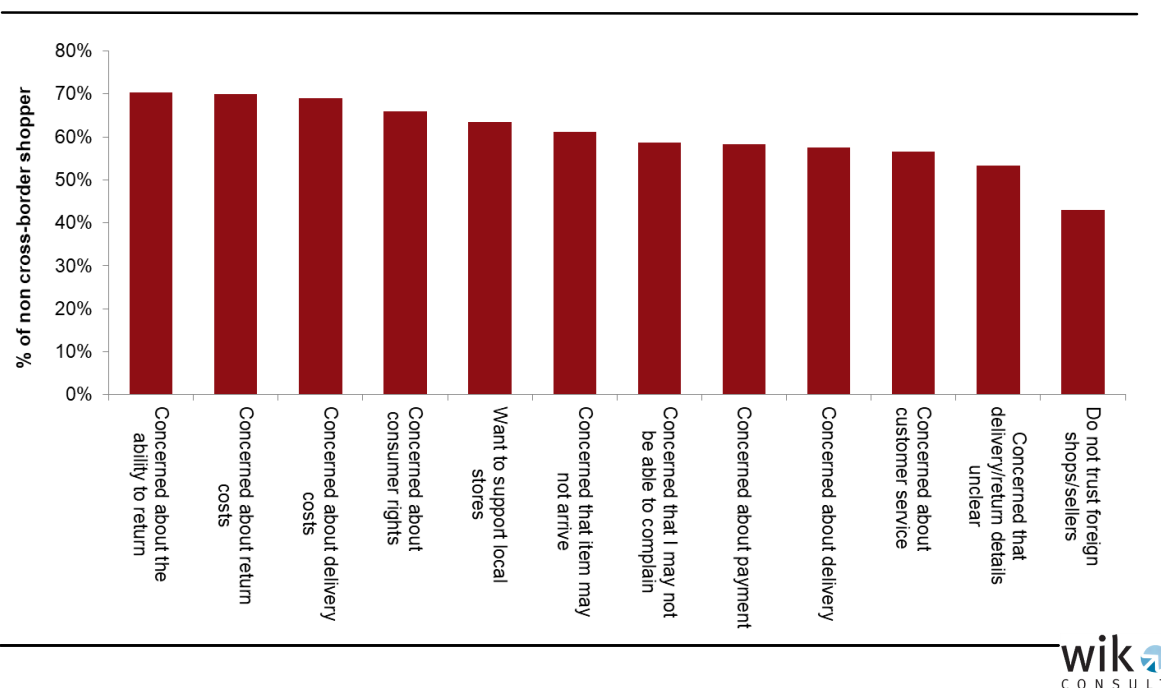
N=8,212. This figure only considers respondents who purchased across borders.

Nevertheless, nearly half of online consumers have not purchased abroad, so far. Concerns about delivery and returns are an issue for those consumers who do not buy cross-border (Figure 49). As regards the reasons that keep them from purchasing cross-border, the majority of pure domestic online shoppers are concerned about delivery and return charges (70%), ability to return (70%) and uncertainty on consumer rights (67%). Those consumers seem to have similar concerns with cross-border shopping as consumers who do not shop online at all.

³⁰⁹ See DPDgroup (2017) and PostNord (2017), E-commerce in Europe 2017. PostNord conducted a survey in 2017 among e-shoppers across the UK, Belgium, the Netherlands, Italy, Poland, Spain, Germany, France, and the Nordics.

³¹⁰ See PostNord (2017), E-commerce in Europe 2017.

Figure 49 Reasons for refraining from cross-border purchase



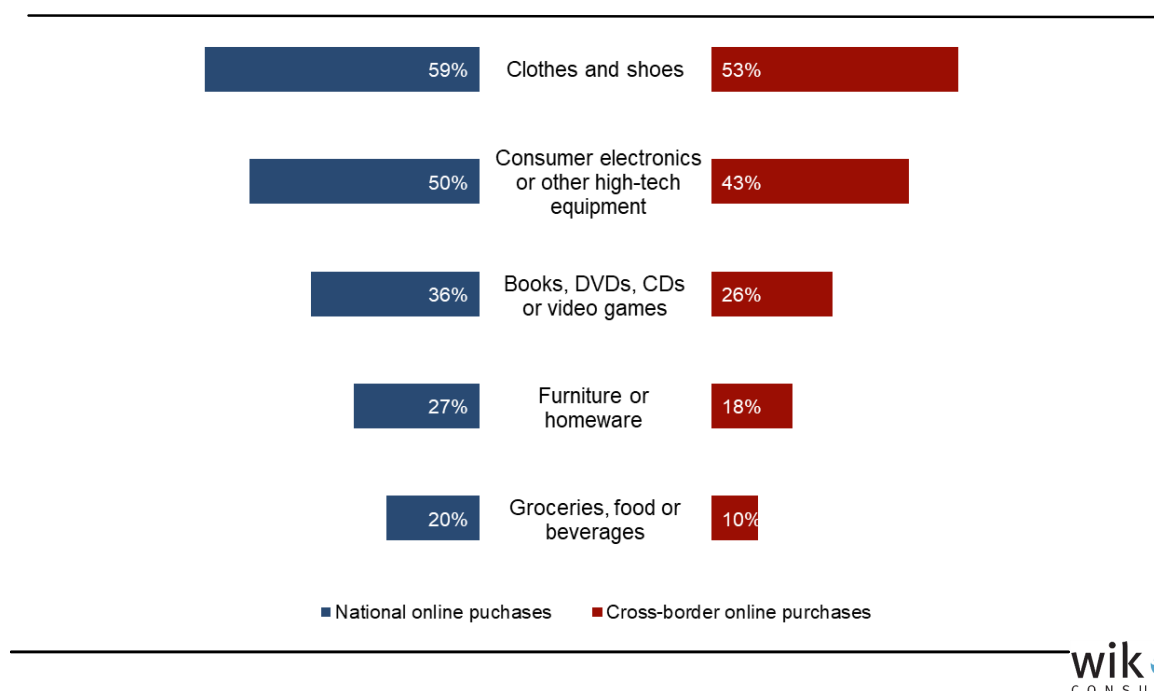
Source: WIK consumer survey.

Question: I have refrained from online stores and sellers on online marketplaces in countries other than the one I currently live in because...

N=8,633. The figure, however, only considers respondents who 'somewhat agree' or 'strongly agree' with the displayed statements.

In terms of shopping intensity and product preferences, cross-border and domestic shoppers do not differ markedly (Figure 50 and Figure 51). The most popular product categories for national and cross-border online purchases are fashion (59% and 53%) and electronics (50% and 43%). The least favourite product categories are furniture and groceries. In spite of this overall trend, there are relevant markets among the surveyed countries, where a substantial share of online shoppers purchases furniture and groceries online. More than 40% of domestic online shoppers in Austria, Czech Republic, Estonia and Germany stated that they have bought furniture or homeware. 30% of Swedish domestic online shoppers and 40% of British domestic online shoppers stated that they ordered groceries, food or beverages online.

Figure 50 Favourite product categories (EU/EEA average)



Source: WIK consumer survey.

Left hand: Question: Over the course of the last 12 month, which of the following items have you purchased from an online shop or a seller on an online marketplace in the country you currently live in? N=15,507.

Right hand: Question: Over the course of the last 12 month, which of the following items have you purchased from an online shop or a seller on an online marketplace in the country other than the one you currently live in? N=8,404.

"No answer/don't know" and "other items" are excluded for this statistic analysis.

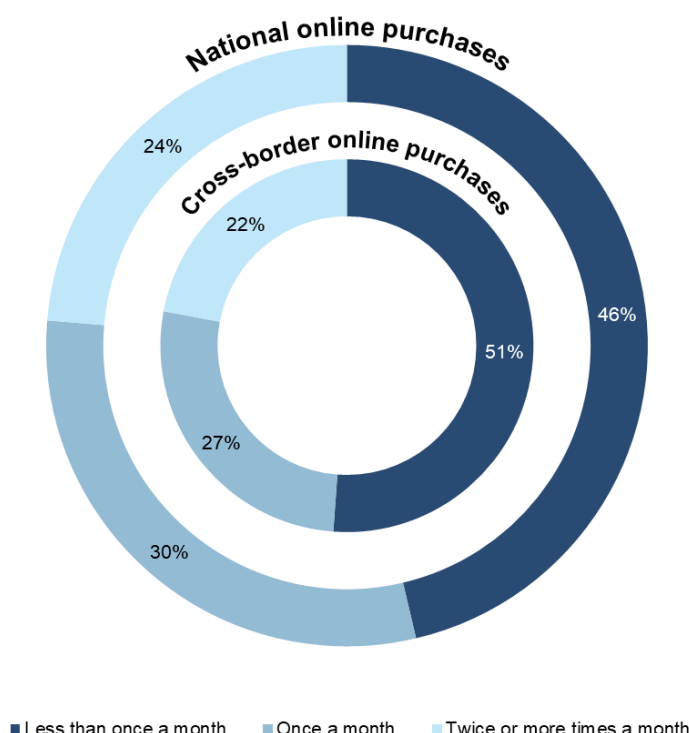
These findings are in line with previous studies. DPDgroup (2017), PostNord (2017) and IPC (2018) also identified fashion as the most popular types of products to shop online. Furthermore, DPDgroup (2017) found that fresh foods and beverages were bought by 14% of European e-shoppers online in 2017. In the same year, the highest proportion of e-shoppers ordering fresh food and beverages was found in the United Kingdom (27%).

Consumers living in the UK can, in general, be considered as high intensity online shoppers.³¹¹ In our survey, about 35% of domestic online shoppers from the UK and about 20% of cross-border online shoppers can be considered "heavy" online shoppers (Figure 51).³¹² Other MS with a high share of "heavy" domestic online shoppers are Germany and Poland. Island, Luxembourg and Malta are countries with shares of 60% and more of "heavy" cross-border buyers.

³¹¹ See also DPDgroup (2017).

³¹² E-shoppers purchasing twice or more times a month are considered heavy buyers.

Figure 51 Shopping frequency (EU/EEA average)



Source WIK consumer survey.

Outer circle: Question: On average how often do you purchase items from an online shop or seller on online marketplaces in the country you currently live in? N=15,507.

Inner circle: Question: On average how often do you purchase items from an online shop or seller on online marketplaces in countries other than the one you currently live? N=8,404.

"No answer/don't know" are excluded for this statistic analysis (1% and 2% of respondents).

4.3 Service quality of cross-border and domestic deliveries

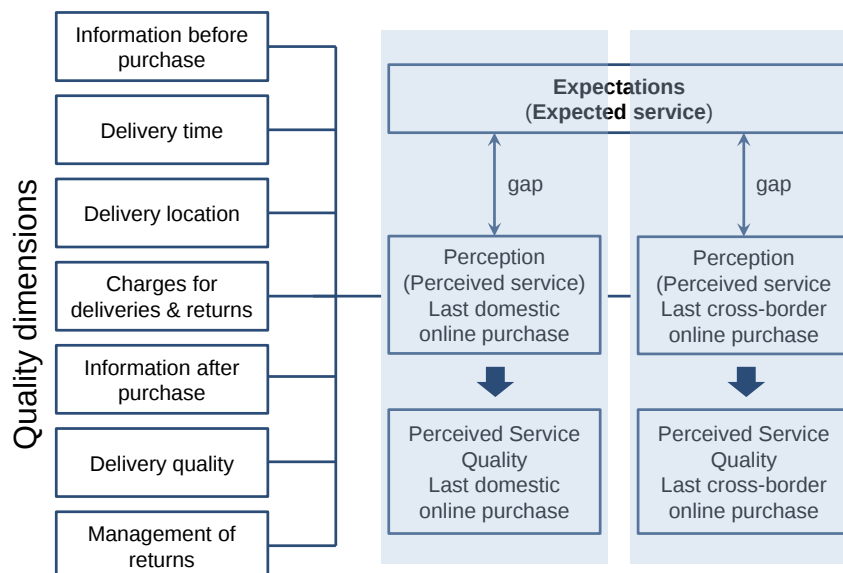
For the analysis of the service quality of cross-border and domestic online purchases regarding delivery-related aspects, we apply a statistical approach developed by marketing researchers. As contemporary definitions and concepts of understanding of consumers' perceptions go, some of the initially influencing concepts in this space were drawn up by Grönroos (1982; 1984)³¹³ and Parasuraman et al. (1985; 1988)³¹⁴. Within their concept, service quality is the result of consumers' evaluation processes, in which consumers compare their expectations of what they think how a service should be

³¹³ See Grönroos, C. (1984), "Strategic Management and Marketing in the Service Sector", 1982, Helsingfors: Swedish School of Economics and Business Administration; Grönroos, C., "A service quality model and its marketing implications", European Journal of Marketing, Vol.18, Number 4, p.36-44.

³¹⁴ See Parasuraman, A; Zeithaml, V.A & Berry, L.L. (1985), "A Conceptual Model of Service Quality and Its Implications for Future Research", The Journal of Marketing, Vol. 49, No. 4, p. 41-50; Parasuraman, A; Zeithaml, V.A & Berry, L.L., "SERVQUAL: A Multiple-Item Scale for Mesuring Consumer Perceptions of Service Quality", Journal of Retailing, Vol. 64, No. 1, 1988, p.12-40.

provided and their perception of the actual service they received.³¹⁵ Hence, the term “perceived service quality” is often used to describe this conceptual approach. It is a subjective judgement of the service quality that is provided. This concept is closely related but not equivalent with consumers’ satisfaction.³¹⁶

Figure 52 The conceptual design of the ServQual model in the WIK consumer survey



In this study, we use Parasuraman et al.’s (1985; 1988) gap model (also called SERVQUAL model) to analyse the service quality of delivery-related aspects for domestic and cross-border online purchases (see Figure 52). Parasuraman et al.’s (1985; 1988) proposed that the perceived service quality is a function of the differences between expectations and perceptions along different service quality dimensions. They developed a service quality model based on gaps.³¹⁷ The perceived service quality is considered as excellent i.e. outperforms consumers’ expectations if the gap between the expectation and the perception of the provided service is positive. No gap indicates that the perceived service quality meets the expectation and a negative gap indicates that perceived service quality has not fully met the expectation.³¹⁸

³¹⁵ See Parasuraman et al. (1988), p.16; Grönross (1984), p. 37.

³¹⁶ See Parasuraman, A; Zeithaml, V.A & Berry, L.L. (1988), “A Conceptual Model of Service Quality and Its Implications for Future Research”, *The Journal of Marketing*, Vol. 49, No. 4, 1985, p. 41-50; Parasuraman, A; Zeithaml, V.A & Berry, L.L., “SERVQUAL: A Multiple-Item Scale for Mesuring Consumer Perceptions of Service Quality”, *Journal of Retailing*, Vol. 64, No. 1, p.15.

³¹⁷ See Seth, N.; Deshmukh, S.G. & Vrat. P. (2005), “Service quality models: a review”, *International Journal of Quality & Reliability Management*, Vol. 22, No. 9, 2005, pp.913-949, p.916.

³¹⁸ See Appendix B for the detailed description of the methodology.

4.3.1 Consumers' value each aspect of the delivery process as equally important

We measured the perceived service quality of consumers' most recent online purchases. Therefore, we distinguish seven quality dimensions along the order and delivery process with 26 statements in total. Table 15) provides an overview of the selected elements of the delivery process covered in this study. These elements were classified into seven dimensions along the purchase process and put the emphasis on delivery- or return-related aspects – "Information on delivery and return conditions before purchase", "Information on the status of delivery after purchase", "Charges for delivery and return", "Delivery time", "Delivery location", "Delivery quality" and "Management of returns". Each of these dimensions includes two to six service quality items.³¹⁹

Table 15 Service quality dimensions and delivery elements

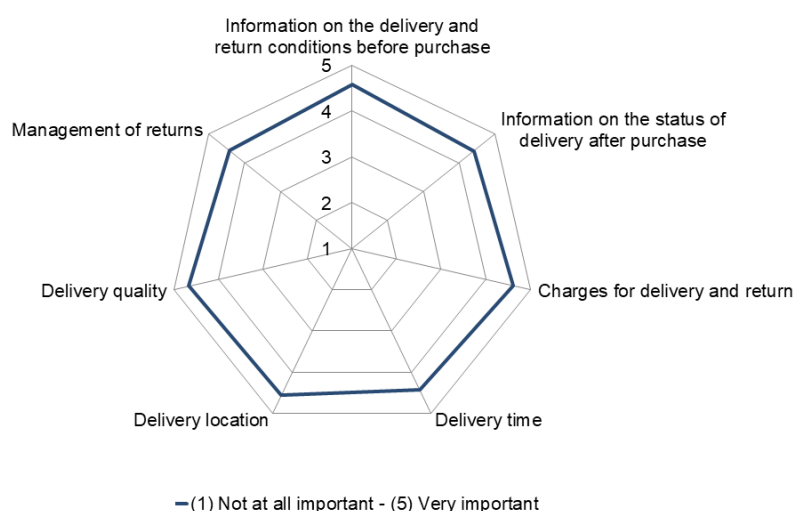
Service quality dimension	Service quality items
Information on delivery and return conditions before purchase	I. Stating the carrier delivering the item. II. Stating the expected delivery time. III. Showing all available delivery options. IV. Information about all delivery charges. V. Information about return costs and provision. VI. Information about customs duties and VAT.
Information on the status of delivery after purchase	I. Notification of the expected delivery date. II. Tracking the delivery process in real time. III. Notification of any delays in delivery. IV. Notification of any attempt to deliver the item.
Charges for delivery and return	I. Free delivery without conditions. II. Free delivery with certain conditions. II. Free return.
Delivery time	I. Possibility to select express delivery. II. Delivery at a specific day. III. Delivery at a specific time.
Delivery location	I. Home delivery. II. Alternative delivery location (in addition to home delivery).
Delivery quality	I. Immaculate item. II. Immaculate packaging. III. Delivery to the agreed location. IV. Delivery on time. V. Courteous deliverer.
Management of returns	I. Visible return address on the packaging or inside the package. II. Return labels within the packaging. III. Return labels available for printing on website.

Source: WIK-Consult.

³¹⁹ Notably, the items that we use can equally be sorted under dimensions typically used in SERVQUAL studies.

On EU/EEA average and on country average, online shoppers value each dimension as almost equally important. The lowest ranking for any dimension in any country is 4.05 and the highest ranking is 4.86. Figure 53 shows the importance of each dimension on a scale between 0 (not important) and 5 (very important) at EU/EEA level.

Figure 53 Importance of each dimension (EU/EEA average)



Source: WIK consumer survey.

Notes: Question: When you purchase an item from an online shop or a seller on an online marketplace, how important are each of the following delivery aspects to you? N=17,037. "No answer/don't know" were not considered in the figure (between 0.3% and 0.5% of respondents).

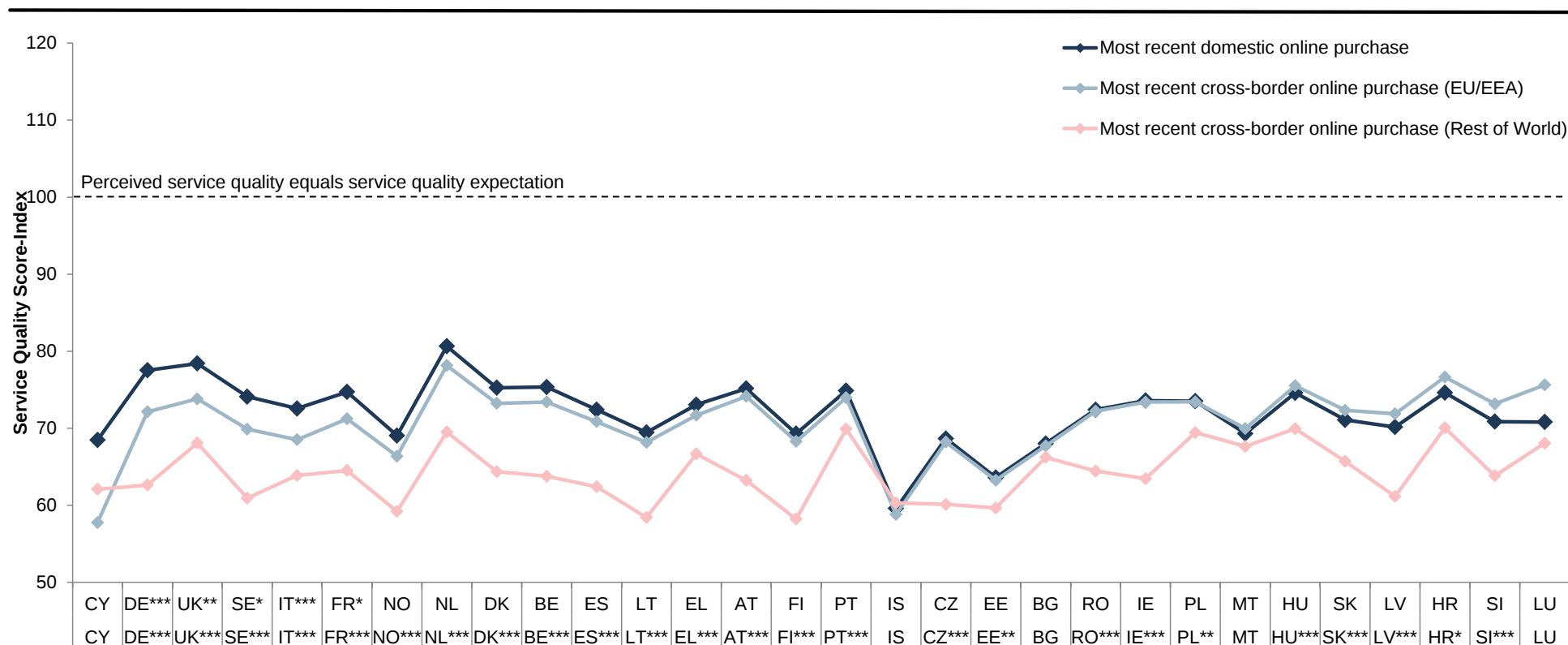
4.3.2 Perceived service quality for domestic and intra-EU purchases is superior compared to cross-border purchases from the rest of the world

Figure 54 depicts the weighted service quality scores of parcel delivery across all surveyed countries. Overall, the service quality perceived for domestic purchases is superior compared to cross-border purchases. However, for both types of purchases the service quality perceived did not meet the consumers' expectations in general. Rather than scoring a service quality index of 100 which would be the case when expectations equal perception, the service quality scored below 100 indication that perceptions of consumers were at some extent not as good as their expectations. Regardless of whether the consumers purchased domestically or cross-border within the EU or outside of the EU, the overall service quality scored at a level below 80 in all countries.

In Section 4.2.3 we highlighted that a significant share of cross-border online purchases happen on websites of other EU MS. The Single Market is characterised by common standards applicable to e-retailers and carriers. Moreover, during the last five years carriers and e-retailers put a significant efforts to improve cross-border deliveries within the Single Market. This may explain the relatively similar results in perceived service

quality of domestic and cross-border purchases from other EU MS. In only five MS, namely Germany, the United Kingdom, Italy, Sweden, and France, consumers perceive a statistically significant higher overall service quality for domestic purchases than for cross-border purchases from other EU MS. This is a strong indicator that within the Digital Single Market consumer perceptions of delivery service quality do not differ substantially no matter if the item was purchased from a domestic online shop or abroad. However, in all but three countries the perceived service quality of the cross-border purchases with e-retailers outside the EU MS is statistically significant worse than with domestic purchases. Consumers from Iceland, Cyprus and Estonia appear to be particular unhappy with the delivery service quality of these purchases. The highest level of consumers perceived service quality for domestic and cross-border purchases are attained in the Netherlands.

Figure 54 Overall service quality scores indices by country



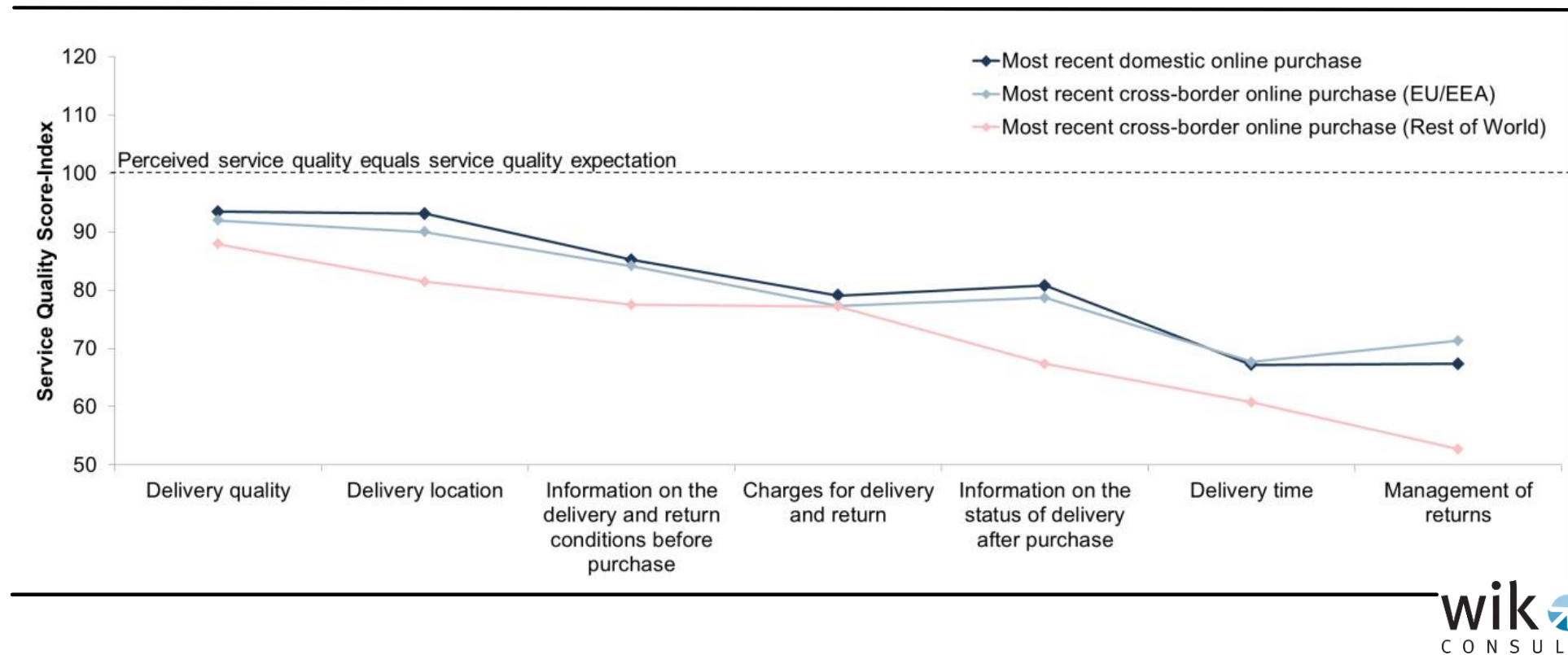
Source: WIK consumer survey. N=17,037.

Notes: Significance level: *0.10, **0.05, ***0.01.

X-Axes: The first row depicts the statistical differences between the service quality perceived by consumers regarding the most recent domestic purchase and the most recent cross-border purchase from an EU/EEA Member State. The second row depicts the statistical differences between the service quality perceived for the most recent domestic purchase and the most recent cross-border purchase from a non-EU/EEA country (Rest of World).

A breakdown of the service quality in seven delivery dimensions identified for the survey is provided in Figure 55. The figure presents the service quality scores by dimension, separately for domestic purchases, cross-border purchases from other EU MS and non-EU MS. Again, online shoppers do not perceive a substantial difference, in absolute terms, in the service quality level of domestic purchases and those from other EU MS across all seven dimensions. However, for purchases from outside the EU the service quality gap is substantially larger. The service performance is much worse for almost all dimensions. One exception is 'Charges for delivery and return'. For all purchases consumer perceive almost similar service qualities which might indicate that particularly e-commerce imports from China are often delivered free of charge and returns of low-cost items do not play an important role.

Figure 55 Service quality score indices by service dimension (EU/EEA average)

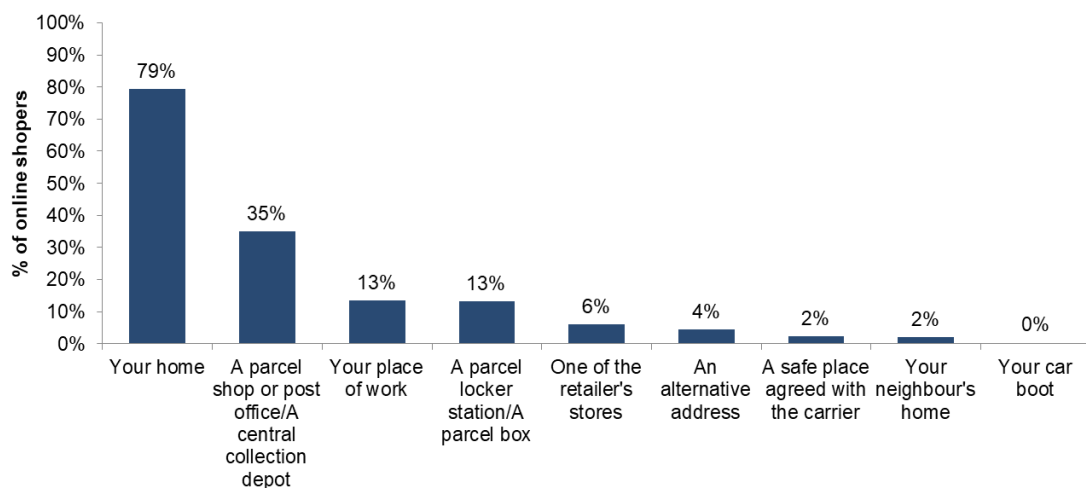


Source: WIK consumer survey. N=17,037.

In general, consumers' expectations are mostly met in terms of delivery quality. Almost 95% of the consumers' would expect a high delivery quality when purchasing online. Overall delivery quality depends to some extent on the effort of both e-retailer and carrier. The e-retailer has the responsibility to wrap the item securely. The carrier on the other hand has to ensure the packetd items are treated with care and delivered as scheduled. Overall, the perceived service quality index is relatively high for all types of shopping – domestic (93.4), cross-border purchases within (91.9) and outside (87.9) of Europe. A closer look at the country-specific service quality scores does not reveal substantial variation in delivery quality scores for both domestic and cross-border purchases. The expected and perceived service quality is basically identical for domestic purchases in Germany, the UK, the Netherlands and Croatia. High levels of service quality for cross-border purchases can be found in Luxembourg, Croatia and Ireland.

Delivery location options trigger similarly high perceived service quality scores. Providing a wide range of delivery options that allow consumers to personalise the delivery process leads to a positive consumer experience and increases the likelihood of purchasing online.³²⁰ Generally, consumers' purchases throughout Europe are most likely to be delivered to their own homes or to a parcel shop, post office or central collection depot (Figure 56). With regards to alternative delivery locations, there are some regional preference patterns. Delivery to workplace or parcel locker stations or parcel boxes is most common among consumers in Southern and Eastern European countries. Germany and the Netherlands have a comparatively high share of consumers using their neighbours' home for delivery.

Figure 56 Standard delivery location (EU/EEA average)



Source: WIK consumer survey. Question: Where do you usually have your parcels delivered to? N=17.037.

³²⁰ See DPDgroup (2017), p. 38.

For at least 95% of consumers in Europe their (actual) standard delivery location matches their preferred location. Conversely, this implies that the majority of consumers in each country can choose their preferred delivery location from among the options provided by the e-retailer.³²¹ This may explain the overall high perceived service quality for this dimension. Since delivery patterns vary between countries we analysed the perceived service quality of two options for delivery location that should be offered by the e-retailer, namely home delivery and an alternative delivery location in addition to home delivery. Generally, consumers appreciate having both options offered by e-retailers. Again, domestic purchases and cross-border purchases from other MS do not differ substantially in terms of the service quality index (93.1 and 89.9). The service quality gap, however, for cross-border purchases is larger. The result further shows that home delivery is the standard delivery option offered by e-retailers for domestic and cross-border purchases and thus matched consumers' expectations closely. However, in the case of alternative delivery locations, e-retailers appear to often fall short of expectations as they appear not to offer them, particularly for cross-border purchases in general, hence the lower perceived service quality with respect to domestic purchases. At country level in almost every country the perceived service quality of the most recent domestic purchases exceeds the perceived service quality of the most recent cross-border purchase. The greatest discrepancy between both can be found in Eastern EU MS. In Western EU MS, however, the expectations and perception on delivery location offering particularly match for purchases bought abroad and domestically.

Other factors highly valued by consumers are transparency and visibility.³²² On average, about 90% of consumers across Europe state that e-retailers should provide general information before purchase³²³ and at least basic information about the state of delivery during the delivery process after purchase³²⁴. The gaps are, as expected, generally the same for domestic (85.1 and 80.8) and cross-border purchases from another MS (84.1 and 78.7) for both dimensions. The gaps are generally larger for cross-border purchases from non-EU/EEA countries (77.4 and 67.3). However, the overall service quality level indicates that there is still room for improvements.

It is important that consumers receive the necessary information before purchase to be able to make informed choices. The more information is provided by e-retailers prior to purchase, the more consumers trust in online shopping. In Article 6 of the Consumer Rights Directive³²⁵ the duties of the e-retailers are defined in relation to information

321 See Appendix B of the study.

322 See DPDgroup (2017), p. 38.

323 Some information include stating the carrier delivering the item, information about customs duties and VAT, information about all available delivery option, stating the expected delivery time, information about return costs and provision and information about delivery charges.

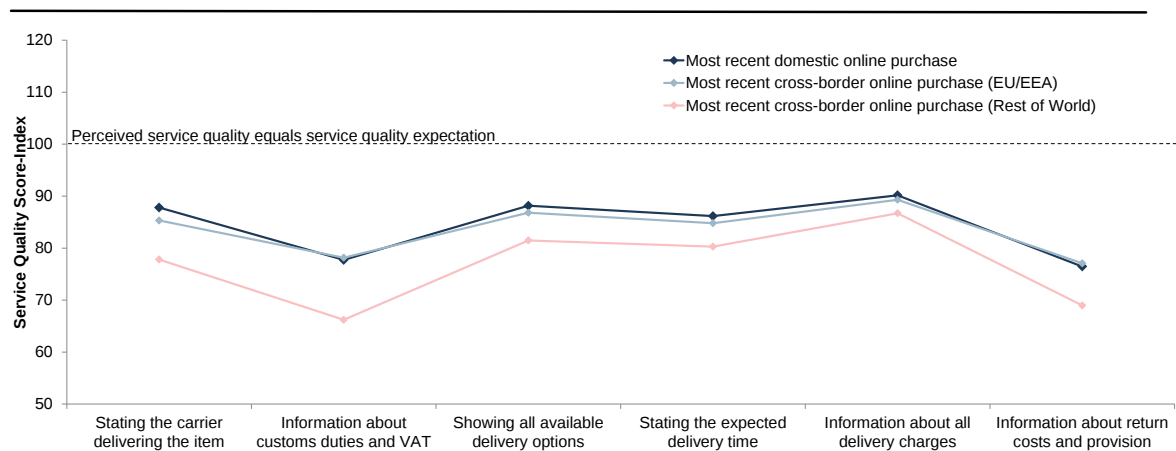
324 Some information include notification of the expected delivery date, notification of any delays in delivery, notification about any attempt to deliver the item, tracking the delivery process in real time.

325 Directive 2011/83/EU of the European Parliament and of the Council of 25 October 2011 on consumer rights, amending Council Directive 93/13/EEC and Directive 1999/44/EC of the European Parliament and of the Council and repealing Council Directive 85/577/EEC and Directive 97/7/EC of the European Parliament and of the Council.

provision before the contract is closed (i.e. before purchase). This also includes information on the cost of delivery and return as well as on delivery arrangements. The EU Cross-border Parcel Regulation³²⁶ takes up this specific aspect in Article 7 and requires that e-retailers make available information about the delivery options and charges payable by consumers for the cross-border parcel delivery before the contract is closed. The WIK consumer survey asked online shoppers more detailed on their expectations and experiences about pre-contractual information provided by e-retailers before purchase: information about

- the carrier delivering the item;
- delivery time;
- available delivery options;
- delivery charges;
- return costs and provisions; and
- custom duties and VAT.

Figure 57 Service quality score indices for the dimension 'Information on the delivery and return conditions before purchase' by item (EU/EEA average)



Source: WIK consumer survey. N=17,037.

Almost 90% of consumers across the MS expect that e-retailers should provide those information. The survey shows that online shoppers are very satisfied with information provision before purchase in relation to delivery options, time and charges for domestic and intra-EU online purchases with score indices around 90 and more. The online shoppers' perception of the information provided about all delivery charges nearly meets expectations scoring, on average, around 90 for domestic as well as cross-border purchases across all countries (MS and rest of the world). This aspect has been

³²⁶ Regulation (EU) 2018/644 of the European Parliament and of the Council of 18 April 2018 on cross-border parcel delivery services.

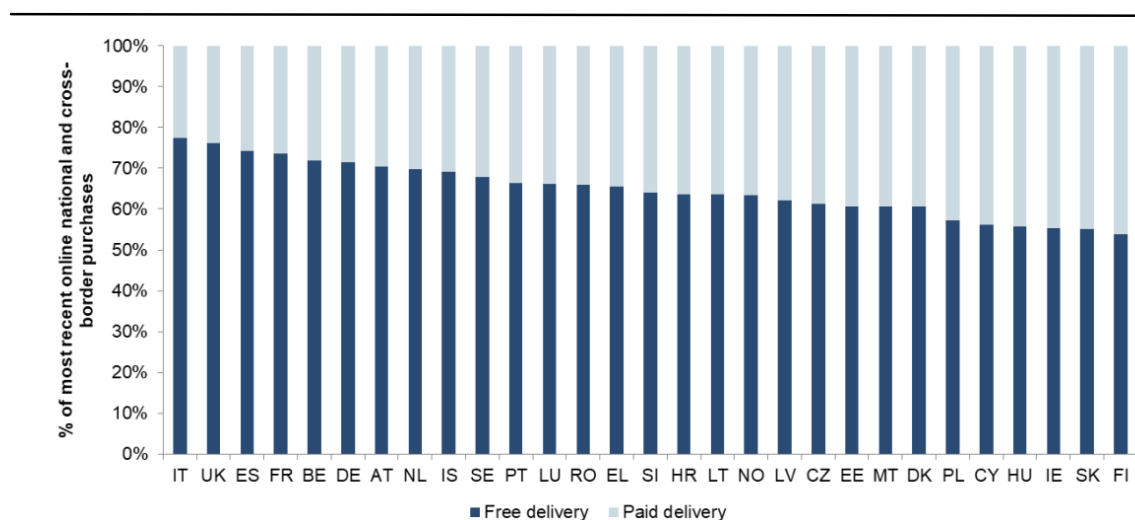
considered as important by online consumers also in prior studies. For example, IPC (2017) reports that 70% of online shoppers rated 'Clear information about delivery charges before purchase' as a very important delivery element and relevant for decision-making. Consumers mainly from Western and Eastern EU MS experience a relatively small difference between the service they expected for this delivery element and the service provided. In slightly less than half of the surveyed countries the service quality score index 'Information about all delivery charges' is no less than 90 for both domestic and cross-border purchases. This outcome also indicates that the requirements of the Consumer Rights Directive and of the EU Cross-border Parcel Regulation are usually met for the pre-contractual provision of delivery-related information.

However, online shoppers across EU/EEA are less satisfied with the information provided about customer duties and VAT as well as return costs and provision. While the first aspect is highly relevant for online purchases from EEA MS and the rest of the world, the second aspect shows that the perceived information provision on the e-retailers' return policy often does not match the expectations of online shoppers.

Interestingly and much different from the result discussed above, the perceived service quality with regards to charges for delivery and returns does not differ between cross-border and domestic purchases as much as in the dimensions above. For only one third of the MS considered in the analysis, the perceived quality for cross-border purchases scored at an index significantly lower as for domestic purchases. Furthermore, it is noteworthy that consumers in Estonia, the Czech Republic, Hungary and Bulgaria perceive cross-border deliveries to perform better with regards to charges for delivery and return than domestic purchases. This outcome might be driven by the importance of online purchases from China particularly in Eastern EU MS. Moreover, this might also explain the positive result on the perceived service quality in relation to cross-border purchases. Online purchases from Chinese websites are often delivered free of charge (either as priority or registered letter post item).

Charges for delivery and returns are naturally a key component of consumers' delivery experience since cost reduction and low prices are one of the main drivers for searching and purchasing online. Free delivery and returns are highly appreciated by a majority of online shoppers. As our results indicate, e-retailers respond to this. Across the MS at least 60% of the online purchases of European consumers were delivered free of charge (Figure 58).

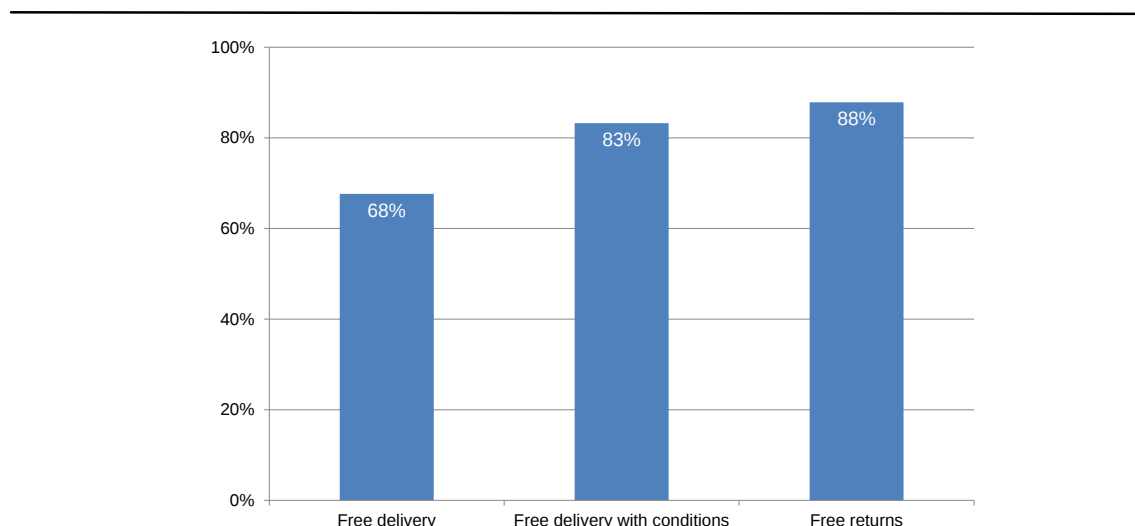
Figure 58 Delivery charges for the most recent domestic and cross-border online purchases



Source: WIK consumer survey.

Notes: Questions: 1. Please specify the delivery cost for your most recent purchase from an online shop or a seller on an online marketplace in the country you currently live in. 2. Please specify the delivery cost for this purchase. N=17.037. "No answer/don't know" were not considered for figure above (0.2% of respondents).

Figure 59 Expectations of online shoppers on delivery and return charges (EU/EEA average)



Source: WIK consumer survey. Question: When you purchase an item from an online shop or a seller on an online marketplace, what are your expectations as regards the delivery and return charges? N=17.037, % of respondents that partly or totally agree with the respective statement.

Some form of free delivery – either without or with conditions (e.g. subscription fee, minimum basket value) – is expected by online shoppers in Europe. On average, about

68 and 83% of consumers across Europe agree that the e-retailer should offer free delivery without or free delivery linked to certain conditions, respectively. Even more consumers – on average, 88% – agree that free returns should be offered (see Figure 59).

Finally, there are 'delivery time' and 'management of returns'. Those categories receive the lowest service quality scores compared to the other dimensions with scores, in general, far below 70. The service quality in those categories requires substantial improvement. Especially the poor service perceived with regards to the management of returns attributes substantially to the size of the gap between expectation and perception in service quality overall.

4.3.3 Online shoppers are not satisfied with the e-retailers' offer on delivery time options

MetaPack (2017) argues that consumers strongly appreciate a personalised delivery process. One factor in personalising this process is the opportunity to choose a specific window of delivery that best matches the individual schedule of the online buyer. Fast delivery, is mentioned most frequently as a factor that makes consumers actually buy from an e-retailer. Besides free and trackable shipment, fast delivery is a highly valued option. MetaPack (2017) found that these options contribute to the overall customer satisfaction. Similar results were obtained by DPDgroup (2017), even though, this study considered a different set of consumers. Particularly when looking at the question of what options would make them more likely to purchase from a website or retailer, 85% and 78% stated next day or same day delivery. In 2017, the IPC (2018) conducted a survey among cross-border e-commerce shoppers. They found that cross-border consumers value by and large the same delivery options.

We therefore analysed expectations and experiences on three options e-retailers could offer their customers:

- possibility to select express delivery;
- delivery at a specific day;
- delivery at a specific time.

To this date, experiences in delivery windows options fall short of expectations for domestic purchases (67.2) as well as for cross-border purchases (64.5), see Figure 60. This indicates that consumers perceive an apparent lack of choices with regard to delivery window options. In particular, this refers to having the choice of a specific day or a specific time slot.

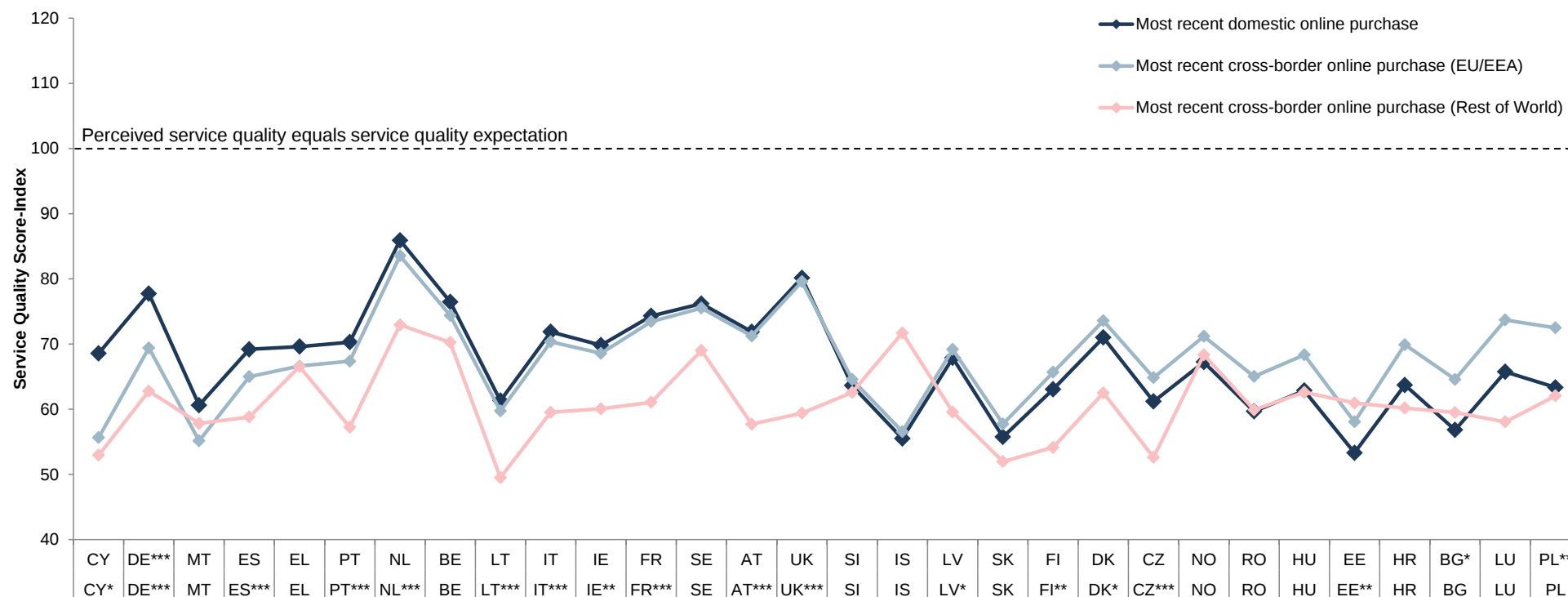
The sub-elements 'Possibility to select express delivery' and 'Delivery at a specific day' of this dimension have been indicated as being very important by consumers in previous

studies. These studies indicate that approximately 60% of consumers of different types and regions would classify both elements as important for online shopping.³²⁷ In our survey 73% would highly expect those options to be provided. Both sub-elements, however, only reach a service quality score index of about 60.2 (Delivery at a specific day) and 74.6 (Possibility to select express delivery) on average across all countries in the sample. The option “Delivery at a specific time” yielded the lowest score of on average 57.7. It seems that this option is not implemented by the e-retailer as expected by the consumers.

In general, there is a high fluctuation of the service quality score index across countries (Figure 60). Mainly, consumers in Western and Eastern EU MS perceive a significantly different service quality for cross-border online purchases. In Poland and Estonia, consumers have a more positive experience with cross-border purchases than purchase from the country they live in as regards delivery time options. Dutch consumers perceive the highest level of perceived service quality for domestic and cross-border purchases. Again, the most differences between cross-border and domestic purchases can be attributed to those purchases coming from non-EU MS.

³²⁷ See MetaPack (2017), UPS (2017), DPDgroup (2017).

Figure 60 Service quality score indices for the most recent domestic and cross-border online purchase for the dimension 'Delivery time' by country



Source: WIK consumer survey.

Notes: N=17,037. Significance level: *0.10, **0.05, ***0.01. X-Axes: The first row depicts the statistical differences between the service quality perceived by consumers regarding the most recent domestic purchase and the most recent cross-border purchase from an EU/EEA Member State. The second row depicts the statistical differences between the service quality perceived for the most recent domestic purchase and the most recent cross-border purchase from non-EU MS (Rest of World).

4.3.4 Online shoppers are often not happy with e-retailers' return policy

The same studies mentioned before also identified return management as equally important for consumer satisfaction as delivery. A convenient return management process creates credibility and loyalty among customers. According to PostNord (2017), among several countries about 40% of online shoppers have returned an item at least once during the last year. About half of the online shoppers stated that the clearance of return procedures may influence their decision about whether to buy from an online store or not. Similar results were reported by KPMG (2017)³²⁸ and IPC (2018). Simple return processes are important for 40% and 57% of the online shopper's surveyed in the respective reports. Also free returns were evaluated positively by consumers.

The WIK consumer survey also revealed that online shoppers mostly expect free returns (more than free delivery)³²⁹, appropriate information on the e-retailers' return policy before purchase³³⁰ and more convenient return handling. These expectations are often disappointed by online shoppers' experiences with domestic but even more in case of cross-border online purchases.

Providing clearly visible return addresses and corresponding labels is one step to simplify the return process for customers. It may also serve as an increasingly valuable competitive advantage for e-retailers since consumers take this into account when making (repeated) purchase decisions.

In this context, we defined three possible services:

- visible return address on the packaging or inside the packet;
- return labels within the packaging;
- return labels available for printing on website.

The service quality levels for 'Visible return address on the packaging or inside the packet', 'Return labels within the packaging' and 'Return labels available for printing on website' range between 59.5 and 72.1.

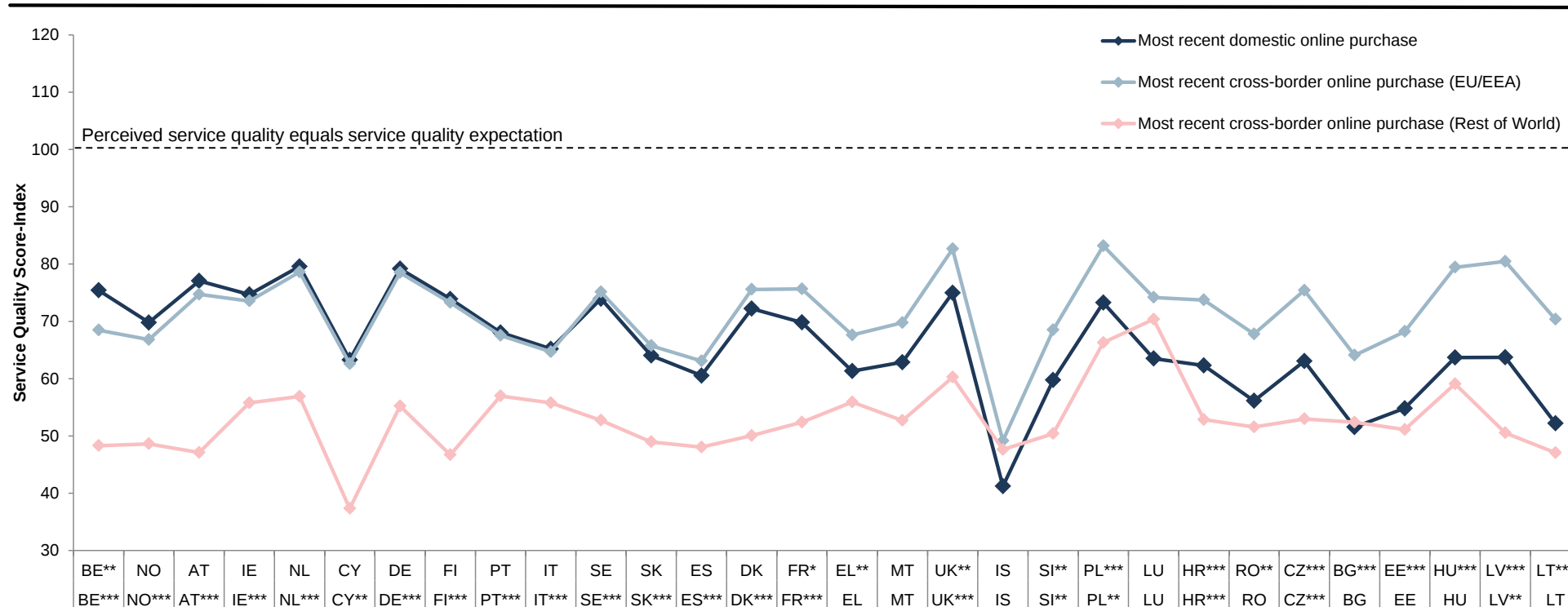
For individual MS, service quality score levels differ strongly (Figure 61). While consumers from countries like the Netherlands and Germany assign a service quality level of about 84 for domestic online purchases, consumers from Iceland rate it at merely 53. A similarly strong variation can be found for cross-border purchases. In total, the service quality gap of domestic purchases is smaller than for cross-border purchases in about nine countries - mainly in Northern and Western European countries.

328 KPMG (2017) conducted a survey among consumers aged 15 to 70 who had made at least one online purchase in the past 12 months. The participants were also within the top 65% of income-earners in their countries. A total of 51 countries were covered and a total of 18,430 responses were received. For further information about the methodology and the results see KPMG, "The truth about online consumers – 2017 Global online consumer report", 2017. Retrieved October 23, 2018 from <https://assets.kpmg.com/content/dam/kpmg/xx/pdf/2017/01/the-truth-about-online-consumers.pdf>.

329 See Figure 59 in Section 4.3.2.

330 See Figure 57 in Section 4.3.2

Figure 61 Service quality score indices for the most recent online purchase for the dimension 'Management of returns' by country



Source: WIK consumer survey. N=17,037.

Notes: Significance level: *0.10, **0.05, ***0.01.

X-Axes: The first row depicts the statistical differences between the service quality perceived by consumers regarding the most recent domestic purchase and the most recent cross-border purchase from an EU/EEA Member State. The second row depicts the statistical differences between the service quality perceived for the most recent domestic purchase and the most recent cross-border purchase from non-EU MS (Rest of World).

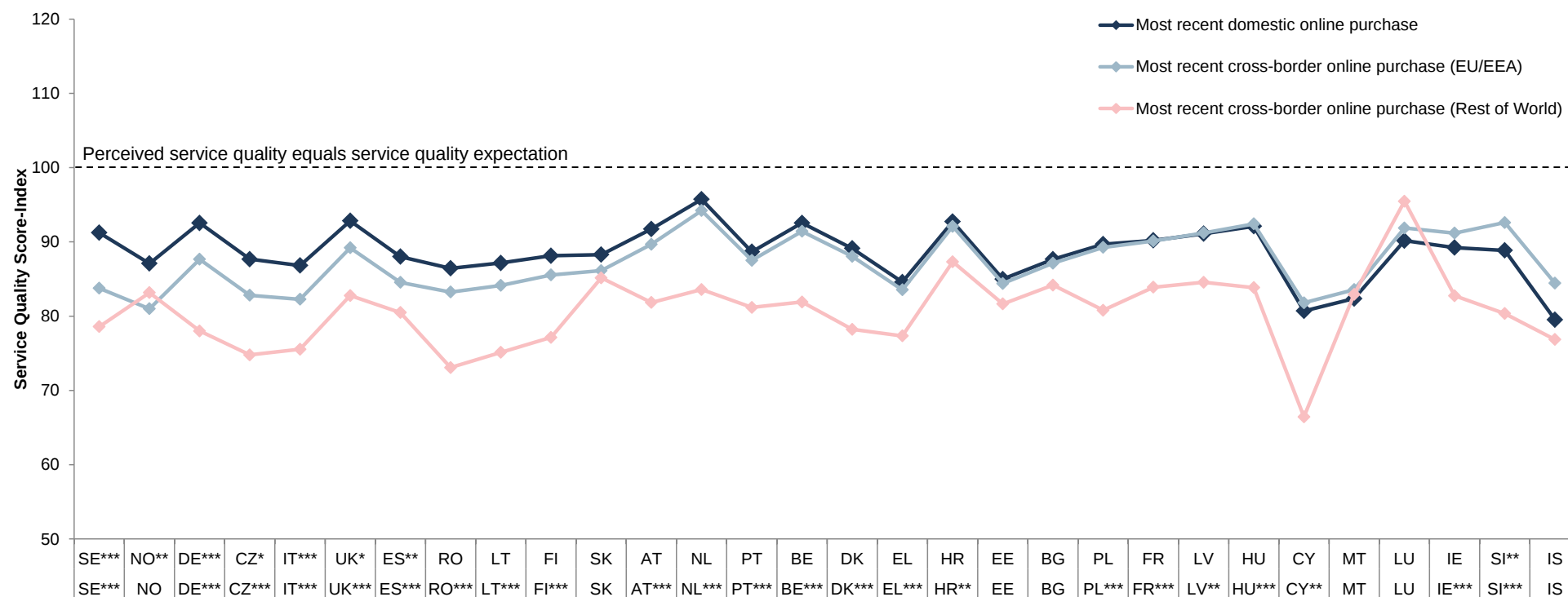
Overall, the dimension 'Management of returns' attained a very low service quality score for domestic as well as for cross-border online purchases and especially for cross-border purchases from extra-EU countries.

4.3.5 Online shoppers are very satisfied with carriers' delivery quality for intra-EU online purchases

The perceived service quality levels described so far emerge from service elements that are often the result of the interaction between e-retailer and carrier. If both players provide a high level of service quality, the overall perceived service quality will also be high. However, there are some service quality items that are more in the responsibility of the carriers than others. Specifically, the carriers influence critically the performance of delivery quality (final delivery) and the features (as well as the quality of these features) offered to monitor the progress of the delivery process (tracking & notification of any attempt to deliver the item). To enable an approximation of carrier-driven service quality, WIK created a subgroup of more carrier-related service quality items including the following elements 'Tracking the delivery process in real time', 'Notification of any attempt to deliver the item', 'Delivery to the agreed location', 'Delivery on time', and 'Courteous deliverer'. The results of the statistical analysis are presented below.

In most MS, carriers' performance does not fall substantially below expectations particularly for domestic online purchase. The levels vary around 90 which is fairly high. The Netherlands followed by the UK attained the highest service quality score indices for domestic online purchases. The perceived service quality for cross-border purchases from other EU MS does not substantially differ from those of domestic purchases. Only in a few countries the service quality gap differ significantly between cross-border purchases from other EU MS and items bought domestically. However, there is a strong statistically significant difference between cross-border purchases from outside Europe and domestic purchases in more than 75% of the countries analysed. The difference between purchases (domestic and cross-border) from EU MS and non-EU countries is particularly pronounced in Cyprus, Germany, Romania, and the Netherlands.

Figure 62 Service quality score indices for the carriers' delivery quality of the most recent online purchases by country



Source: WIK-Consult consumer survey. N=17,037.

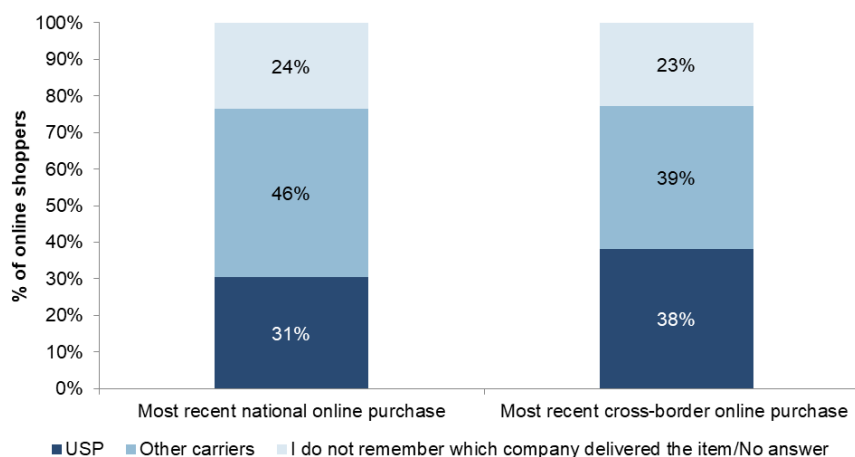
Notes: This statistical analysis includes the more carrier-related items 'Tracking the delivery process in real time', 'Notification of any attempt to deliver the item', 'Delivery to the agreed location', 'Delivery on time', and 'Courteous deliverer'.

Significance level: *0.10, **0.05, ***0.01.

X-Axes: The first row depicts the statistical differences between the service quality perceived by consumers regarding the most recent domestic purchase and the most recent cross-border purchase from an EU/EEA Member State. The second row depicts the statistical differences between the service quality perceived for the most recent domestic purchase and the most recent cross-border purchase from non-EU MS (Rest of World).

The majority of last purchases, irrespective whether the products were purchased domestically or internationally, was delivered by a carrier other than the respective USP (46%, first column of Figure 63, and 39%, second column). 31% of online shoppers stated that their most recent domestic purchase was delivered by the USP. With regard to cross-border purchases 38% of the online shoppers stated that the USP delivered their shipment.

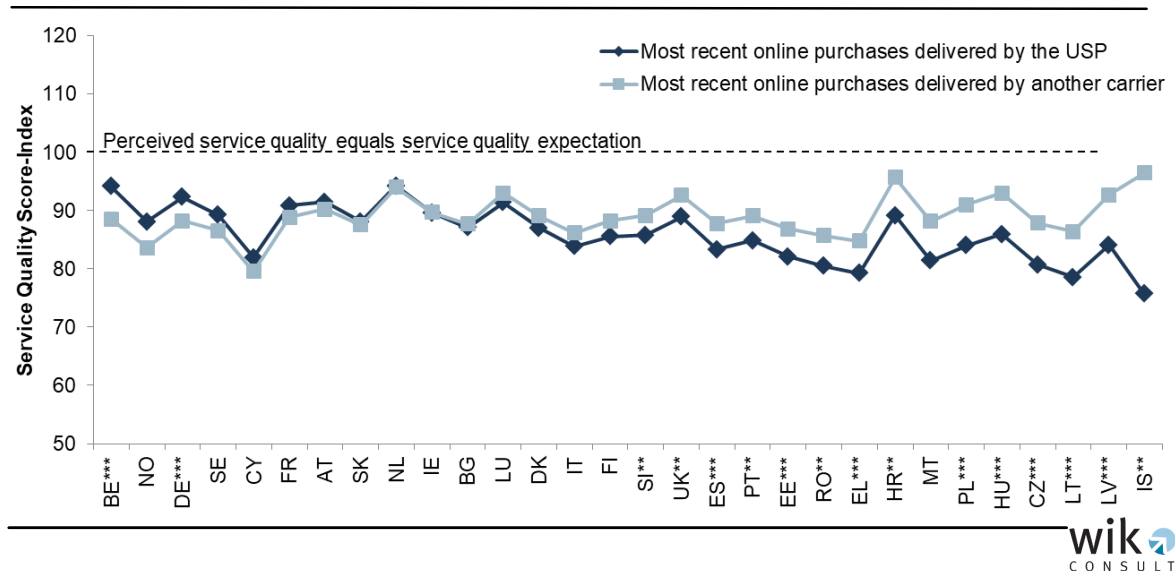
Figure 63 Carrier of the most recent domestic and cross-border online purchase (EU/EEA average)



Source: WIK consumer survey. Question: Which company delivered the last item you purchased from an online shop or a seller on an online marketplace in the country you currently live in/in a country other than the one you currently live in? N=17,037.

Figure 64 shows that there is a statistically significant difference in the perceived carrier-related service quality levels between USPs and other carriers. In half of the countries; including many Eastern EU MS, the United Kingdom, Spain, Portugal, Greece, and Iceland. Here, consumers perceive a higher service quality level if the item is delivered by another carrier than the USP. In contrast, only in Belgium and Germany consumers perceive a significantly higher service quality when the USP delivered the purchased items. This negative perception is again mainly driven by the cross-border purchases as Figure 24 shows.

Figure 64 Service quality score indices for the carriers' delivery quality of USPs compared to other carriers of the most recent online purchase (domestic and cross-border purchases combined) by country

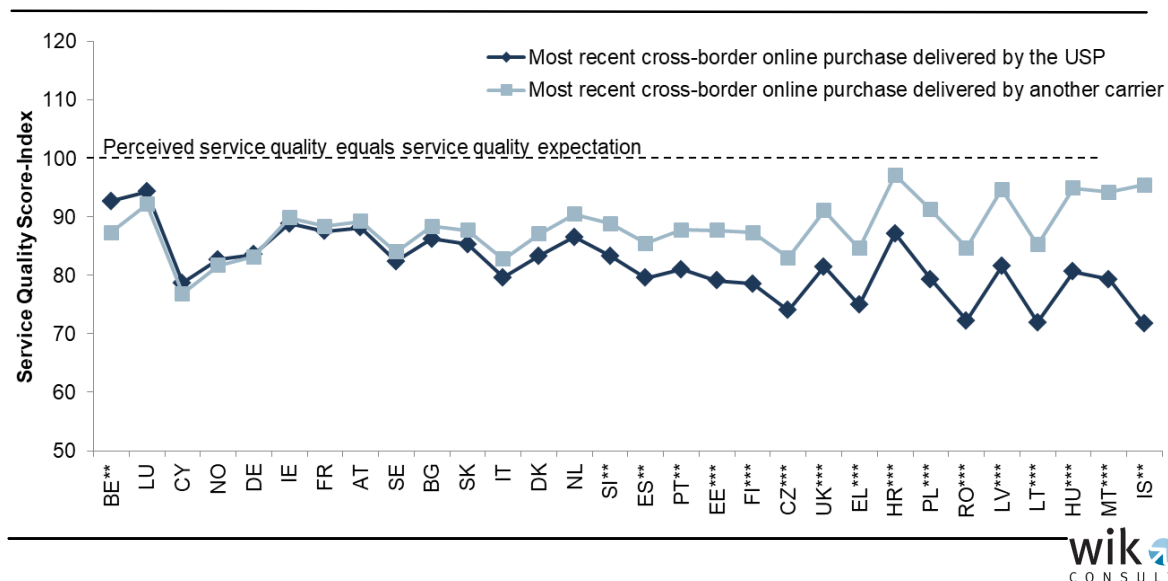


Source: WIK consumer survey.

Notes: N=17,037. Significance level: *0.10, **0.05, ***0.01.

This statistical analysis includes the more carrier-related items 'Tracking the delivery process in real time', 'Notification of any attempt to deliver the item', 'Delivery to the agreed location', 'Delivery on time', and 'Courteous deliverer'.

Figure 65 Service quality score indices for the carriers' delivery quality of USPs compared to other carriers of the most recent cross-border online purchase by country



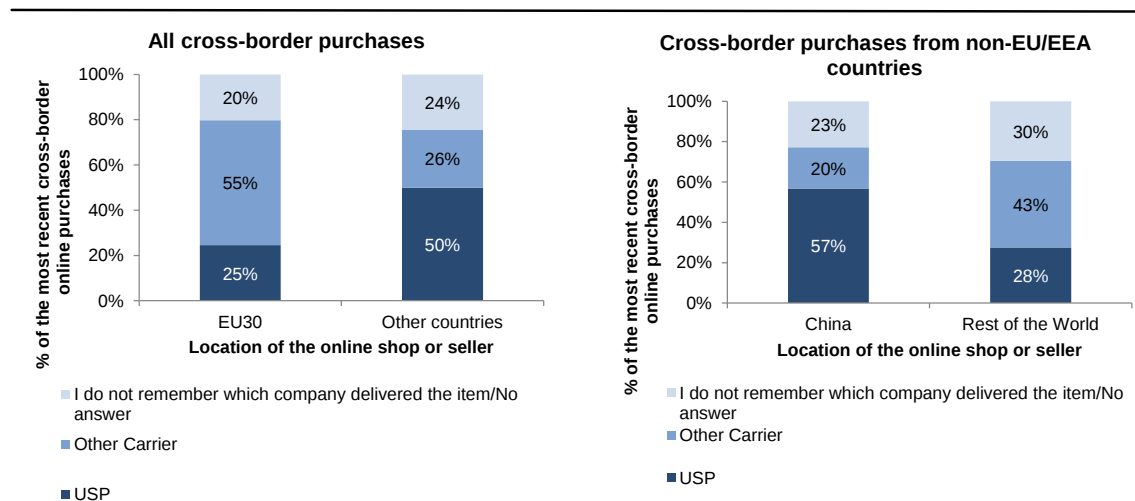
Source: WIK-Consult consumer survey.

Notes: N=17,037. Significance level: *0.10, **0.05, ***0.01.

This statistical analysis includes the more carrier-related items 'Tracking the delivery process in real time', 'Notification of any attempt to deliver the item', 'Delivery to the agreed location', 'Delivery on time', and 'Courteous deliverer'.

Particularly online shoppers in many Eastern EU MS and the UK were likely to have bought an item from a Chinese website in our survey (see Figure 48 in Section 4.2). A high proportion of online purchases from China is usually delivered as priority or registered letter post item (small packets) which explains the high share of these purchases delivered by USPs (57%, see Figure 66).

Figure 66 Carrier of the most recent cross-border online purchase



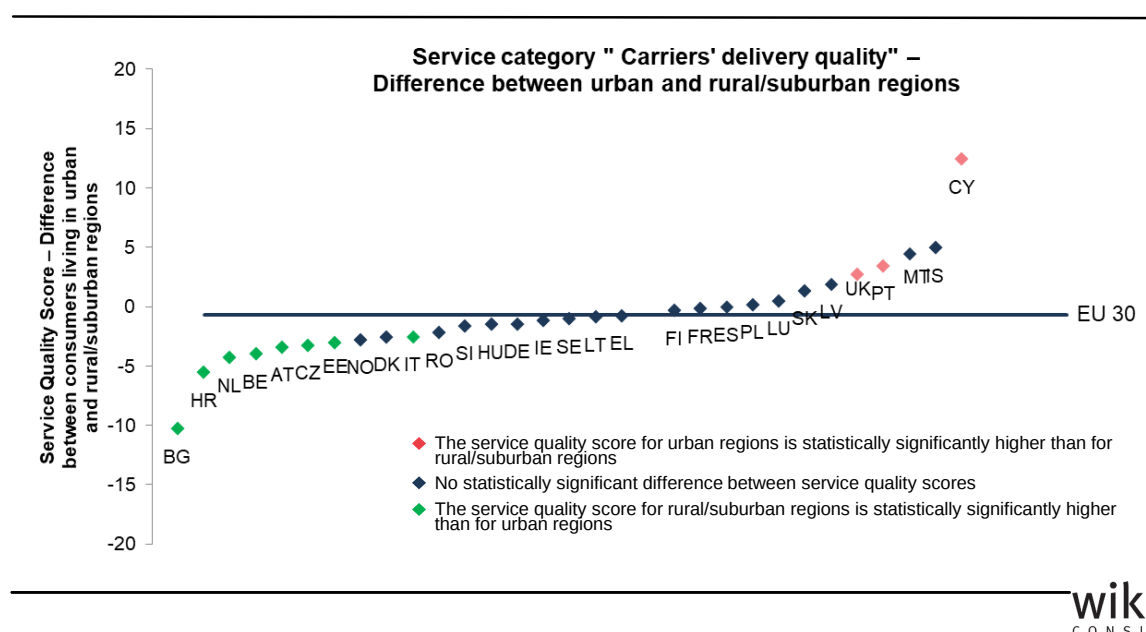
Source: WIK consumer survey.

Notes: Question: Which company delivered the last item you purchased from an online shop or a seller on an online marketplace in the country you currently live in/in a country other than the one you currently live in? N=17,037.

These items usually need a relatively long transport time. The delivery process is either loosely or not tracked at all so that the delivery process is not transparent to the online buyer. Around two thirds of cross-border shipments delivered by USPs came from outside Europe and thereof nearly 90% from China. This may negatively impact the perceived service quality levels of cross-border deliveries of USPs in the perception of the online shoppers.

Even though there is a difference in the perceived service quality in delivery regarding the origin of the e-retailer, there is mostly no difference in the delivery service quality experienced depending on the residential area of the consumer (Figure 67). In most EU MS consumers do not perceive differences in service quality depending on whether they live in densely or sparsely populated areas. Only in one third of the MS considered in the analysis consumers living in an urban areas perceive a slightly different service quality in terms of delivery than consumers living in suburban/rural areas. In the United Kingdom, Portugal and Cyprus perceive a statistically higher service quality than consumers living in rural or suburban areas. In eight MS, mainly Western and Eastern EU MS, the consumer living in rural/suburban areas perceive a higher service quality than consumers in urban areas.

Figure 67 Perceived delivery service quality score between urban and suburban/rural areas



Source: WIK-Consult consumer survey.

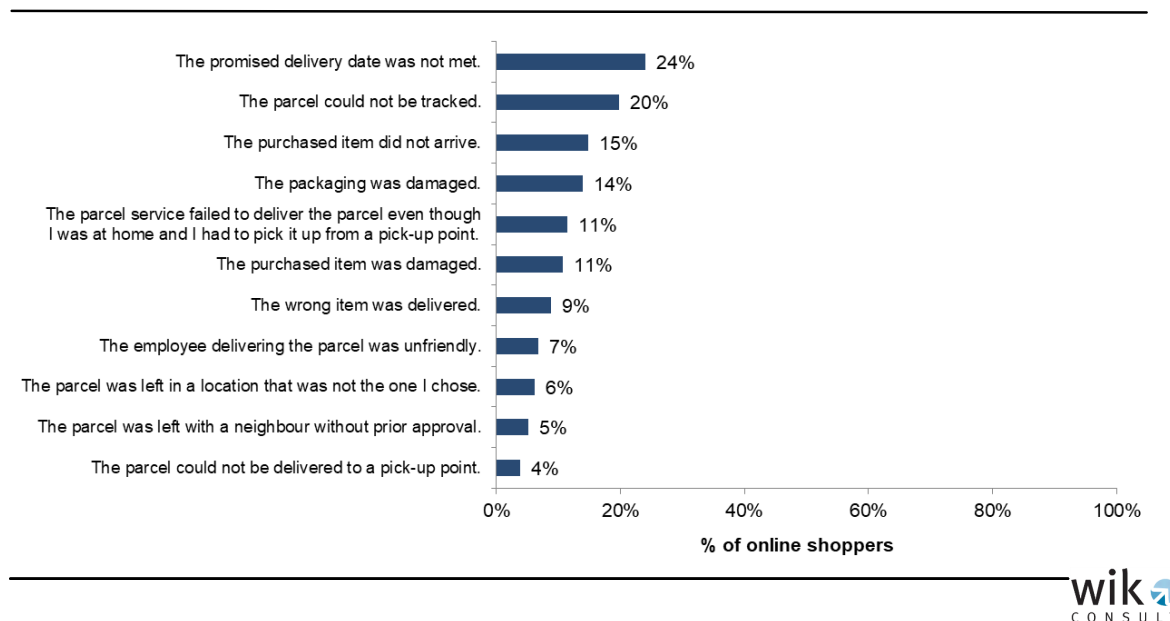
Notes: N=17,037. Significance level at least 0.10.

4.4 Complaints handling and dispute resolution

For a 2017 report, the European Commission commissioned a survey on consumers' attitudes towards cross-border trade and consumer-related issues.³³¹ The study covered 28 MS as well as Iceland and Norway. On average, the survey results indicate a decrease in percentage of online shoppers experiencing problems in delivery like damaged, wrong, and late or even no delivery. In 2016, 26% of consumers complained about late delivery, 12% about damaged or wrong delivery, and 6% of consumers' did not receive the purchased item at all. In the same period, almost 80% of online shoppers stated that they did not experience any problem at all. This share is increasing since 2014 and indicates improvements in e-retailers' and carriers' services related to e-commerce deliveries. The findings of the WIK consumer survey are quite in line with those of GfK (2017). On average, almost one quarter of the online shoppers experienced a delay in delivery within the last 12 months and 15% did not receive the purchased item (Figure 68). Furthermore, 20% were not able to track the parcel and 14 and 11% of the consumers received a damaged parcel or item.

³³¹ See GfK (2017), Consumers' attitudes towards cross-border trade and consumer protection 2016.

Figure 68 Problems that occurred in the last 12 months (EU/EEA average)



Source: WIK consumer survey.

Question: Which of the following occurrences as part of an online purchase has actually happened to you in the past 12 month? N=17.037.

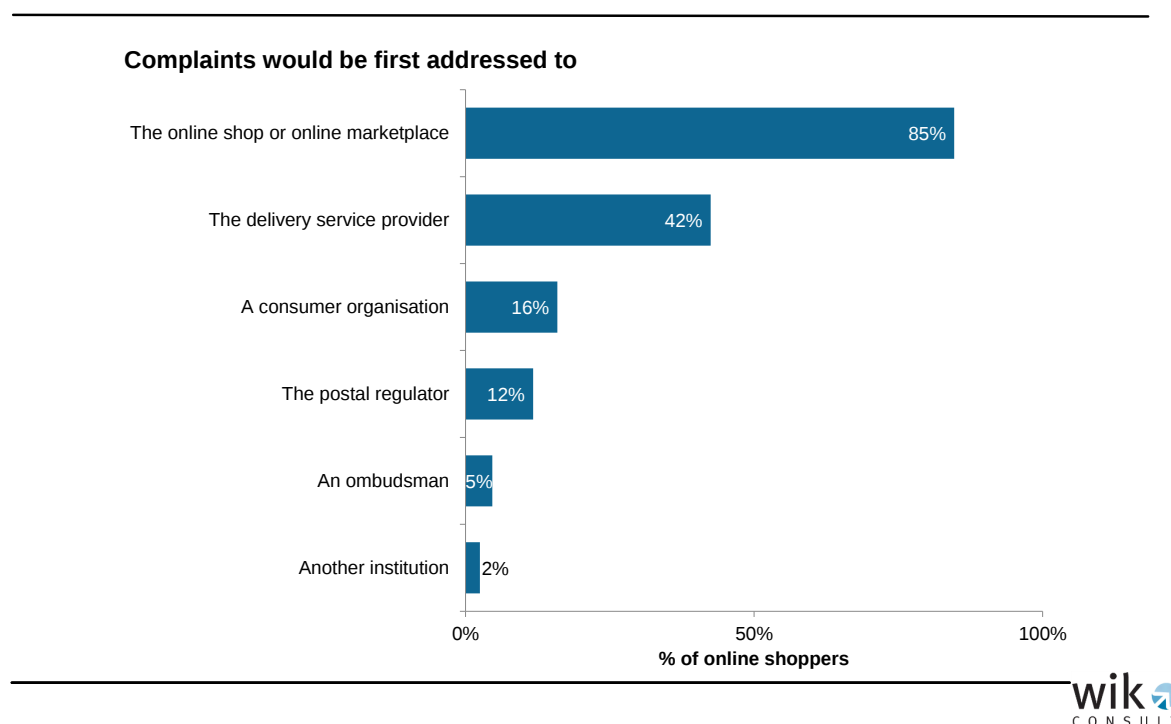
On average, 4% did not provide an answer to this question. Those respondents are excluded from this statistical analysis.

Most of those occurrences listed in Figure 68 would cause only a relatively small share of consumers to file a complaint. Only when issues become more severe, substantially more than half of consumers would file a complaint. In particular, consumers would complain if the purchased item is damaged (80%), a wrong item was delivered (76%) or the item would not arrive at all (76%).

The GfK survey showed that there is a relatively high share of consumers not complaining, even though, they experience non-negligible problems (20.1%). One major reason for not taking any actions is that the sums involved were too small (34.6%).³³²

³³² Ibid.

Figure 69 Addressees of potential complaints (EU/EEA average)



Source: WIK consumer survey.

Question: To whom would you address your complaint in case of delivery problems? Multiple choice. N=17.037.

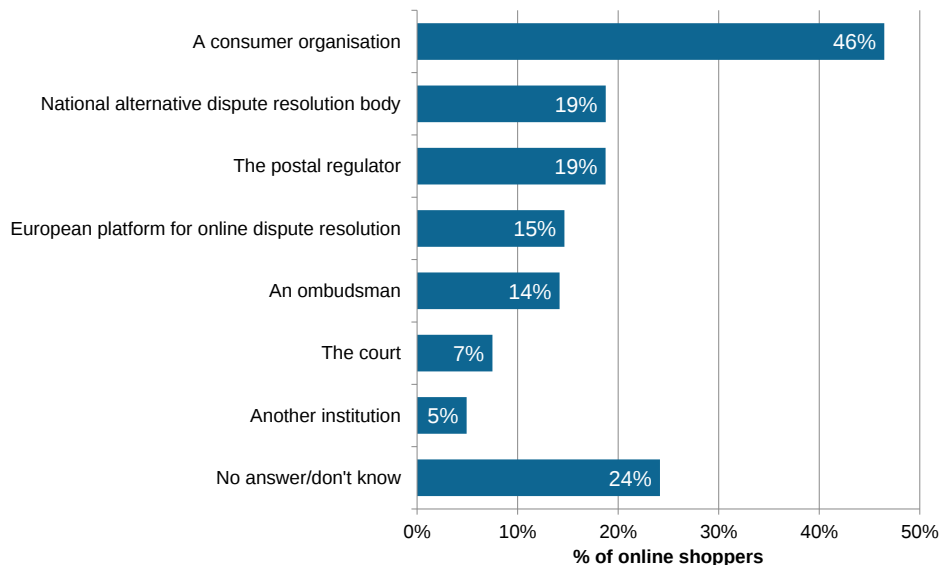
If they actually were complaining, the majority of consumers, in the WIK consumer survey, would first contact the online shop or marketplace; around 85% would lodge a complaint with the online shop or marketplace. 42% of European online shoppers would complain to the delivery service provider. Less than 15% would express their initial complaint towards an official authority.

In June 2013, the Directive on consumer alternative dispute resolution (ADR) and the EU Regulation on consumer online dispute resolution (ODR) entered into force.³³³ MS had until July 2015 to implement the Directive in their own countries and until January 2016 to apply the regulation. The legislation on ADR and ODR shall allow consumers and e-retailers to solve their disputes in a quick, low-cost and simple way.³³⁴ The WIK survey suggests that many online shoppers are still not aware of alternative dispute resolutions.

³³³ Directive 2013/11/EU of the European Parliament and of the Council of 21 May 2013 on alternative dispute resolution for consumer disputes and amending Regulation (EC) No 2006/2004 and Directive 2009/22/EC and Regulation (EU) No. 524/2013 of the European Parliament and of the Council of 21 May 2013 on online dispute resolution for consumer disputes and amending Regulation (EC) No 2006/2004 and Directive 2009/22/EC (Regulation on consumer ODR)

³³⁴ ANEC (2015), Cross-border online shopping within the EU.

Figure 70 Complaints procedure applied by online shoppers (EU/EEA average)

Unresolved complaints would be escalated to

Source: WIK consumer survey.

Question: To whom would you address your complaint if it was not resolved satisfactorily? Multiple choice. N=17.037.

When the initial complaint would not be resolved satisfactorily, the majority of consumers would contact a consumer organisation (46%) or the domestic postal regulator (19%). ADR or ODR would be used by 19% and 15%, respectively. The GfK study (2017) found, however, that only 63.4% were satisfied with the complaint handling of the e-retailer, service provider or manufacturer. And only 58.1% were satisfied with the problem resolution by public authorities. ³³⁵

4.5 Conclusions

The share of internet users and online shoppers is continuously growing

The increasing availability and usage of the internet has been driving a continuous increase in the share of consumers who purchase items and services online. In Europe, around half of consumers have purchased at least one physical item online in 2017. Although we expect this trend to continue, there exists a substantial share of consumers who adamantly refrain from shopping on the internet. Their preference for purchasing

³³⁵ GfK (2017), “Consumers’ attitudes towards cross-border trade and consumer protection 2016” – a study for the European Commission.

goods and services in brick-and-mortar stores (only) appears to be rooted in a lack of trust in online stores and data security concerns.

The majority of consumers purchase online either domestically, in large e-commerce markets or in neighbouring countries

Trust plays an important role in the decision of whether to purchase an item online from a domestic e-retailer or from an e-retailer abroad. Many consumers simply find it convenient to shop online from a store or seller based in the country where they live. Consequently, the majority of consumers in Member States with large national e-commerce ecosystems prefer to purchase items from domestic e-retailers. Conversely, many consumers in Member States characterised by relatively small national e-commerce ecosystems, such as Luxembourg, have been relying on foreign e-retailers for some time. No matter the size of the national e-commerce ecosystem, consumers who purchase cross-border items typically prefer e-retailers from neighbouring Member States or large e-commerce ecosystems like Germany and the UK. However, there is also a substantial number of consumers who purchase items from e-retailers located outside of Europe. Among these e-retailers, Chinese e-retailers play an important role. Around 38% of cross-border online purchasers are registered with Chinese websites according to the WIK consumer survey.

Consumers perceive domestic and intra-EU delivery quality as fairly similar, but the quality of delivery from the rest of the world is much lower.

As our results indicate, whether cross-border shipments originate within the EU or not has an enormous impact on the perceived delivery service quality. Differences in service quality perceptions regarding online purchases from e-retailers within the EU/EEA and those from domestic e-retailers are only statistically significant for a few Member States (Germany, Italy, the UK; and slight differences in France and Sweden). Conversely, perceived service quality from extra-EU online purchases, i.e. most likely a purchase from China, score markedly lower than domestic purchases in almost all Member States in our sample.

Besides the e-retailer's country of origin, there are various other determinants that influence consumers' delivery service quality perceptions. For example, a perception of high delivery service quality depends on actions by both the e-retailer and the carrier. Consumers' expectations regarding delivery service quality is only reflected if they experience outstanding performance across all delivery-related aspects including: information provision before and after purchase; delivery and return charges; delivery quality; delivery location and time; returns management; etc. Overall, e-shoppers value each of delivery-related aspects equally as the WIK consumer survey revealed.

Consumers are happy with information provided by e-retailers on delivery cost and arrangements for intra-EU online purchases

The more information provided by e-retailers prior to purchase, the more consumers are willing to trust online shopping. The Consumer Rights Directive defines the duties of e-retailers in relation to information provision before the contract is closed (i.e. before purchase). This includes information on the cost of delivery and return as well as on delivery arrangements. The EU Cross-border Parcel Regulation gives attention to this specific aspect in Article 7 and requires that e-retailers disclose information about cross-border delivery options and charges payable by consumers for the cross-border parcel delivery before the transaction is completed. The WIK consumer survey shows that online shoppers are very satisfied with information provided by e-retailers before purchase in relation to delivery options, time and charges for domestic and intra-EU online purchases. Online shoppers' perceptions of the information provided nearly meets expectations across all Member States. This outcome indicates that the requirements of the Consumer Rights Directive and of the EU Cross-border Parcel Regulation are generally adhered to regarding the pre-contractual provision of delivery-related information by e-retailers in the EU/EEA Member States.

Delivery time options and management of returns are matters of major concern in nearly all Member States

The overall service quality scores identified in the WIK consumer survey point to areas within the delivery process that require additional attention from market actors. While perceived delivery service quality and delivery location by and large matches consumers' expectations, options for different delivery windows and management of returns remain substantially below consumers' expectations for almost all Member States in the sample. Regarding delivery windows, consumers expect more flexibility in choosing a specific date and time for delivery. Furthermore, they would also like to have more variation in delivery options regarding the speed of delivery, i.e. choosing between express and non-express delivery options.

As regards management of returns, there is first and foremost a general mismatch between consumers' expectations and actual experiences. Overall, this implies relatively low levels of perceived service quality for this survey item. Notably, the mismatch is less pronounced for domestic purchases than for cross-border purchases, in particular regarding imports from non-EU/EEA Member States in Western and Northern EU MS. In many Eastern and Southern EU MS, this is true for all shipments. Allegedly, e-retailers care less about retaining customers from these countries as is evident from a lack of information on possible return solutions and/or limited access to available return solutions. Instead of customer negligence, this apparent lack of return options may also be attributable to a lack of corresponding offers by carriers shipping to these countries.

Online shoppers are very satisfied with carriers' delivery quality for intra-EU/EEA online purchases

The perceived service quality levels described so far emerge from service elements that are often the result of the interaction between e-retailer and carrier. If both players provide a high level of service quality, the overall perceived service quality will also be high. However, there are some service quality items that are more in the responsibility of the carriers than others. Specifically, the carriers influence critically the performance of delivery quality (final delivery) and the features (as well as the quality of these features) offered to monitor the progress of the delivery process (tracking & notification of any attempt to deliver the item). To enable an approximation of carrier-driven service quality, WIK created a subgroup of more carrier-related service quality items including the following elements 'Tracking the delivery process in real time', 'Notification of any attempt to deliver the item', 'Delivery to the agreed location', 'Delivery on time', and 'Courteous deliverer'.

The survey revealed that online shoppers are very satisfied with the carriers' delivery quality for domestic and intra-EU/EEA online purchases. This indicates that the national delivery markets provided by USPs, international and national parcel and express carriers are performing fairly well. A more detailed analysis on carriers' delivery quality in the perception of online shoppers revealed that USPs particularly in many Eastern and Southern EU MS have a significantly lower performance than other carriers for domestic and even more for cross-border online purchases which are often dominated by e-commerce imports from China.

Consumers' place of residence is not essential in forming perceptions on delivery service quality

Notably, whether the recipient of the shipment resides in a densely populated area or in rural area does not make a substantial difference to his/her perception of delivery service quality. Furthermore, consumers are almost equally happy with domestic deliveries performed by USPs and other carriers, but much less so in case of cross-border purchases. Again, this is particularly true for purchases made in non-EU/EEA Member States.

Practices for dispute resolution vary across Member States

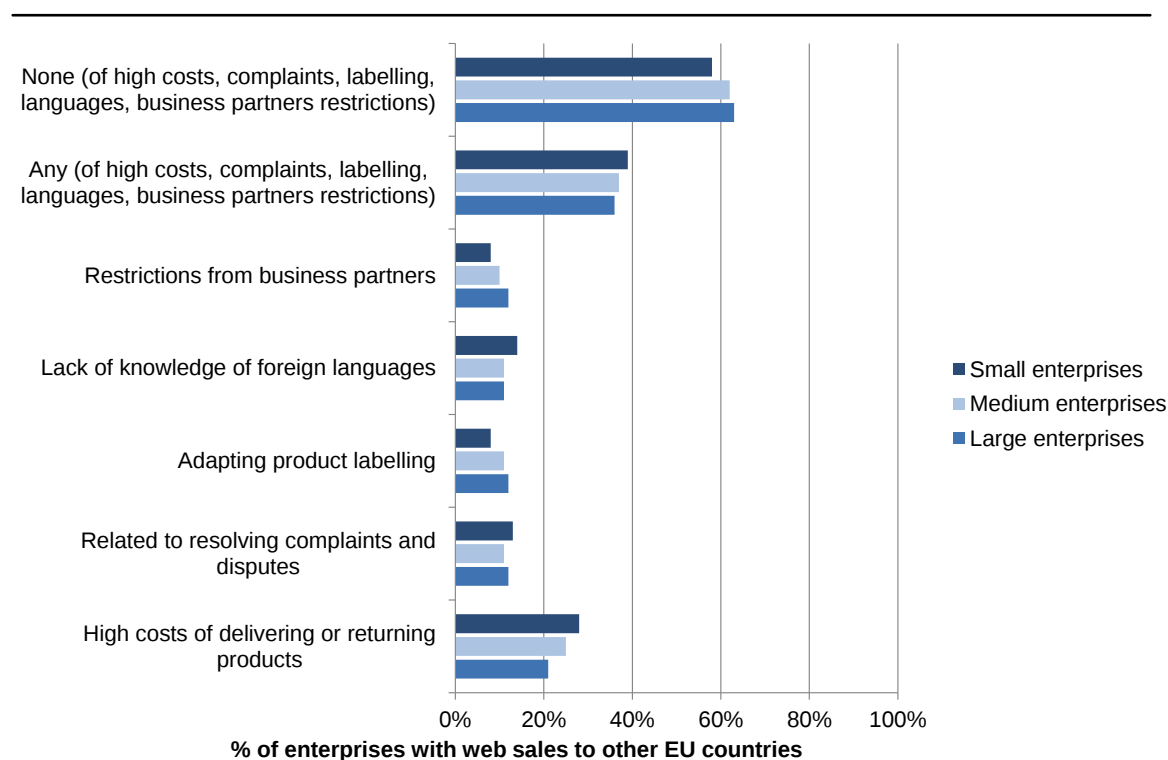
Finally, the results from the part of this study referring to consumers' experiences and behaviour indicate that consumers are only likely to complain when substantial issues with the delivery materialise, for example, if the purchased item is damaged, a wrong item was delivered, or the item did not arrive at all. Consumers' first point of contact for complaints is most likely the e-retailer or the carrier. Other entities, like consumer organisations, the postal regulator or an ombudsman, generally do not have a significant influence on the mindset of consumers. Finally, the WIK consumer survey suggests that many online shoppers are still not aware of alternative dispute resolutions (ADR and ODR) set up by EU legislation and implemented since 2016.

5 E-retailers’ experiences

5.1 E-retailers’ experiences in cross-border sales

In contrast to the high number of international and national surveys on consumer needs, such surveys on e-retailers’ needs are very rare.³³⁶

Figure 71 Difficulties faced by enterprises with web sales to other EU MS by country size (2017, EU-28)



Source: Based on Eurostat, [isoc_ec_wsobs_n2], extracted on 23.8.2018.

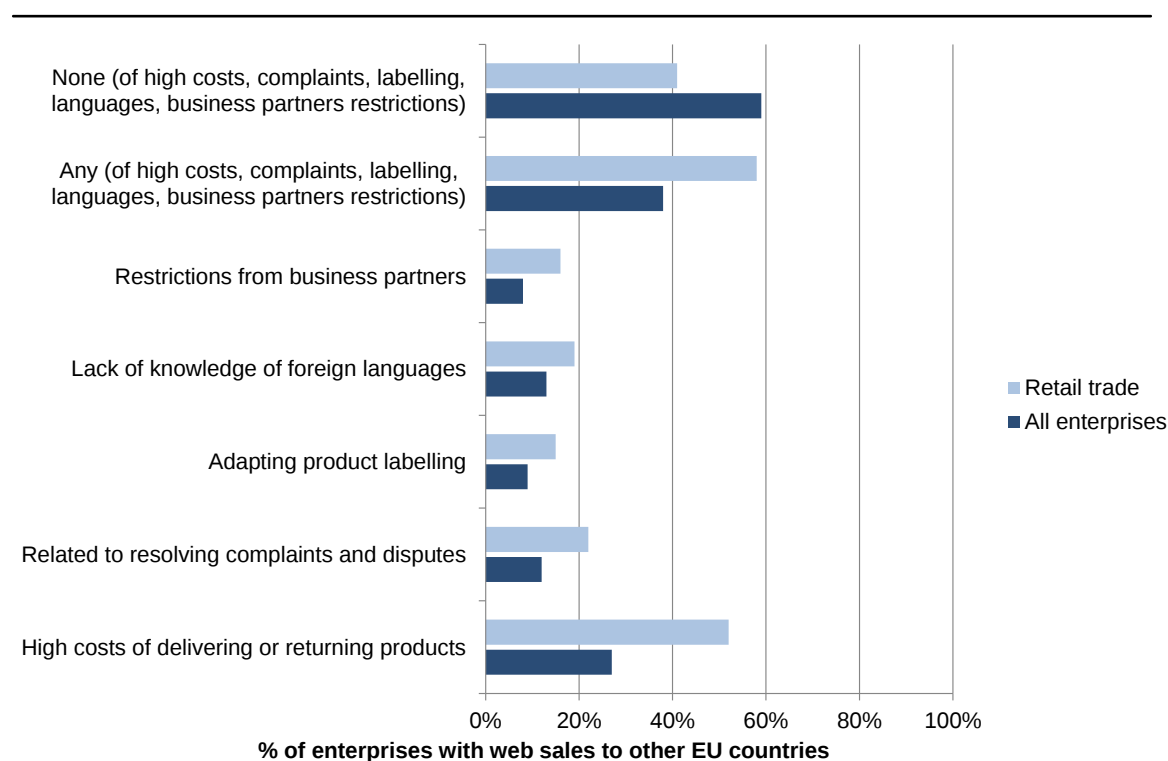
Note: The data is only available for 2017.

Data from Eurostat, presented in Figure 71, describe an overall ease of selling products to other EU MS online stated by enterprises with experiences in web sales to other EU MS. 59% of all enterprises stated that no particular difficulties are hindering their intra-EU online sales. Only one fifth of the enterprises complain about high costs of delivering and returning products. The share of large and medium enterprises that face some

³³⁶ WIK’s efforts to reach e-retailers by a separate survey on their experiences and expectations failed due to insufficient participation. At this point, we would like to thank all stakeholders that supported us to promulgate the survey.

difficulties in cross-border web sales to other EU MS is generally lower than that of small enterprises.

Figure 72 Difficulties faced by retailers with web sales to other EU MS (2017, EU-28)



Source: Based on Eurostat, [isoc_ec_wsobs_n2], extracted on 23.8.2018.

Note: NACE Rev. 2 G47, Retail trade, except of motor vehicles and motorcycles (10 persons employed or more)

The situation appears to be different when looking at the retailers' experiences with web sales to other EU MS. The share of retailers facing difficulties is for all aspects higher than the average of all enterprises. Particularly with regard to the cost of delivering and returning products more than half of retailers faced problems. Retailers are particularly challenged by logistics costs because (1) they are usually re-sellers with much lower product margins than manufacturers or wholesalers and (2) they are usually not pure e-retailers but have also to cover the costs of their brick & mortar business. Therefore, costs of delivery and returns are considered much more as a burden by retailers than by the enterprises, generally.

Due to the survey design it is not possible to identify to which extent high delivery costs or high return costs are responsible for this outcome. Additionally, it is not clear whether the return costs are only determined by the pure transport costs (that are paid either by

the e-shopper or by the e-retailer) or whether it refers to all cost elements of the return process.

A non-representative e-retailer survey of Ecommerce Europe (2016)³³⁷ highlighted that one third of the respondents consider that logistics and/or distribution make cross-border sales in Europe more difficult compared to 44% in their 2015 survey. Around one quarter complained about high costs and one fifth on “difficulties with returns for small volumes and with postal services”. Around one sixth complained about “long delivery times in EU for non-express services”.³³⁸

5.2 Managing cross-border deliveries

The vast majority of e-retailers are micro and small enterprises. As concluded in Section 3.2.4 national and international carriers increasingly seek to attract micro- and small e-retailers by facilitating access to their services. They introduced lower priced online tariffs for domestic and cross-border parcel services and developed web portals to better reach micro and small e-retailers, e.g. portals like MyDPD, GLS One or GLS EasyStart, MyDHL Parcel or MyDHL+ for express services, UPS Today, myHermes, etc. Moreover, small and medium-sized e-retailers are often eligible for business accounts at one or more carriers. A business account means that e-retailers have access to lower shipping rates, monthly invoicing (which reduces transaction costs) and other service components that facilitate the regular exchange of data between the carrier and the e-retailer (see Section 3.3.2 for more detail). Overall, in countries with well-developed e-commerce markets and large retail markets small and increasingly micro e-retailers (hobby sellers) have some choice between cross-border delivery solutions offered by USPs as well as parcel and express carriers, either by using online booking tools (to benefit from lower online tariffs) or by using intermediaries like parcel brokers and delivery management platforms.

USPs play an important role in domestic and cross-border B2C delivery (see also Section 3.3.3 for more detail). Firstly, the USPs provide basic domestic and international delivery services as part of their universal service obligation and to this respect, they are the carrier of last resort at least for e-retailers with a relatively low number of parcels per week. In some countries, the USP might be the only carrier that provides letter and parcel delivery services in areas of very low population density.³³⁹ Particularly in MS with emerging e-commerce markets low-performing USPs may therefore impede the development of a viable e-commerce business at least in rural and very rural areas if alternatives are missing (given that these regions have an appropriate digital infrastructure). The agreement closed between Amazon and Poste Italiane in

³³⁷ See Ecommerce Europe (2016), Cross-border E-commerce Barometer 2016.

³³⁸ See Ecommerce Europe (2016), Cross-border E-commerce Barometer 2016, p. 27.

³³⁹ Stakeholders at the national stakeholder workshop in Sweden highlighted that only PostNord delivers in the low-densely populated Northern part of Sweden. See Chapter 5.4.

June 2018³⁴⁰ also indicates the importance of USPs in B2C delivery. The Italian e-commerce market is still relatively small (compared to their Western and Northern counterparts) and has a considerable growth potential. While the delivery infrastructure is much better developed in the Northern part of Italy in the South Poste Italiane (and its express subsidiary SDA) appears to be the only carrier that deliver parcels.

Moreover, USPs are the first choice for cross-border deliveries of small-sized and lightweight e-commerce shipments domestically as well as cross-border. This is another outcome of the national stakeholder workshops and interviews with representatives of e-commerce associations. Letter post products for e-commerce shipments are usually the cheapest way to send merchandise cross-border (see also Section 3.3.2 for more detail). Since 2013 many USPs have developed dedicated letter post products (or delivery services for items that fit into letter boxes) for delivering e-commerce items cross-border with and without tracking.³⁴¹

While stakeholders agreed that the supply of dedicated services for domestic and cross-border deliveries has significantly improved since 2013 there are still service gaps in countries with low demand for cross-border e-commerce deliveries, for example the Greek e-commerce association stated that e-retailers often have access only to relatively expensive international parcel & express services to deliver heavier and/or valuable goods to other MS because low and unregular export volumes per country do not qualify for consolidation and direct injection in the countries of destination. For low-weight (less than 2 kg) and less valuable goods Greek e-retailers use international letter services provided by the USP (ELTA). On the other hand, the association highlighted that the local parcel & express carrier ACS has recently launched an EU Economy parcel product and a dedicated delivery and return solution for shipments to Cyprus which is an important target market for Greek e-retailers. The new offer of ACS is much cheaper than the available cross-border express services.³⁴²

Stakeholders at national workshops complained about a lack in transparency of available cross-border delivery services in a country. This is not surprising because the number and variety of delivery products has increased, for domestic as well as for cross-border delivery services. Emerging delivery management platforms (often in combination with parcel broker activities) help particularly small e-retailers to facilitate access to delivery services of more than one carrier. These platforms have emerged in large e-commerce markets (e.g. in France, Germany and the UK) but also in markets with quickly growing e-commerce markets and significant competition in delivery services like (e.g. in Italy, Poland and Spain). Parcel brokers and delivery management

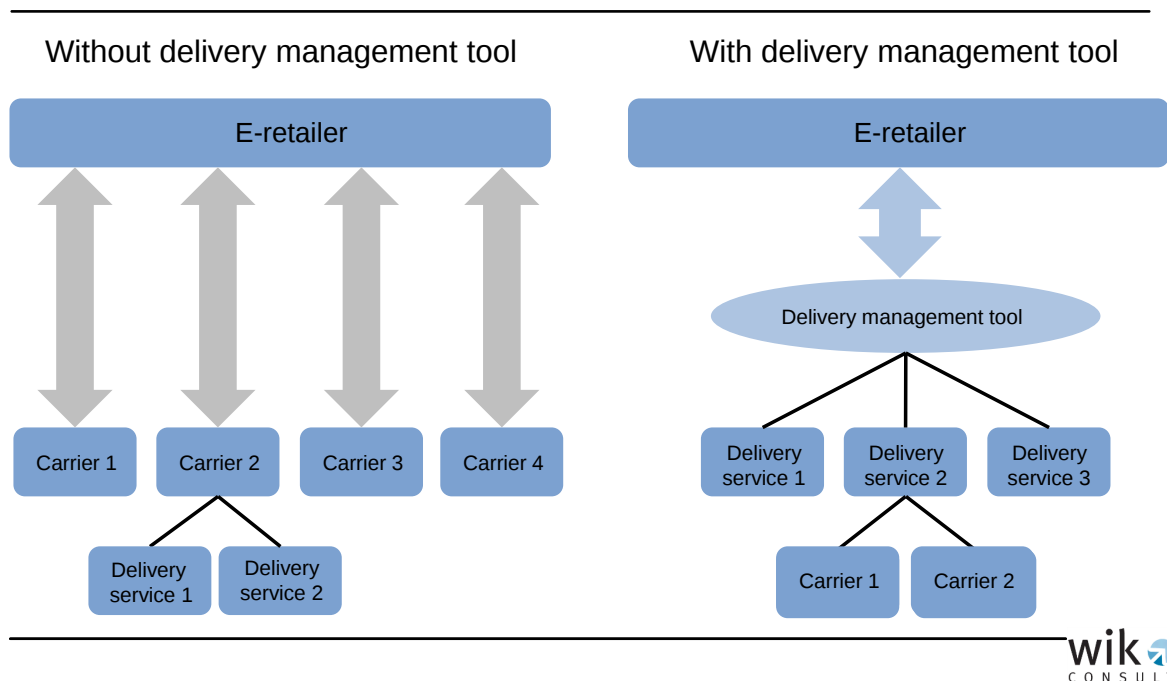
³⁴⁰ See Poste Italiane (2018), Strong results confirmed in 2Q18 and 1H18.

³⁴¹ E.g. PostNL (Priority Pakjes Tracked), Deutsche Post (Warenpost International), Correos (Paq Light International), Austrian Post (Paket Light International XS) or PostNord (Varubrev). Generally, e-retailers can use registered cross-border letter post products. These services are usually less costly than comparable cross-border parcel services, see also Chapter 3.3.7.

³⁴² Interview with the Greek e-commerce association EPAM, 23 August 2018.

platforms seek to integrate a broad range of different domestic and cross-border delivery services. As e-retailers need different delivery services depending on the product category, size and weight, speed of delivery, customised delivery solutions these platforms can offer e-shoppers a bundle of delivery options that best fit to the product categories (domestically as well as cross-border).

Figure 73 Function of a delivery management tool



Source: Based on WIK-Consult (2014)

Figure 73 illustrates the function of a delivery management tool. In the case without such a tool (standard case for many micro and small e-retailers) the e-retailer has to manage the data flow and the production of labels etc. for each carrier separately. Today, there are many possibilities to link the online shop respectively the Enterprise Resource Planning / Inventory Management System to carrier solutions. E-retailers can either use specific web portals provided by carriers (e.g. GLS One, MyDPD or MyHermes), plug-ins (e.g. for the shop software), or they can individually integrate the carrier solutions. However, as the electronic interfaces among the carriers are not standardised this may require substantial investment in IT interfaces and time. Delivery management tools provide one standardised interface for the e-retailer and are able to manage the interfaces to different carriers and their delivery services. Metapack (UK) is an example for a sophisticated delivery management tool for large e-retailers. Boxtal, located in France, sendcloud or shipcloud, both located in Germany, are examples for such delivery management tools for small and medium-sized e-retailers (see Case study 11). In some cases e-retailers have the opportunity to benefit from preferential tariffs for specific delivery services if they use such a delivery management tool.

However, choice among different delivery management tools for e-retailers and access to preferential tariffs vary from country to country and from carrier to carrier.

Case study 11: Delivery management platforms for domestic and international deliveries: Examples Packlink (ES), Boxtal (FR), Shipcloud (DE), SendCloud (NL), Sendit (PL), ParcelHero (UK)

Delivery management or shipping platforms enable e-retailers to manage their deliveries more easily and having access to more than one carrier (multi-carrier solution). Furthermore, aggregating shipments from multiple customers, these platforms have signed advantageous contracts with international carriers, thus in turn providing delivery rates significantly lower than list prices to their customers. Nevertheless, services and condition offered to the customers vary across the five companies.

All of them have the same target group, namely SME e-retailers. Registration is required to benefit from special services, however Packlink and ParcelHero have specific branches dedicated to business customers (Packlink PRO, ParcelHero® Business Credit Account), while shipcloud and sendcloud offers different membership conditions depending on the monthly volume of shipments (e.g. at shipcloud starting from EUR 14 for a maximum of 750 shipments per month to EUR 149 for up to 30.000 shipments per month).

Private customers can book their shipments at cheaper prices than those offered by carriers directly; further Boxtal, Packlink and ParcelHero offer a price comparison engine, allowing consumers to easily compare services and prices between multiple carriers. Shipcloud does not offer a price comparison engine but a tracking system, while on Sendit's webpage it is possible to compare services offered by different carriers without price comparison. SendCloud offers 'Smart Shipping Rules' that help to identify the most cost-efficient delivery service for each product category.

E-retailers with high shipping volumes can benefit from additional services offered by these platforms. In addition to discounted prices, Boxtal, Packlink and shipcloud allow customers to book and manage their deliveries through a dedicated delivery management platform. ParcelHero's and shipcloud's members can track their delivery through an online tracking system. Moreover, all the five companies have developed APIs which can be integrated into e-retailers' e-commerce platforms, marketplaces or other systems. Finally, shipcloud offers the possibility to registered customers with a shipping volume higher than 3.000 per month to manage their deliveries through its delivery management platform, maintaining their own contracts with carriers. Moreover, since October 2017 shipcloud offers a 'shipcloud connector' for Etsy sellers to facilitate delivery management.

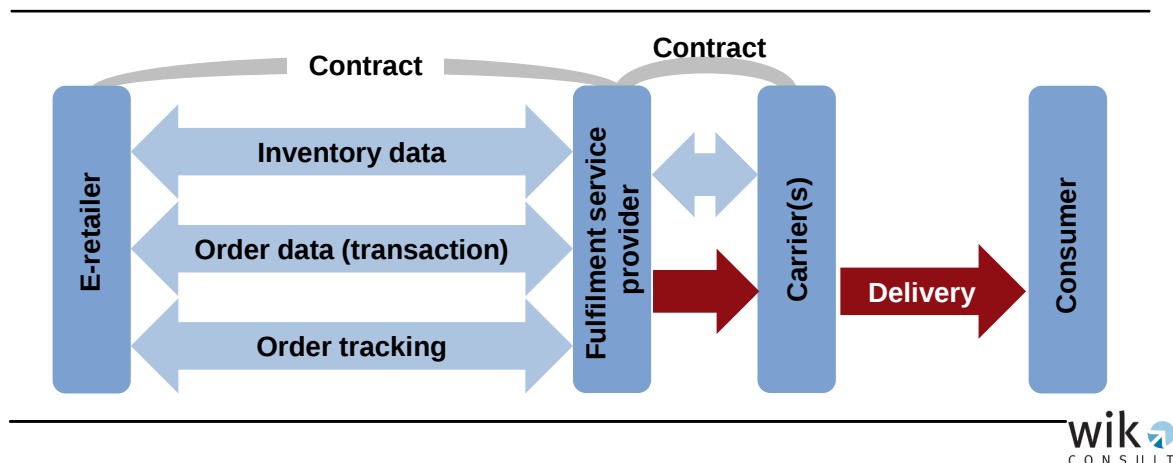
Both domestic and international shipments are facilitated by the five platforms. Boxtal and Packlink have established partnerships with a selection of international carriers. Packlink is especially focusing on the Spanish, German, French and Italian market, putting forward that in such cases it might be largely fostering domestic shipments as well. ParcelHero in addition to offering shipments abroad offers a special import service from over 220 countries to the UK. Sendit works in cooperation with international carriers, but the website available only in Polish indicates a focus on the domestic market. Shipcloud offers shipping solution both to Germany as well as abroad, closely cooperating with German carriers and with Parcel One, a consolidator for international shipments. In contrast to shipcloud, SendCloud has launched a dedicated internationalisation strategy and is currently providing its services to e-retailers in five European countries: Austria, Belgium, France, Germany and the Netherlands.

Source: Company websites

Finally, e-retailers have the opportunity to outsource inbound, outbound and reverse logistics to an external fulfilment service provider (or 'Third-Party-Logistics' 3PL) which allows the e-retailer to concentrate on his retail trade. This is illustrated in Figure 74. In that case the e-retailer and the fulfilment service provider have to agree on appropriate

service standards for warehousing, deliveries and returns. Fulfilment service providers are an appropriate option for quickly growing e-retailers to more easily scale their business without the need of significant investments in warehousing and technology.

Figure 74 Fulfilment service provider (3PL)



Source: WIK-Consult

From the logistics' point of view the integration of a 3PL provider transforms the supply chain into 'B2B2C' relation because the e-retailer has to arrange that his products are transported either from his warehouse or from the wholesaler/manufacturer to the 3PL provider (B2B). The 3PL provider is then responsible for the B2C delivery. In this case the fulfilment provider has an individual contract with one or more carriers. He acts as a 'physical' consolidator because he can bundle shipments of several e-retailers.

There are basically three groups of 3PL suppliers

- 'Independent' 3PL suppliers (e.g. SEKO Logistics, Arvato)
- Carriers that offer warehousing and other supply chain services (e.g. offered by international carriers e.g. DHL eCommerce / DHL Supply Chain and UPS or by local carriers e.g. PostNL and bpost)
- E-retailers / online marketplaces with fulfilment services (e.g. Fulfilment by Amazon or Ebay Fulfilment, see case studies 5 and 6)

Case study 12: Ebay Germany launches Ebay Fulfilment and Ebay Shipping service for sellers

Ebay Germany has launched new logistics services for Ebay sellers to meet the standards of the Ebay Plus service and ensure next-day delivery in cooperation with Hermes and DPD, among others. The Ebay Plus service offers Ebay buyers free deliveries and returns as well as access to exclusive deals, promotions and other benefits for an annual fee of EUR 19.90.

Ebay Fulfilment is a multi-channel fulfilment service that provides next-day delivery of customer orders until 6 pm on the next day. The logistics partner Fiege takes over the storage and shipping preparation of the products for the participating Ebay retailers on behalf of Ebay. An optimal delivery experience for the end customer is guaranteed by Hermes. Support for further shipping through other service providers are planned for 2019.

With Ebay Shipping, Ebay offers smaller sellers, in particular, fast delivery at an attractive price for all channels. During the beta phase, the Ebay shipping solution is implemented in cooperation with DPD. Retailers participating in the beta phase agree with the Ebay customer service on a suitable daily pick-up time slot that is always later than 2:30pm so that as many orders as possible can be processed on the same day. DPD delivers these items usually on the next day. End customers benefit from its digital services such as map-supported live tracking or a 60-minute delivery time slot. Retailers can obtain Ebay and multichannel parcel labels via the new Ebay Shipping platform. The beta phase initially applies to retailers in the Bremen area. Further regions and shipping services will be successively added in 2019.

Source: CEP Research, Ebay Germany launches Ebay Fulfilment and Ebay Shipping service for sellers, 17 October 2018

The European Amazon marketplaces in combination with FBA offer small and medium-sized e-retailers the opportunity to expand cross-border as outline in Section 2.3. Additionally, Amazon offers its sellers fulfilment services that facilitate growth in other European markets. As Amazon has warehouses in eight EU MS e-retailers can stock their products in the country of destination which reduces the delivery time and improves the customer experience. In the next case study the Amazon model is described in more detail.

Case study 13: Fulfilment and delivery services by online marketplaces: Pan-European FBA by Amazon (Fulfilment by Amazon)

Amazon has five separate marketplaces (UK, Germany, France, Spain and Italy), the countries are close enough to each other that they can be treated like a single marketplace. Moreover, Amazon operates in total 72 fulfilment centres (warehouses) in 8 European countries:

- UK: 22 (planned 5)
- DE: 20 (planned 2)
- FR: 10
- IT: 5
- ES: 7 (planned 2)
- CZ: 2 (fulfilment & return centers), PL: 5 SK: 1

The warehouses located in the Eastern European countries are mainly used to serve the Western European markets (notably Austria and Germany). Pursuing the objective of further integrating the five European marketplaces and with the focus on providing the best service to customers in term of speed of delivery, Amazon offers its sellers the possibility to make use of the Fulfilment by Amazon (FBA) service. Through a single seller account it is possible to manage and sell inventory across all five European marketplaces. Products have to be sent by sellers to an Amazon Fulfilment Centre – either with an own carrier or by joining the ‘Amazon Partnered Carrier Program’ (e.g. DHL in Germany) - then Amazon will take care of picking, packing and shipping the products to the customers, a customer service in the local language is offered as well. Any product category which can normally be sold through an Amazon Seller Account up to a maximum of 30 kg is eligible for Fulfilment by Amazon (FBA). However, the decision to closely cooperate with Amazon also means that the dependency of the e-retailer on Amazon increases. The single e-retailer does not have the bargaining power to negotiate on FBA conditions but is bound to Amazon's public tariffs and conditions.

Marketplace Pulse reports that among the top 10,000 sellers on the French, Italian and Spanish Amazon marketplaces more than 50% and on British and German marketplaces more than 40% of sellers using FBA. The share of sellers using FBA has increased since June 2017.

With Pan-European FBA Amazon distributes sellers' products to the fulfilment centre in the destination countries based on anticipated demand. Only local fulfillment fees (and delivery costs) are then applied. Moreover, pan-European FBA allows to become eligible for Prime-delivery in each of the destination countries. This is not possible when opting for the European Fulfilment Network (EFN). In that case sellers store their products in a local Amazon's Fulfilment Centre (e.g. in Germany). Orders coming from other European marketplaces are then shipped from the German warehouse (export to the country of destination). In this case the cross-border EFN fees apply for orders to the countries of destination (with longer delivery time). Depending on the location of the inventory the seller has to take care on differences in the VAT application. If the products are stored in another European country the seller needs a local VAT number. If the products are only stored in the home country, a VAT number for the country of destination is only needed if certain revenue thresholds are reached.

Both options, pan-European FBA as well as EFN facilitate small and medium-sized e-retailers to grow internationally and broaden the customer base. The pan-EU FBA is particularly attractive because it helps to reach the Prime members in other European countries. However, e-retailers have to weigh the advantages of this programmes against potential shortcomings and risks as outlined above.

Sources: MWPVL International (2018), Amazon Global Fulfillment Center Network, retrieved 7 November 2018; Marketplace Pulse (2018), FBA Usage Among Amazon Marketplace Sellers, retrieved 7 November 2018; Marketplace Pulse (2018), Two out of Every Three Amazon.com Sellers Use FBA, 31 January 2018; Amazon Sellers' website

Improved cross-border delivery services are available in many but not in all MS. In countries with a tradition in distance sales (in the pre-internet time based on printed catalogues) domestic B2C parcel delivery services had already been in place (e.g. in the Nordics, the Netherlands, Austria, France, Germany and the UK). In these MS, particularly the USPs play an important role in B2C delivery. In MS without such a tradition a comparable B2C delivery infrastructure has not been developed in the past but is emerging in line with growing e-commerce (like in many Eastern and Southern EU MS). With growing cross-border B2C e-commerce cross-border delivery services have emerged along with important export and import relations (mainly between neighbouring countries, see Sections 3.2.2 and 4.2.3).

Accordingly, there are two major components to categorise the possibilities of e-retailers to manage cross-border deliveries: the size of the e-retailer (in terms of the number of e-commerce shipments) and the state of development of the national e-commerce ecosystem (in terms of supply of e-commerce intermediaries like parcel brokers and delivery management platforms, fulfilment services providers etc.).

Table 16 E-retailers' access to (cross-border) delivery services

E-retailer size	State of development of domestic e-commerce ecosystem		
	High level	Medium level	Low level
Micro	Single-piece and cheaper online tariffs (non-account customers) Online access Parcel brokers Choice between different carriers and services (including USP)	...	Neither the USP nor local parcel & express carriers offer specific delivery solutions for micro e-retailers USP as delivery service provider of last resort
Small	PLUS Business tariffs (account customer) Delivery management platforms / parcel brokers	...	USP (merchandise sent as priority / registered letter post) If eligible to become an account customer access to business and/or individual tariffs for parcel/express services with
Medium	PLUS Individual tariffs (account customer) 3PL services / consolidators	...	- Local carriers (may include the USP) with delivery partners in the countries of destination - International express carriers
Large	PLUS Direct injection	...	No large e-retailers

Source: WIK-Consult

Table 16 provides a stylized overview of the relationship between e-retailers' size and the stage of development of the national e-commerce market and how this affect the supply of available B2C delivery services.

5.3 Managing cross-border returns

For e-retailers returns create a significant cost risk. The share of returns vary with the product category: clothing and footwear are by far most often subject to returns than other product categories followed by home electronics.³⁴³ The return levels are also different between domestic and cross-border purchases. An online survey among European e-retailers by the Amsterdam University of Applied Sciences (2017) provides indications that the share of cross-border returns is generally lower than of domestic returns in most countries.³⁴⁴ Moreover, return rates vary between countries. The share of e-shoppers returning goods were highest in Germany and the Netherlands and lowest in Poland according to the 2018 consumer survey of PostNord.³⁴⁵ The return process from an e-retailer's point of view consists of several elements including the transport from the consumer back to the warehouse of the e-retailer. While domestic returns are already a complex task cross-border returns can be even more complex.

The WIK consumer survey has revealed that the gap between consumers' expectations and their experiences with the return management of e-retailers is particularly high, for cross-border purchases more than for domestic ones (see Section 4.3.4). E-shoppers expect easy return handling ideally free of charge, an expectation also driven by large e-retailers like Amazon or Zalando that have established free returns as standard in some countries (e.g. in Germany and the UK). This also puts pressure on SME e-retailers with single web shops as the national stakeholder workshops have revealed (see Section 5.4) because customers expect a similar level of convenience and services from other web shops, too.

As cross-border e-commerce continues to rise, and more businesses start selling cross-border to win and retain foreign consumers, the solution of the cross-border return challenge becomes more urgent. Consumers have the right to withdraw goods within 14 days from the delivery without specific reasons. Within 14 days after getting the information on the return the e-retailer has to refund the customer.³⁴⁶ E-retailers should inform potential customers transparently about their return (and refunding) policy and on the cost of return ideally at an early stage of the online sales process. Online marketplaces put additional pressure on their sellers to provide low-cost return solutions. Amazon, for example, requires that sellers have to state a local return address for cross-border orders of the respective national Amazon marketplace (see

³⁴³ See PostNord (2018), E-commerce in Europe 2018.

³⁴⁴ See Amsterdam University of Applied Sciences (2017), The State of Cross-border Ecommerce in Europe, Cross-border performance compared to domestic performance of European online shops (<https://public.tableau.com/profile/cmihva#!/vizhome/TheStateofCross-borderEcommerceinEurope/Cross-borderE-Commerce>).

³⁴⁵ See PostNord (2018), E-commerce in Europe 2018.

³⁴⁶ Directive 2011/83/EU of the European Parliament and of the Council of 25 October 2011 on consumer rights, amending Council Directive 93/13/EEC and Directive 1999/44/EC of the European Parliament and of the Council and repealing Council Directive 85/577/EEC and Directive 97/7/EC of the European Parliament and of the Council [EU Consumer Rights Directive], Article 9 and 13.

Case study 14 on Amazon's requirements). Refunding of the consumer is the other side of the coin. From the e-retailer's point of view refunding can only happen after the arrival and the inspection of the return in the warehouse. In case of cross-border returns the time lag between the shipment of the return and the arrival in the warehouse can be very long. E-retailers additionally complain that compared to deliveries the return process is less transparent to the e-retailer meaning that he does not know where the return exactly is and when it will arrive in the warehouse.

Case study 14: Requirements on return policies of online marketplaces for cross-border e-commerce (Amazon marketplace)
Amazon expects that Amazon sellers offer free or low-cost returns to their buyers for international shipments. E-shoppers can return most ordered items within 30 days from receipt of the delivery. In case of international returns from customers of one of the five European marketplaces (i.e. Italy, France, Germany, Spain and the UK), Amazon requires that sellers apply one of following methods: (1) Offering a full refund without requesting the item to be returned. (2) Providing a local return address in the buyer's marketplace. For example, if the product was sold on Amazon.it, the seller has to provide a return address in Italy so that the buyer has to pay not more than the domestic tariff. (3) Providing a pre-paid return mailing/parcel label for a return request. Amazon recommends that the prepaid return shipping labels include tracking. If a local return address is not available, the seller could use an International Returns Provider on the Solution Provider Network. Registered providers for European returns at Amazon are for example B2C Europe, Salesupply or Ezi Returns.

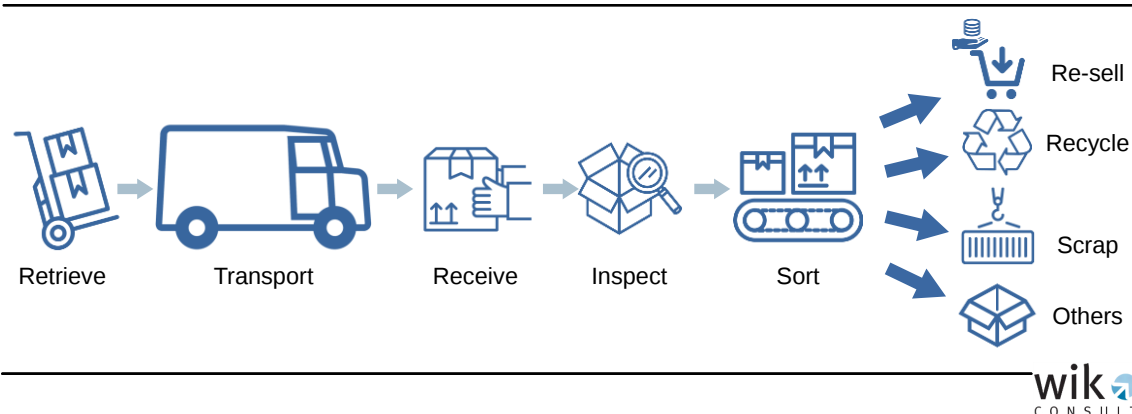
Source: Amazon (2018), Customer Returns for International Sales, accessed on 1 August 2018.

According to a German e-retailer survey on the delivery and return management in e-commerce (2018), the most important cost drivers of returns are the reception (including the identification of the article) and the inspection of returned items followed by the transport/delivery costs (see Figure 75). Fashion e-retailers face the highest return rates with up to 60%.³⁴⁷ A UK survey of Barclaycard (2018)³⁴⁸ also highlighted that fashion e-retailers are particularly affected, with almost 40% reporting that refunds have risen. According to this survey, businesses are adapting in response; nearly 30% the respondents increased the price of the items to cover the cost of managing and processing returns. 28% of the respondents worked with a logistics provider to speed up the returns process.

³⁴⁷ See EHI (2018), Geklickt, gekauft und retourniert, press release of 11 June 2018.

³⁴⁸ See Barclaycard (2018), Return to Sender: Retailers face a 'Phantom Economy' of £7bn each year as shopper returns continue to rise, press release of 26 June 2018.

Figure 75 Reverse logistics services



Source: WIK-Consult

Today, e-retailers have several options how to deal with cross-border returns.

- It can be reasonable to write off low-value items when the handling costs of the return are not covered by the expected revenue (of from re-selling);
- Outsourcing of the returns management to a 3PL logistics provider is another option (e.g. Amazon offers returns handling as part of its FBA programme targeting small e-retailers, global providers are for example XPO Logistics, Kühne & Nagel targeting large e-retailers);
- The provision of a local return address at a parcel forwarding service provider could be practical in case of low volume returns but can also be very time-consuming (e.g. shipito provides US mailing addresses for a fixed fee per month to consolidate parcels which are then sent back to the country of origin)³⁴⁹,
- The e-retailer can arrange a return shipping in cooperation with a carrier, for example with
 - an international express carrier with the potential risk of being expensive (pick up at the premises of the e-shopper);
 - a European parcel carrier (e.g. DPD, DHL Parcel, GLS or Hermes) with either a collection service or a drop off at a PUDO of the carrier ;
 - a USP which is usually cheaper but more time-consuming (low cost returns as international letter post item, usually not tracked), in that case the e-shopper has to drop off the return at the post office / parcel shop of the postal operator.

Since 2013 parcel & express carriers as well as many USPs have developed dedicated services for returns (including cross-border returns) either as tracked or

³⁴⁹ Shipito.com website.

non-tracked low cost letter post service (only USPs) or as a more expensive parcel service. Most USPs participate in the IPC Common Return Platform (element of the IPC INTERCONNECT programme) that allows them to offer e-retailers' customers priority postage-paid international return services.³⁵⁰

- E-retailers can outsource the returns management to returns consolidation services specialised on cross-border returns (e.g. ReBounce Returns or ZigZag) which might be a useful model particularly for e-retailers with high return volumes.
- Delivery management platforms like SendCloud also offer solutions to small and medium-sized e-retailers to manage returns by providing a web portal solution that e-retailers can use to offer a customised returns services to their customers including the production of the parcel label.

However, the availability of appropriate return services depends on the country and the development stage of the e-commerce ecosystem. The larger this ecosystem the easier is it even for small e-retailers to organise not only domestic but also cross-border returns.

Generally, a web portal or similar solutions that require consumers to contact the e-retailer (or its service provider) before sending an item back has the advantage that the e-retailer is timely informed about the return and that he has better control and more transparency on the return process.

The WIK consumer survey has shown that there is still a significant gap between online shoppers' expectations on the management of returns and their experiences, for both domestic and cross-border purchases. This indicates that the return challenge is not limited to cross-border online purchases. However, compared to 2013, carriers as well as e-retailers are much more aware on the necessity of appropriate and affordable return solutions that better comply with the expectations of online buyers.

Within the EU the supply of return solutions has been improved since 2013. E-retailers have more options how to deal with returns and to offer their customers more convenient return solutions to date, at least in MS with well-developed e-commerce markets. For e-retailers that are located in MS with less developed e-commerce markets the situation might be different. In these MS e-retailers may have less or no access to appropriate return solutions resulting in significantly higher costs for returns. This might limit the their willingness to sell to other MS.

But, the major challenge, the high total cost of handling and refunding returns, still remains. While the cost of processing returns (i.e. receiving, inspecting and final re-use

³⁵⁰ IPC, Returns Service (<https://www.ipc.be/services/e-commerce-solutions/returns>). One example for an international return service is DHL Retoure International. Consumers can drop off their returns in postal outlets of the USP in their home country.

of the item) depends on the number of transactions, the transport costs for returns vary with distance and can be high particularly in case of cross-border returns if sent as single-piece item (and the consumer claims funding of the return cost from the e-retailer). Solutions like the one developed by ZigZag, that allows the re-sale of returns at a local online marketplace in the country of destination, may help to at least avoid the (high) cost of transporting goods back to the e-retailer (see Case study 15).

In the end, it is up to the e-retailer to decide how to design his return policy for domestic and potential foreign online shoppers and to decide which return solution is the most appropriate for his business (if any).

Case study 15: Examples for a shipping platform for international returns: ReBound Returns and ZigZag

Both companies, ReBound and ZigZag, were founded four years ago, 2015 and 2014 respectively. They support retailers to manage returns at a global scale and have developed a return platforms

Both have developed global returns management platforms. ReBound has been specifically developed for online fashion retailers (brands and online shops) that face particularly high return rates. According to ReBound, the demand for their services is quickly growing. The returns platform has over 500 customers and manages 35 million returns transactions a year. The relatively low number of customers indicates that ReBound mainly targets large e-retailers. The ReBound returns platform has integrated more than 110 carrier services worldwide, giving the retailers a single IT platform to manage returns globally and enabling consumers a simple system to send their items back. Customers can either pay for their return postage online through the ReBound platform benefiting from a more affordable choice of local return options (i.e. using a local return address so that only domestic parcel rates have to be paid in the worst case), or they return purchases for free depending on the e-retailers' returns policy. The entire return journey is managed by ReBound including consolidating returns and tracking updates.

ReBound is a global solution supporting 195 countries throughout Europe, Australia and the USA. Originally launched solely as a cross-border solution, ReBound has recently moved into the UK e-commerce market to knit together many of the UK's leading delivery options through a single IT platform, together offering the largest UK returns network. After receiving a significant investment, ReBound is looking to expand beyond the clothing retail market, and is targeting expansion into homeware, technology and furniture.

The ZigZag network connects over 200 local warehouses in 130 countries. Consumers can return items back to e-retailers via ZigZag's returns portal. Customers send tracked returns by post, locker or courier from over 300,000 locations (provided by connected carriers). Goods are sent back to a local warehouse where ZigZag can scan, grade, consolidate or refurbish products to get them back into the supply chain more quickly. Customers can be refunded more quickly, and goods can then be returned, destroyed, donated or re-fulfilled to a new order or resold via marketplaces. According to ZigZag, e-retailers can save over 50% of delivery costs. Moreover, the opportunity to re-sell returns in the country of destination may solve the problem many e-retailers and their customers face when sending back the items at high cross-border parcel tariffs. However, similar to Rebound, ZigZag still puts the emphasis on large e-retailers with significant return rates.

For both start-ups it is necessary to get as much volume as possible as quickly as possible to built up and operate such a global return platform profitably. Integrating carrier services into the returns platform and negotiating lower delivery rates (for domestic and cross-border returns) with local and international carriers require sufficient actual and potential volume. Otherwise the start-ups do not have enough bargaining power to close such agreements with carriers. If these platforms are successful we expect that in the next years their innovative solution will become also available to smaller e-retailers as well as to other product categories (than only fashion articles) with significant international online trade.

Sources: ReBound website; fashionunited.uk (2018), ReBound receives “significant investment” from BGF, published 2 October 2018; and retailtimes.co.uk (2017), International returns platform ReBOUND launches in the UK market, published 7 August 2017. Pentagon (2018), Returns in Retail: Interview with Al Gerrie, CEO & Founder of ZigZag Global (October 2018, youtube)

5.4 E-retailers face different choices for delivery in different Member States

5.4.1 WIK organised national stakeholder workshops in six Member States

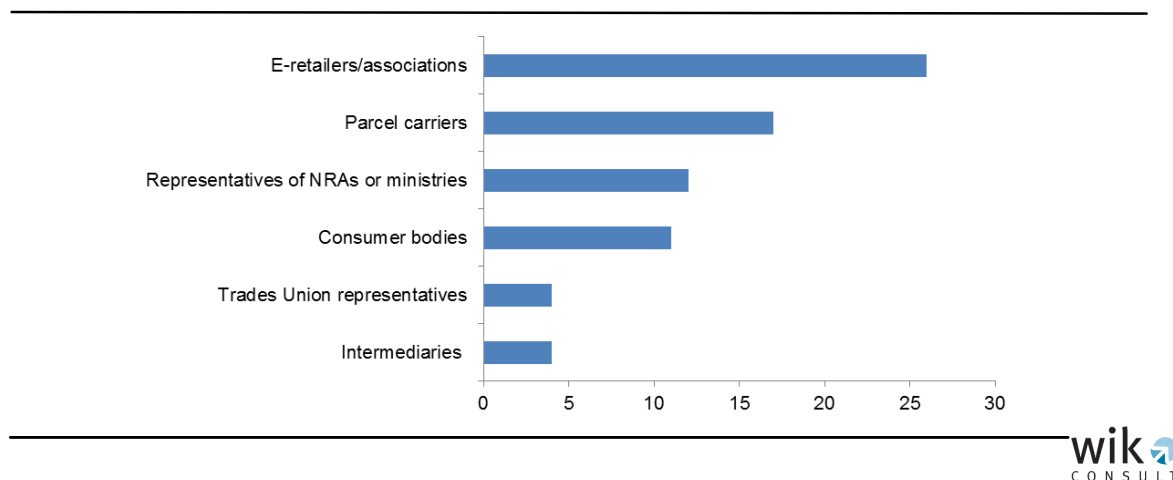
The National Stakeholder Workshops in Germany, Belgium, Bulgaria, Poland, Portugal, and Sweden are part of the research and fact finding process of the study and an essential method to gain insight into the e-retailers' views and perspectives on cross-border e-commerce. The workshops were designed to ensure a wide level of participation and engagement from specific stakeholders and interested parties involved in cross-border parcel delivery in six MS. With Belgium, Bulgaria, Germany, Poland, Portugal and Sweden, MS from all regions of the European Union were selected to reflect diversity among EU MS.

The workshops dealt with recent developments, current performance and future trends in e-commerce and delivery markets. They specifically addressed both domestic and cross-border markets (export e-commerce and logistics). A limited group size of 10-15 stakeholders facilitated a vivid and interactive discussion among the most relevant stakeholders. Categories of stakeholders invited included³⁵¹

- E-retailers and their associations
- Parcel carriers
- Intermediaries (i.e. e-fulfilment suppliers/3PL, virtual consolidators/parcel brokers or shipping management platforms)
- Consumer bodies
- Representatives of trade unions
- Representatives of NRAs or ministries

³⁵¹ The quotation for the representatives of the different stakeholder groups was up to 7 e-retailers or associations, 2-3 intermediaries, up to 2 consumer bodies representatives, 2-3 parcel carriers, as well as representatives from trade unions and postal regulators (national regulatory authorities) or ministries.

Figure 76 Total number of stakeholders involved per category

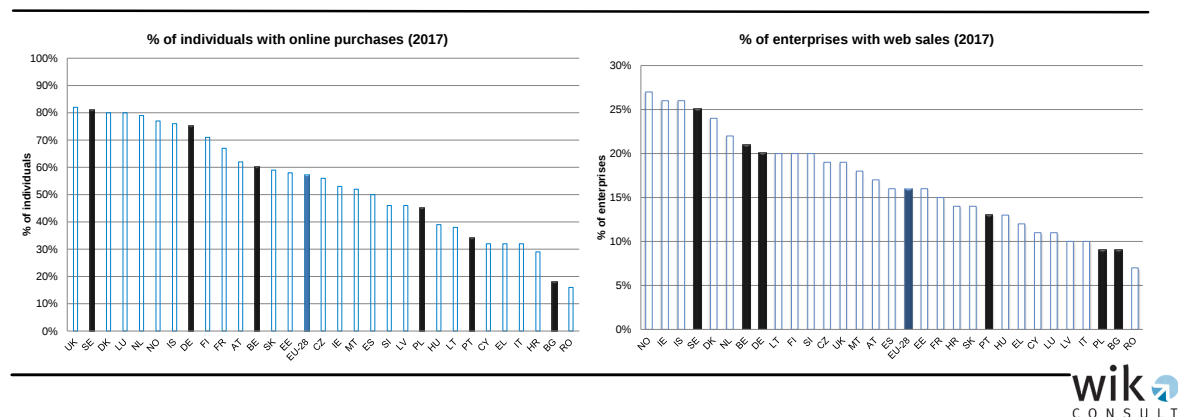


In total, 74 stakeholder representatives participated at the six workshops. The half-day events were held from June to September 2018.³⁵² The overall atmosphere at all discussions was output-oriented, positive and constructive. The mainly discussed topics and more controversial issues at the workshops varied with the maturity of the e-commerce ecosystem and the importance and development of cross-border deliveries especially for medium-sized e-retailers as well as geographical and cultural-specific conditions.

There are significant differences between Northern/Western (Belgium, Germany and Sweden) and Southern/Eastern EU MS (Bulgaria, Poland and Portugal) in the level of e-commerce activities from consumers and enterprises (see Figure 77 and Figure 78).

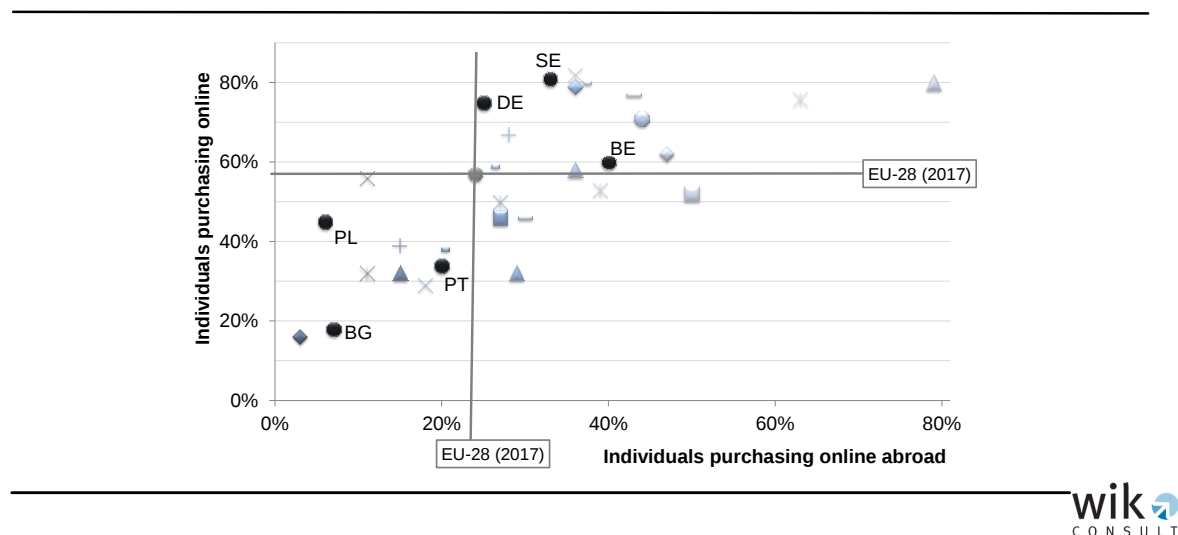
³⁵² WIK-Consult organised the workshop in Germany, all other workshops were organised by its partner Efficienc3: 29 June 2018, Sofia, Bulgaria; 11 July 2018, Cologne, Germany; 19 July 2018, Lisboa, Portugal; 10 September 2018, Stockholm, Sweden; 14 September 2018, Vilvoorde, Belgium, 14 September 2018, Warsaw, Poland. All participants discussed in their national language. The local moderators recorded each workshop in writing and send detailed internal protocols to WIK-Consult for evaluation. As agreed with the participants, these notes are confidential and not open for publication.

Figure 77 E-commerce in the workshop countries (% of individuals with online purchases in the last 12 months, 2017)



Source: Based on Eurostat, [isoc_ec_ibuy], extracted on 9.3.2018 and [isoc_ec_eseln2], extracted on 10.7.2018.

Figure 78 Domestic and cross-border purchases (2017)



Source: Based on Eurostat, [isoc_ec_ibuy], extracted on 9.3.2018.

In Belgium, Germany, and Sweden the share of domestic and cross-border online shoppers lies well above the EU average while this share is much lower in Bulgaria, Poland, and Portugal.

5.4.2 Barriers for e-commerce activities vary among Member States

In the workshop discussions, stakeholders mentioned a variety of barriers that limited the development of e-commerce, in general and of cross-border e-commerce, in particular.

- Generally, it appeared that online shoppers were more open for cross-border purchases than e-retailers for cross-border sales. This seemed particularly true in Portugal and Belgium. Retailers in MS with a tradition in mail-order business like Germany, Poland and Sweden had apparently transformed more easily to benefit from growing e-commerce.
- Swedish consumers living in a country with a wide disparity between urban and rural areas in terms of population density appeared to be even more ready to use online-shopping.

In MS with a tradition in mail-ordering, competitive delivery markets supported the success of domestic e-commerce. If the domestic e-commerce market was small and lacks attractive product ranges consumers were more willing to buy cross-border. Limiting factors like age or lack in digital readiness seemed less important today, even in Southern or Eastern EU MS.

In MS with less advanced e-commerce markets like Bulgaria, Poland, and Portugal more smaller domestic retailers started activities in online sales. Stakeholders highlighted that domestic e-commerce markets in MS without large national e-retailers or online marketplaces were driven by foreign actors, e.g. Amazon that drove the development of the Spanish and the Italian e-commerce markets. In contrast, Poland had a large national e-commerce company named Allegro that had established a solid market presence with its online marketplace which was the mostly used one of Polish online shoppers. In Portugal and Bulgaria, such a powerful e-commerce driving force was missing. Another factor that might limit the development of a national e-commerce market was the location of a country. Belgium, for example, is surrounded by mature e-commerce markets with large e-retailers and online marketplaces in the Netherlands, Germany and France. Portuguese consumers had the opportunity to benefit from the much larger Spanish e-commerce market. This led to difficulties for national retailers to transform into successful e-retailers and inhibited the emergence of new pure e-retailers in these MS. Stakeholders at the Swedish workshop expected that Amazon might enter the market in the future and many believed that this would highly affect e-commerce in Sweden: Amazon was expected to “shake up” the Swedish e-commerce market significantly because small national e-retailers would become more visible on the Amazon marketplace compared to the current situation.

Finally, the stakeholders mentioned that e-commerce imports from China played an increasingly important role in many e-commerce markets like in Germany, Poland, Portugal, and Sweden. It was the top one non-EU country people order from. Massive marketing for mobile-only apps like Wish during the FIFA soccer world championship, competitive prices especially for electronic gadgets and low postal rates promoted further growth of imports from China, especially for low-priced products driven by price-sensitive consumers.

5.4.3 The performance of domestic and export parcel markets has improved

In the past few years, turnover and volume in parcel and express delivery have been booming in all six markets. Next-day and tracked delivery services are more and more considered as a standard widely expected by online shoppers, even in less mature e-commerce markets like Bulgaria (next-day delivery is only available in Bulgarian cities).

According to the stakeholders, high-quality logistical competences and various innovative delivery options were available in the Belgian, German, Polish, and Swedish delivery markets. The stakeholders characterise these markets as highly competitive and innovative. Requirements for customer service and claims departments are met by each carrier individually and does not seem to be an issue in all six MS. Issues with lost or damaged items were not so much of concern for the participants at the workshops in the selected MS. The number of lost or damaged items was rated as comparatively low in relation to total volume delivered. For the participants the clarification of the liability was more important in this context.

Participants of the Portuguese workshop also claimed that there were neither difficulties of road transport nor of delivery services provided. Today, the large logistics companies and international carriers operate in Portugal while the USP, CTT Correios, tried to keep up with competition and to surpass where possible.

The delivery of parcels to rural and remote areas were not an issue as noted by the stakeholders in the Belgian and German workshop. On the contrary, delivery in metropolitan and inner-city areas became an increasing daily challenge for carriers. In the other four MS it is also not considered as a major problem although some carriers did not deliver daily to all areas. Participants in the Polish workshop, though, pointed out how the comparatively small scale of orders from such areas challenged the carriers who had to cover the higher costs of the service without being able to increase prices for the e-retailers selling to rural customers. Moreover, as there were no parcel collection points in the less accessible areas carriers needed to deliver and collect parcels at home. Swedish stakeholders reported that Swedish e-retailers – and especially start-ups – were often not interested to sell to the Swedish countryside as delivery options were limited mainly to PostNord and delivery costs were therefore higher than for sales to urban areas.

Participants of the Belgian workshop emphasised that there were emerging cooperations between carriers in the Belgian parcel market to better meet the challenging and quickly growing demand of e-retailers: bpost and DHL Parcel for example launched a joint offer for parcel services to Dutch and Belgian e-retailers (bpost is the Belgian partner in the European DHL Parcel network). E-retailers could use a one-stop-shop for all Benelux shipments. Another example was Cubee, a network of parcel lockers owned by bpost which was also used by GLS Belgium, or the bpost-

owned network of parcel shops Kariboo! which cooperated with DHL Express and PostNL. Participants at the Swedish workshop pointed out that in Sweden, Schenker, UPS, and DHL shared the same transport vehicles in very remote areas for better use of the transport capacity and to save cost.

Polish consumers got more and more used to high service quality in terms of delivery speed, instant or same-day delivery (standard was two to three days at the moment), and Polish e-retailers even asked for Sunday deliveries. Allegro, the biggest online marketplace in Poland, offered flat rate subscriptions for delivery to parcel lockers ('Allegro smart'). Peaks in parcel deliveries and increasing number of orders at Sundays (driven by trade ban for brick and mortar stores) had resulted in more delays and thus in a decline in e-shopper satisfaction.

In Bulgaria, however, a large fashion e-retailer invested in own delivery capacities to better meet customers' quality requirements for faster and more predictable delivery services. Despite of the implicit criticism the overall performance of the Bulgarian delivery industry was rated as “ok - medium” by the workshop participants. Home delivery as well as parcel shops were available and re-routing during delivery was possible for recipients. In rural areas, however, delivery was less frequent (not daily but two to three days per week). Particularly the handling of returns in Bulgaria appears to be more problematic than in other countries. While Bulgarian online shoppers did not expect free but at least convenient returns (which is considered as an important element to promote the national e-commerce business), only few e-retailers provided pre-addressed return labels (which gave evidence on return rights and facilitated return handling).

According to the experts at the Bulgarian workshop, many e-retailers, even from other EU MS, did not sell to Bulgaria. Possible reasons were geographic distance due to the peripheral location of the country and insufficient volume (resulting in high delivery costs). To overcome the combined distance/volume problem service providers emerged that offered drop-shipping solutions in the country of origin. In this case, the service provider set up a local delivery address in the country of origin (e.g. in Germany), consolidated the orders and sent them combined to a Bulgarian address. On the other hand, as highlighted by the participants, e-commerce deliveries between Bulgaria and the neighbour countries Greece and Romania developed very well.

Increasing requirements of e-shoppers and e-retailers on delivery services push carriers to improve their services in terms of speed, and quality/variety and put pressure on carriers' prices. In MS like Belgium, Germany, and Sweden international e-retailers like Amazon or Zalando introduced “free delivery and returns” from the start of their activities and managed to establish these features as a factual market standard. As a result, willingness to pay additional fees for extra-services is rather low among e-shoppers.

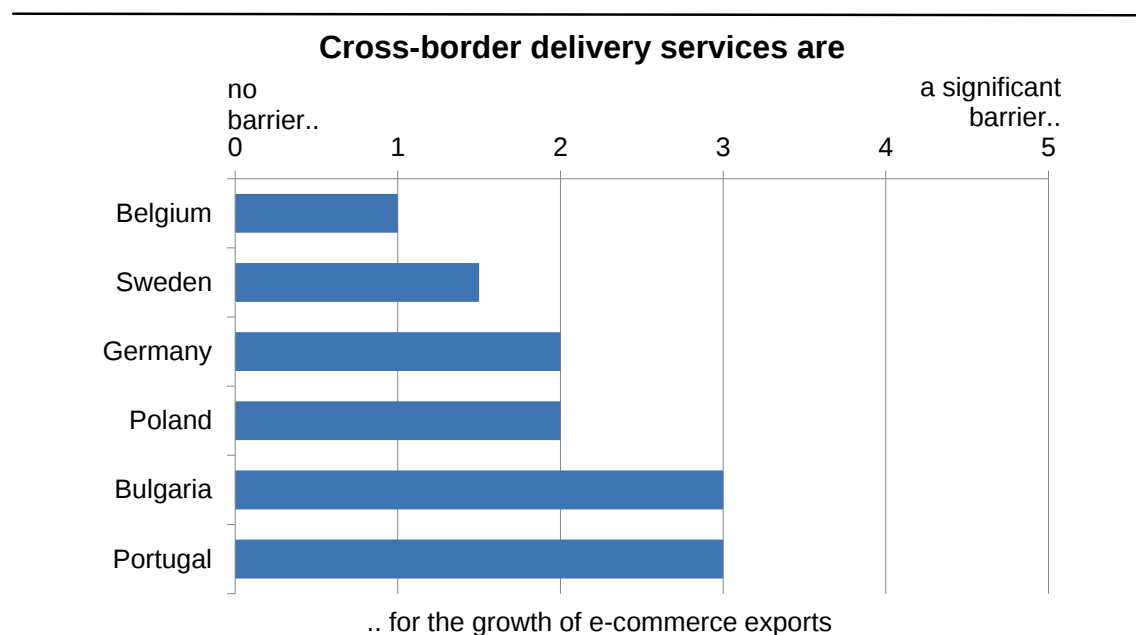
In future, large e-retailers like Amazon were expected to get more and more involved in parcel delivery. In Germany this was already the case in areas of high population density, in Belgium (like in Sweden) the market entrance of Amazon was expected.

Competition for the last mile was assumed to become more fierce. Local delivery companies in urban areas (express companies or crowd delivery solutions) are expected to offer instant or same-day delivery at lower prices in all countries. In Sweden, carriers expect the emergence of “last-mile providers” within a decade, many of them as algorithm-based platforms. However, this does not seem to be a substantial threat to established carriers in the selected countries, so far. They are more challenged to find qualified drivers, a major problem that required a lot of recruiting and administration efforts in many countries.

5.4.4 Cross-border delivery services are not considered as a significant barrier for the growth of e-commerce exports

At all national workshops, the participants were asked to rate whether cross-border delivery services form a barrier for the growth of e-commerce exports on a scale between 1 and 5 (“1” means no barrier at all where “5” means a significant barrier.). Overall, the participants broadly agree that cross-border delivery services do not form a major barrier for the growth of e-commerce exports.

Figure 79 Cross-border delivery services and e-commerce exports



In each of the countries, participating carriers felt the struggle to meet the ever increasing parcel volume induced by B2C e-commerce growth. In their view, they were meeting this pressure reasonably by investing in infrastructure, innovations in last mile solutions and improved technical solutions to better integrate their delivery services in e-retailers’ web shops to minimise frictions in the supply chain.

USPs were not benefitting from e-commerce parcel growth per se. This very much depended on their ability (1) to offer innovative parcel delivery services and (2) to compete with more advanced parcel carriers with up-to-date operations. These carriers built their sorting centres matching the new requirements of efficient e-commerce parcel delivery and they invested in modern track and trace, navigation, as well as in technologies to better integrate web shops and to allow online shoppers to closely track and control the delivery process. New entrants who were able to build their logistics infrastructure from the scratch without any legacies (e.g. in IT infrastructure) had competitive advantages, some USPs claimed.

Challenges for parcel carriers mentioned in the workshops were mainly

- to meet the prevailing market rates and service standards while at the same time to invest in capacity and innovations to tackle the growing number of deliveries and more and more demanding quality requirements of e-retailers and e-shoppers.³⁵³;
- to cope with limited margins when negotiating rates with e-retailers because of price pressure driven by fierce competition in the delivery market (especially in Belgium, Sweden, Germany, Poland);
- to gain and to maintain direct access to the customer’s (e-retailer’s) interface (i.e. by avoiding co-operations e.g. with parcel brokers or delivery management platforms) while at the same time try to reduce costs for delivery in remote areas (by van sharing);
- to cope with delivery time windows in cities (e.g. in Belgium, Germany), bans of diesel trucks (e.g. Belgium, Germany), and overall road congestion;
- to change the policies for packing parcels with respect to transport effectiveness (unification, damage-resistant, eco-friendly).

Challenges for e-retailers mentioned in the workshops were mainly

- to meet challenges like poor profitability in e-commerce, pressure from extensive streamlining of web shop features in the e-commerce market and overall price pressure (i.e. when re-selling products and brands of other companies)

353 Workshop experts expect an increase in home delivery in Sweden as this is not the overall rule today in the country with its regional disparities between the Southern and the Northern region.

- to compete, grow and then to expand internationally by selling cross-border seems particularly difficult for e-retailers in small e-commerce/retail markets and peripheral MS (Portugal, Sweden, and particularly Bulgaria);
- to find a market niche between international e-retailers (Amazon, Zalando etc.) and low-cost e-retailers (e.g. from China). The disappearance of the “middle market” affects retail markets like Portugal where domestic medium-sized retailers have difficulties to enter the e-commerce market³⁵⁴;
- to identify and calculate costs of (cross-border) shipments is particularly difficult for small e-retailers. Parcel delivery rates of different carriers are often not transparent. Customs and taxes appear too complicated and prevent small e-retailers from shipping abroad;
- to negotiate discounts on parcel rates for small e-retailers (especially for cross-border shipments);
- to meet expectations of recipients as regards the variety of delivery options: instant delivery and same-day delivery options require high automation of internal processes.

High delivery costs were definitely mentioned as an obstacle for the growth of cross-border deliveries even if many consumers were willing to pay more for deliveries of high-value goods or the import of specialities from other countries. Online shoppers considered the lack of transparent return policies as a problem. Small e-retailers who mainly sold on marketplaces had the opportunity to use available delivery options at the marketplace (e.g. provided by Ebay) but appropriate return solutions were usually not part of the service, as participants of the German workshop pointed out. Return policies and costs were rated as a major obstacle for cross-border shipments particularly in Bulgaria. Due to long delivery times the 14-days-return time window as required by the Consumers Rights Directive could not always be met by the online shopper, especially in rural areas, and reimbursement in cash (because of a lack of a bank account of the buyer) were a problem for Bulgarian e-retailers (cash on delivery was therefore one of the most preferred payment options of Bulgarian online buyers).

Cross-border delivery often required the integration of several national distribution networks and the chosen delivery route was not always the shortest or fastest which led to longer delivery times and higher costs. The lack of common standards and harmonised rules limited the development as well. This was an issue for many questions arising on customs duties and the application of value added taxes. Standardisation of track and trace was on the way but still in progress (GS1, IPC initiative). However, e-retailers and carriers in more developed markets agreed that

354 Experts estimate that Ebay and Amazon represent more than half of the Portuguese e-commerce revenues and that the market will increasingly be concentrated.

tracking across borders had greatly improved during the last years and resulted in a better visibility of e-commerce shipments for both, e-retailers and online buyers.

Sometimes geographical particularities were mentioned as a problem for the delivery industry (e.g. the border between Bulgaria and Romania at the Danube River with only two bridges impeded trade). The peripheral location of Bulgaria at the border of the EU also limited cross-border trade options.

However, there were also other challenges that limit cross-border e-commerce which do not mainly relate to delivery services. For example, in the Eastern EU MS like Bulgaria payment by cash on delivery is very popular and a prerequisite to succeed in the Bulgarian e-commerce market. Furthermore, many Bulgarian consumers appeared to not trust very much in ordering goods and services online and usually expected an additional order confirmation by phone.

In addition, guarantees, return policies, maintenance provision, how to get compensation or replacement and the clear identification of the brand and country of origin of the e-retailer and manufacturer of the goods were still overall barriers to cross-border e-commerce. Although regulation was harmonised within the EU some online shoppers might feel insecure of their consumer protection rights when ordering from foreign countries. A higher transparency of rules could help to overcome such obstacles.

5.4.5 E-retailers' opportunities to sell cross-border depend on characteristics of the national e-commerce ecosystems

The development of the cross-border e-commerce markets in Northern and Western Europe differs to a considerable extent from other markets. Our analysis of the market performance in the selected MS shows a comparably high degree of development in Germany and Sweden. This is not only reflected in the statistics but also in the results of the workshop discussions.

- Bulgaria and Portugal show a lower performance of their national e-commerce markets today. For the future, a growing export of their national e-retailers also seems less likely for many reasons. In Portugal, e-shoppers buy more and more from large e-commerce countries which can be partly explained by the Portuguese e-shoppers' purchasing power (import from China), cultural neighbourhood (import from Spain) and overall attractiveness of the market (import from UK). In Bulgaria, e-sellers and buyers struggle with a variety of challenges and problems and if companies sell abroad it is to neighbouring countries like Greece and Romania or to Germany possibly driven by orders from migrants.

- Poland seems to be an example of a medium performing market with a comparably strong national e-commerce market with many e-retailers that increasingly sell across borders to Germany, Czech Republic, and France also partly driven by orders from migrants. Language and cultural issues appear to be the main reasons for Polish e-shoppers to buy mostly domestically. The traditionally popular mail-order business in Poland has been transformed into e-commerce businesses and this has contributed to build a solid national e-commerce market where people prefer buying national brands they already know. If they buy cross-border they do so from large e-commerce markets like China, UK, and Germany.
- In Belgium, the picture is quite ambiguous. The demand for online purchase is slightly higher as the EU-28 average and a substantial higher percentage is buying cross-border (40% compared to 24% in EU-28 average). This is likely to be due at least in part to the average range of goods offered nationally and the high demand that can be also met by sellers nearby with a similar cultural background (the Netherlands and France). E-retailers selling cross-border from Belgium find themselves in a suitable position in the centre of Europe with opportunities to sell to France, the Netherlands, and Germany and a percentage well above the EU-28 average are taking advantage of this unique chance (13% of companies selling cross-border online compared to 9% in EU-28 average).

Among the significant results of the National Stakeholder Workshops was the discovery, among others, that delivery services is far from being the main and foremost barrier to the development of cross-border e-commerce. Country-specific and / or products of higher value, products from larger e-retailers with international websites, products attractive to migrants, collectors, or fans etc. find their way to online shoppers living abroad. The participants emphasised that products with reasonable prices and at higher quality are more likely to be sold or ordered cross-border and that the delivery is not the major concern neither of buyers nor of sellers because of the options available. Low-value Chinese e-commerce imports were the exemption from this rule. Consumers appreciate the substantial price advantages of fashion and electronic gadgets from Chinese websites.

Especially in highly competitive delivery markets like in Poland or in Belgium many delivery options are widely available. Belgium's location at the centre of Europe and its excellent road and warehouse infrastructure also add to the advantages for cross-border sales (warehouses of European e-retailers and brands are located in Belgium). Regional disparities in population density (and thus demand for e-commerce deliveries) or high volume can lead to cooperations between carriers as the examples in Belgium or Sweden has shown.

In general, language and cultural background seem to be two highly influential factors for cross-border purchases and sales. The examples of countries like Belgium,

Bulgaria, Portugal, and Sweden show how important neighbouring countries are for the development of cross-border e-commerce. Specific national consumer preferences (like cash-on-delivery payments, order confirmation by phone in Bulgaria) and also language barriers can be key obstacles for e-retailers to sell cross-border.

5.5 Conclusions

Successful e-commerce is highly dependent on consumers' experiences. Therefore, customer-centricity is key when setting up a successful online shop. To ensure good customer experiences, e-retailers face a wide variety of challenges including the establishment of smooth fulfilment processes for payments and logistics. However, micro and small e-retailers often have limited capacity in finding the best solutions and the appropriate delivery services for their business. For this reason, e-retailers require simple solutions for delivery and return services that are easy to find, operationally appropriate, reliable and visible, and cost-effective. Moreover, delivery services should support e-retailers in their ambition to meet the needs of their customers in terms of delivery quality, time and location of deliveries, and convenient returns solutions.

Choice of domestic and cross-border delivery services has improved for micro and SME e-retailers particularly in more mature and large e-commerce markets

As highlighted in the national stakeholder workshops and interviews, the supply of delivery services has significantly improved in many Member States. These improvements include the efforts of international carriers put into making domestic and cross-border delivery services more flexible and recipient-friendly. For example, launching and expanding the network of pick-up and drop-off points, introducing tools and applications for recipients to monitor delivery status, and enabling consumers to redirect time and location of deliveries. In particular, carriers with European networks like DPD, DHL Parcel and GLS seek to develop cross-border delivery services with recipient-friendly delivery options based on the preferences of local e-shoppers in the country of destination. Under the umbrella of the International Postal Corporation (IPC), USPs are also working on initiatives to improve integration of their local delivery services and to develop more flexible and visible cross-border delivery services as well as improved return services.

While e-retailers confirm that the supply of domestic and cross-border delivery services for e-commerce items has broadly improved in the last five years, there are still considerable differences between Member States due to the stage of development of their national e-commerce ecosystems. The e-commerce ecosystems in Northern and Western EU MS are markedly more advanced than in most Southern and Eastern EU MS (that often lacks a tradition in distance selling). Discussions at the national stakeholder workshops highlighted the importance of large e-retailers and online marketplaces for the development of domestic e-commerce markets by setting

standards that help to increase consumers' trust in online shopping and to promote the development of appropriate delivery services.

Opportunities for micro and SME e-retailers increase with the stage of development of the national e-commerce ecosystem

Basically, the more developed the e-commerce ecosystem within a country, the more opportunities arise for micro and SME e-retailers to participate in e-commerce. This ecosystem includes support services that cover important aspects of the e-commerce business such as building attractive websites and online shops, giving advice on sales strategies (e.g. on online marketplaces), providing payment services, supporting online marketing activities as well as supporting warehousing and delivery logistics. In contrast, local e-retailers in Member States with less developed e-commerce environments (i.e. a low number of local e-retailers) or those operating in Member States where local e-commerce activities only started to gain momentum at a later stage (e.g. Belgium started later than the Netherlands or France, but developed rapidly thereafter) face considerable competition from e-retailers in more advanced foreign e-commerce markets. In this case, it is more difficult for local e-retailers to succeed and grow in their home markets and internationally. Some examples include the prevalent large share of Chinese e-commerce imports in many Eastern EU MS, or the reliance of Belgian consumers on Dutch, German, and French e-retailers.

Furthermore, micro, small and medium-sized e-retailers that are located in Member States with less developed e-commerce ecosystems face additional challenges in setting up successful cross-border e-commerce operations since they lack the operational, technological and legal capacities to adequately deal with the necessary requirements. From the interviews and national workshops, stakeholders highlighted that differences in regulations and tax laws, as well as cultural differences and language issues, often present more stringent barriers for cross-border sales than the higher costs and complexity of cross-border deliveries.

Cross-border delivery services are not a significant barrier for growth of e-commerce exports

Nearly half of enterprises with web sales also sell their products abroad, at least occasionally. For this group of e-retailers, managing cross-border delivery services does not significantly impede growth in e-commerce exports. However, because delivery and return costs are considered as input costs, e-retailers seek to minimise these costs as much as possible.

In well-developed e-commerce markets, e.g. Belgium, Denmark, Germany and Sweden, cross-border parcel logistics are not necessarily considered as an obstruction. Instead, it is deemed a manageable challenge that is increasingly dealt with by innovative new solutions and emerging service providers in these Member States.

Parcel brokers and delivery management platforms have emerged and contributed to improving the transparency of available services offered by e-retailers (in particular, micro and small e-retailers) as well as facilitating the processing of domestic and cross-border deliveries and returns.

In contrast, e-retailers in Member States with less advanced e-commerce markets, e.g. Bulgaria, Greece and Portugal, have less capacities for international growth due to a lack of available support service providers. Additionally, some of these e-retailers have to deal with more basic drawbacks such as limited access to broadband (in Bulgaria and Greece), and little trust in e-commerce purchases in general. Additionally, e-retailers in low developed e-commerce markets have fewer appropriate alternatives for domestic and, in particular, cross-border delivery services.

High costs regarding the delivery and return of e-commerce items are a persistent issue for e-retailers, especially in Member States with relatively small e-commerce markets (and thus low cross-border volumes).

More efforts needed by the e-commerce and delivery industry to deal with (cross-border) returns

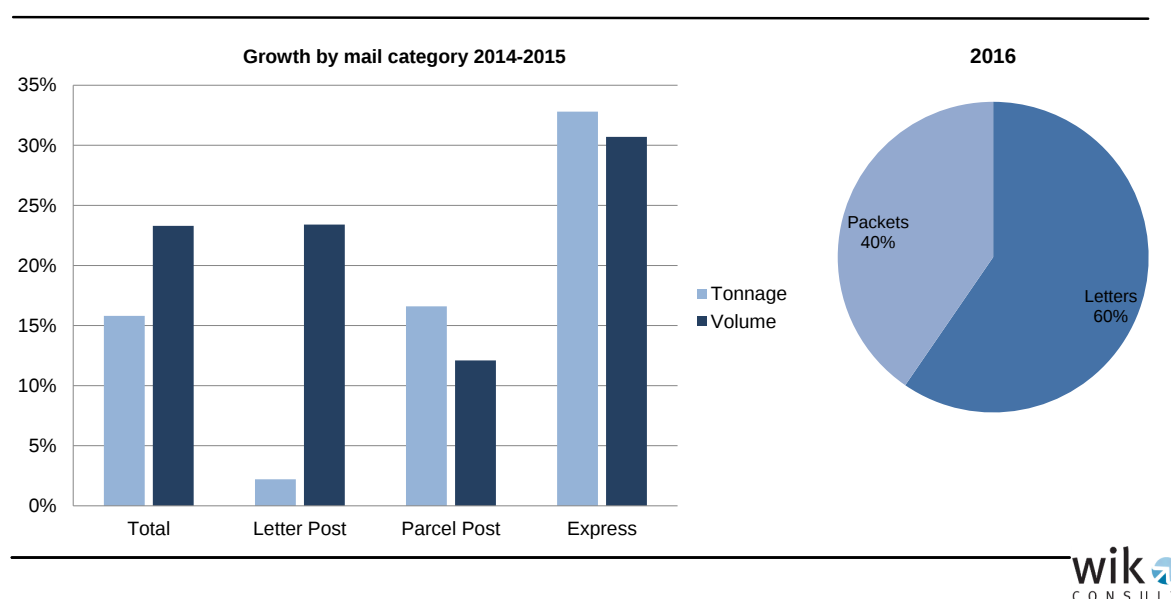
Discussions at the six national stakeholder workshops in Bulgaria, Belgium, Germany, Poland, Portugal and Sweden, and interviews revealed that the management and cost of cross-border returns are a greater concern than the management of cross-border deliveries. Returns form an inherent element of the e-commerce business, especially relevant and important for product categories like fashion, but less relevance and importance for categories like electronic goods and groceries. With growing domestic and cross-border e-commerce there is an increasing need for manageable return solutions. The development of appropriate cross-border return solutions by carriers and e-commerce intermediaries has gained momentum, but there remains a significant gap in appropriate return services for e-retailers.

6 E-commerce with non-EU countries

6.1 The rise of postal imports from Asia

International postal items are increasing in terms of both volume and tonnage around the world. According to UPU figures, the volumes of international parcels grew by 12% in 2015 compared to 2014, while the tonnage increased even more by 16.6%.³⁵⁵ In addition, the importance of small packets is growing within the global letter mail stream, accounting for 40% of international letters in 2016 (see Figure 80).

Figure 80 Trends in global letter mail streams (UPU)



Source: Left: Based on UPU (2016), Research on Postal Markets, Trends and Drivers for International Letter Mail, Parcels, and Express Mail Services. Right: based on UPU (2018), POC, Results of the items per kilogramme (IPK) study, POC C 2 2018.2–Doc 4a, p. 8.

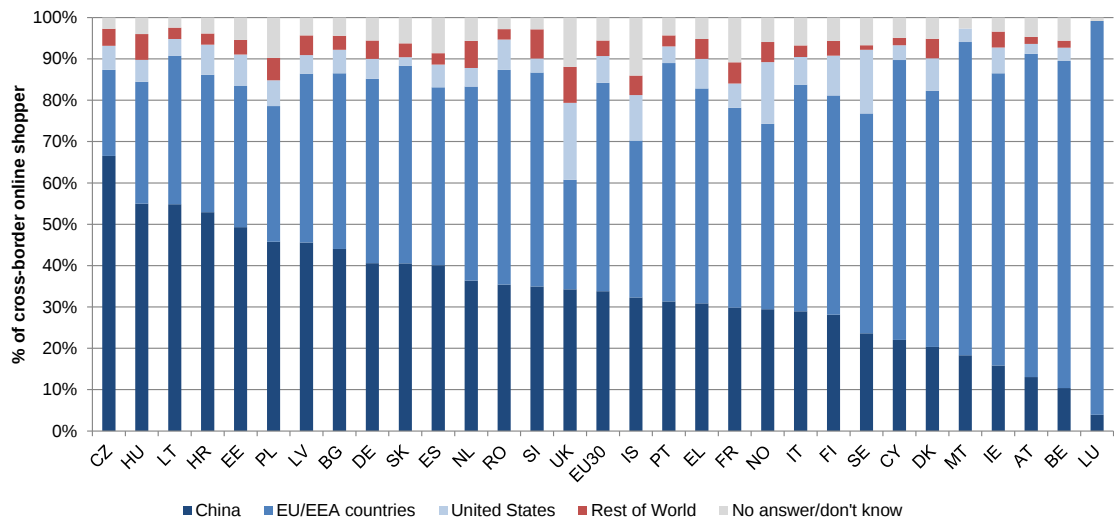
Postal shipments from Asia play an important role within these streams. UPU figures show that about 100 million items were sent from the Asia-Pacific region to Europe in 2015, the second-largest postal stream between World regions.³⁵⁶ While UPU volumes for items from Asia to the EU are not published, the share of items sent from Asia-Pacific region to 'developed' countries within the UPU system provides a trend. In 2011, the stream 'Asia-Pacific' to 'developed countries' represented 22% of global postal flows within the UPU, growing to 33% of all flows in 2016. Among the USPs from Asia and even around the world, China Post is standing out in terms of e-commerce transported

³⁵⁵ See UPU (2016), Research on Postal Markets, Trends and Drivers for International Letter Mail, Parcels, and Express Mail Services – Final Report, p. 19.

³⁵⁶ See UPU (2017), Towards better measurement of e-commerce flows and readiness, presentation of Dr. José Ansón at UNCTAD e-commerce week, 27 April 2017, slide 11.

by air, having exported more than 225 million postal items in 2015.³⁵⁷ By comparison, the USPs of UK, France and Germany exported less than 10 million e-commerce items by air.

Figure 81 Location of the seller from the most recent cross-border purchase

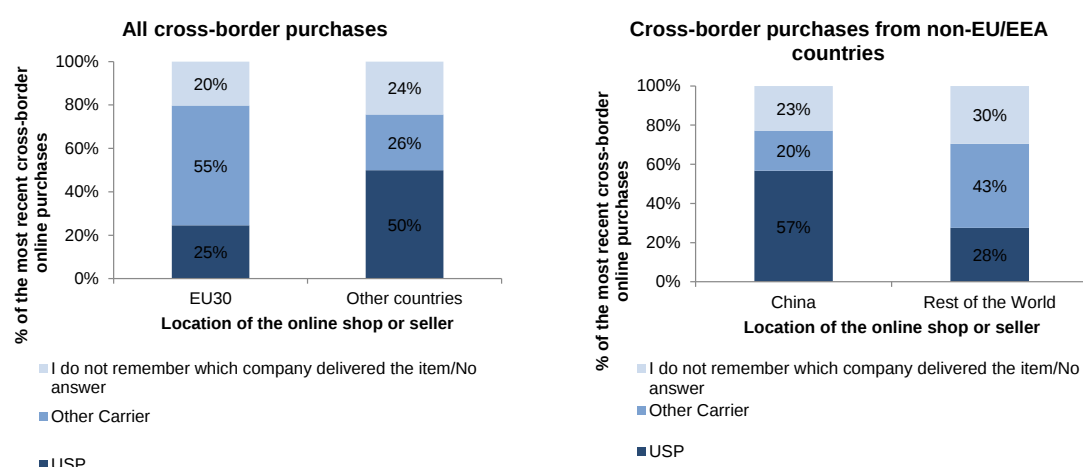


Source: WIK consumer survey (2018).

The WIK consumer survey provides also insights into the importance of Chinese e-commerce items for European consumers. Habits of international e-shopping by consumers in the EU, and the most popular countries to buy from, vary to a great extent (see figure above). Nevertheless, the figure corroborates the argument that China plays an important role for European cross-border online shoppers. In 19 out of 31 countries within the scope of the survey, more than 30% of consumers bought their most recent cross-border purchase from a Chinese seller or website. The top five countries where online shopping from China is most popular are Eastern EU MS.

³⁵⁷ See *ibid*, slide 12.

Figure 82 Cross-border deliveries by type of operator



Source: WIK consumer survey

The WIK consumer survey also provides more insight into who transported items purchased by consumers from non-EU sellers. National USPs transport and deliver at least half of the cross-border purchases from non-EU countries, as is shown by Figure 82. Given the market positions of USPs for B2C-deliveries in many EU MS, this should not come as a surprise. For cross-border orders from China, the share of purchases delivered by the USP is even higher (57% of consumers said their last purchase was delivered by the USP, while a quarter of consumers could not remember who delivered it). This means the majority of e-commerce items from China to the EU has been shipped under the UPU regime. The UPU system enables Chinese e-retailers to benefit from low terminal dues when sending e-commerce goods with China Post to the EU (see Section 6.4).

6.2 The role of postal service providers for extra-EU imports

Many European Posts report strong increases of e-commerce items in their inbound cross-border streams, in particular from China.

Not only did “normal” e-commerce continue to post double-digit growth, but e-commerce volumes from above all China also absolutely rocketed. (PostNord, Annual Report 2017, p. 4)

For those countries which are net importers of postal shipments from outside the EU, this volume explosion is a challenge. Postal shipments brought into the EU by non-EU USPs are usually remunerated under the UPU terminal dues system but some USPs have agreed on alternative bilateral arrangements. A major share of these items stems from China or other Asian countries which are classified as developing countries under

the UPU remuneration system. China Post pays rates (so-called terminal dues) to the USP in the country of destination which depend on the classification of the destination and origin countries within the UPU system. MS in Western and Northern Europe are classified as ‘industrialised countries’. All other countries are ‘developing countries’. Terminal dues for letter items are largely independent of the level of national postage (see also Section 6.4).³⁵⁸ The bottom line is that in many cases, terminal dues for delivery of letter post items sent from developing countries to industrialised countries are well below equivalent national postage rates, especially for delivery of e-commerce items.³⁵⁹

For many European USPs, the high volumes of Chinese e-commerce items in the letter mail stream are a challenge. In particular Posts in Northern Europe suffer from the financial impact of these items for four reasons. First, the increase of e-commerce goods in the mail stream is very pronounced in the Scandinavian countries. Although there are no UPU statistics on country-to-country basis available, USPs from Denmark, Finland, Iceland, Sweden and Norway report enormous volume increases of e-commerce goods in the mail streams from China.³⁶⁰ Second, a substantial share of the e-commerce items are sent as registered letters, so they cannot be delivered to the letterbox as a signature by the receiver is required. E-commerce goods from China and other Asian countries are often small packets which are transported in the mail stream together with items of correspondence. They are, according to interviews with USPs, often wrapped in plastic and poorly addressed. They are therefore difficult or impossible to sort in automatic sorters, causing even more costs for the delivering operator.

Third, the Scandinavian countries have vast areas which are sparsely populated. Delivery of registered letters has to take place at the door instead of at the fence which may require delivery staff to make long side trips to single houses or farmsteads. Delivery at five days of the week is thus very costly in these areas. Fourth, costs of delivery are also driven by wage levels. All Scandinavian countries have income levels above the European average, corresponding to high wage levels.³⁶¹ High delivery costs result in high postage levels which are among the highest in Europe for these countries.

Yet, terminal dues received by USPs in high-cost MS are essentially the same as for USPs in other MS with lower delivery cost and domestic postage (this is true for all MS that are classified in groups 1 or 2 by the UPU, see Section 6.4 below. Currently, all MS except BG, LT, RO are in terminal dues groups 1 or 2). As a consequence, USPs with high wage levels and thus high postage receive terminal dues for delivery of postal

³⁵⁸ These terminal dues are determined by UPU Congress which meets every four years. For an overview of the rules determining terminal dues see Dieke/Niederprüm/Thiele (2016), UPU terminal dues and international e-commerce, Bad Honnef, September 2016.

³⁵⁹ This is undertaken by upper limits (so-called caps) for terminal dues from developing countries.

³⁶⁰ See Posti, Annual Report 2017, p. 67; PostNord, Annual Report 2017, p. 4; Interview with Post Norway, Copenhagen Economics (2018), Report on USO net costs in Iceland, p. 54. None of these USPs quantifies the volume increases. We estimate the growth to be double-digit.

³⁶¹ See Eurostat, GDP per capita in PPP.

items from China which do not cover their costs.³⁶² While this system affects Nordic Posts in particular, other USPs in Europe are also adversely affected in varying degrees.

Extra-EU imports offer business opportunity to universal service providers as well

There are only a few postal service providers within the EU which seem to have made a business opportunity from extra-EU imports. These operators act as a gateway for e-commerce goods in the postal stream from Asia to Europe. Royal Mail, DHL and Omniva are operators which seem to be commercially successful in importing Chinese e-commerce items into the EU (according to expert interviews carried out during this study). The activities undertaken by these Posts focus on the shipment of postal items from Asia to Europe. Asian e-retailers increasingly notice a demand from European consumers to receive their purchase within a few days rather than a few weeks. Whereas Chinese e-retailers could also use postal services of China Post (in conjunction with a European USP for the delivery aspect), services offered by European USPs directly from China become increasingly popular as they offer faster transit times and more reliable services, albeit for a higher price. Although exact figures on these activities are not publicly available, the following examples illustrate these activities.

Royal Mail, for example, is *'increasingly targeting parcels from China with direct commercial approaches'* and sees the UK as a *'popular gateway for China's volumes to continental Europe'*³⁶³ Royal Mail transports e-commerce shipments as letters and parcels to its international hub located at London Heathrow airport, where they are customs cleared and processed further to destination countries within Europe.³⁶⁴ However, during transport from Asia to Europe, the e-commerce items are shipped in bulk and thus declared as freight, while they are further distributed within the EU as postal items.³⁶⁵ Details about VAT and customs procedures, in particular whether simplified procedures for postal shipments or full customs procedures are applied in this case, were not available for this study. Royal Mail had launched a 'cross-border parcel initiative' in 2017 which further triggered growth of its international parcel volumes.³⁶⁶

Similar to Royal Mail, DHL is active in Asian markets to collect and transport e-commerce items from e-retailers to Europe. DHL offers a service to Chinese e-retailers called 'Parcel International Direct', allowing Chinese e-retailers to access consumers in the UK and US directly and at reduced transit times (between 4 and

³⁶² Ibid.

³⁶³ See Royal Mail International (2018), Site visit and presentation, 2 October 2018, slide 12.

³⁶⁴ Ibid.

³⁶⁵ According to European postal operators interviewed for this study.

³⁶⁶ See Royal Mail (2018), Press release of 18 January 2018, Trading update for the nine month ended 24 December 2017.

7 days).³⁶⁷ DHL offers direct injection into the country of destination, where it is delivered through national partners, usually the national USP. Recently, the company has added France and Germany to this service.

6.3 Universal Postal Union

6.3.1 Overview of the UPU

The Universal Postal Union (UPU) is an intergovernmental organisation and a specialised agency of the United Nations which governs the provision of international postal services. The UPU includes 192 member countries, i.e., almost all countries in the world. The headquarters of the UPU is located in Bern, Switzerland, where it maintains a permanent staff, called the 'International Bureau', of about 245 persons.³⁶⁸

The UPU was founded in 1875 pursuant to an 1874 agreement of twenty-one countries, including the major European countries and the United States. Member countries meet periodically in a general 'Congress' to revise and re-adopt the UPU agreements or 'acts'. There have been 26 Congresses in 144 years. In 1964, the UPU adopted the UPU Constitution as a permanent act that embodies the organisational provisions establishing the UPU as an institution. After 1964, the Universal Postal Convention, or 'UPU Convention' — which previously included both organisational and operational provisions — was limited to rules governing the exchange of international mail.

Today, the UPU meets in a regular Congress every four years. Each Congress agrees on a new UPU Convention and may amend other permanent acts like the UPU Constitution. The most recent regular Congress was held in Istanbul in 2016. The Istanbul Congress adopted the 2016 UPU Convention, which is in force from January 1, 2018, to January 1, 2022. The Istanbul Congress also elected countries to serve on two standing committees which manage the affairs of the UPU between Congresses: the Postal Operations Council (POC) and the Council of Administration (CA). The next regular UPU Congress will be held in Abidjan, Ivory Coast, in 2020.

³⁶⁷ See DHL eCommerce Hong Kong website, <https://www.logistics.dhl/hk-en/home/our-divisions/e-commerce/shipping/international-shipping.html> [7 December 2018].

³⁶⁸ The internet site of the Universal Postal Union is www.upu.int. The Constitution as amended by the 2016 Istanbul Congress, the 2016 UPU Convention, and resolutions of the Istanbul Congress may be found in UPU, *Decisions of the 2016 Istanbul Congress* (2017). http://www.upu.int/uploads/tx_sbdownloader/actsLastCongressActsEn.pdf. The Constitution and related agreements, together with annotations by the International Bureau, are set out in UPU, *Constitution and General Regulations* (2018). http://www.upu.int/uploads/tx_sbdownloader/actInThreeVolumesConstitutionAndGeneralRegulationsEn.pdf. The 2016 UPU Convention and the Convention Regulations (adopted by the POC in 2017 and periodically amended), together with annotations by the International Bureau, are set out in UPU, *Convention Manual* (2018). http://www.upu.int/uploads/tx_sbdownloader/actManualsInThreeVolumesConventionManualEn.pdf.

The UPU Constitution also provides for the possibility of convening an Extraordinary Congress at any time. During the week of September 3-7, 2018, the UPU held an Extraordinary Congress in Addis Ababa. This was only the second Extraordinary Congress convened since 1875; the first Extraordinary Congress was purely ceremonial. The main purpose of the Addis Ababa Congress was to approve an expansion of the Postal Operations Council from 40 to 48 members beginning in 2020.

The Postal Operations Council (POC) is the key decision-making body in the UPU in most respects. The POC consists of representatives of 40 countries. In almost all cases, the national delegates are universal service providers. The POC manages the operational work of the UPU and is dedicated to advancing the commercial interests of universal service providers. The POC also adopts the Convention Regulations, a body of detailed rules which regulates the international postal system and which is, under the provisions of the UPU Constitution, binding on member countries. In addition, the POC drafts most of the key revisions to the UPU Convention which are considered by Congress. Since the POC's origin in 1994, 16 of the 40 seats on the POC have been reserved for the 28 'industrialised countries', effectively giving the major universal service providers permanent seats on the POC and control over it. By adding 8 new seats on the POC, all of which will be filled by developing countries, and making other changes to the rules of membership, the Addis Ababa Congress substantially shifted the balance of power in favour of developing countries.

The Council of Administration consists of representatives of 41 countries. Delegates to CA meetings are usually officials of the public universal service providers, national postal regulators, or postal ministries. The CA manages the finances of the UPU and supervises issues relating to governmental policy. Although the focus of the CA is more governmental than the POC, it is also concerned with the overall commercial strategy of the UPU and other issues with substantial commercial implications.

6.3.2 Transformation of the international postal services market

The 2016 UPU Convention distinguishes between two categories of postal items: *documents* and *goods*. A 'document' is defined as 'any piece of written, drawn, printed or digital information, excluding objects of merchandise'. A 'good' is any tangible and movable object that is not a document (other than money).³⁶⁹

Documents and goods may be transmitted between universal service providers by means of three international postal services: the letter post, parcel post, and EMS.

- Letter post is a service for the international exchange of documents and goods

³⁶⁹ UPU Convention (2016), arts. 1.4, 1.5.

weighing up to 2 kg.³⁷⁰ The letter post is the primary service of the international postal system and is roughly equivalent to domestic priority mail.

- Parcel post is a service for the international exchange of packets weighing up to about 30 kg (weight limits vary by origin and destination countries). Even though the parcel post and letter post both handle packets weighing less than 2 kg, they are operationally distinct.
- EMS (express mail service) is an especially rapid service for the international exchange of documents and packets weighing up to 30 kg.

The UPU Convention and Convention Regulations directly govern only the letter post and parcel post. EMS is managed by a separate group of public universal service providers, the EMS Cooperative, which has a relationship with the UPU but which is managed according to its own decision making procedures.

In the last two decades, and especially in the last decade, the central focus of the UPU has shifted from the exchange of international documents to the distribution of international e-commerce goods. According to UPU data, conversion from documents to packets is occurring more quickly in international postal markets than in domestic markets. Between 2000 and 2015, the international letter post (including small packets) declined by 59% while the international parcel post grew by 162%. In contrast, in domestic postal markets globally, letter post volume declined by 27% while parcel post volume increased by 62%.³⁷¹ Within the international letter post, goods are rapidly taking the place of documents, especially in flows from large e-commerce countries like China and Singapore. Although UPU statistics are fragmentary, it appears that in 2018 goods will probably constitute the majority of international postal shipments and certainly account for the vast majority of weight.³⁷² Accordingly, the main concern of the UPU in the last decade has been to protect and promote the universal service providers'/ designated operator's position in the market for the distribution of international e-commerce goods.

370 The Convention Regulations provide that small packets weighing up to 5 kg may be admitted if agreed by origin and destination designated operators. UPU Convention (2016), arts. 17.2-17.6; UPU Convention Regulations (2017), art. 17-103. The origin designated operator may also, in its discretion, send shipments containing printed papers or books and pamphlets weighing up to 5 kg. Shipments containing books and pamphlets weighing up to 10 kg may be admitted by bilateral agreement.

371 UPU, 'Development of Postal Services 2015' (Powerpoint, 2017).

372 In the US, data from the Postal Service imply that goods constituted about 75% of inbound letter post shipments received in 2017.

6.3.3 Public policy issues presented by the UPU

Transformation of the international postal system from a document exchange to a goods distribution service has exacerbated long time public policy concerns about the operation of the UPU.³⁷³ There are three primary issues that have historically given government officials concerns about the UPU: low remuneration rates and related anticompetitive practices, lack of proper customs controls for postal packets, and an inappropriate combination of governmental and commercial authority.

The first issue derives from the fees or 'remuneration' that universal service providers charge each other for delivery of inbound letter post and parcel post. Remarkably, universal service providers do not charge the same rates for delivery of inbound international mail as they charge for delivery of identical domestic mail even though international mail, once it has arrived at the port of entry, is transported, sorted, and delivered together with domestic mail. Handling costs for similar shipments of international and domestic mail are not merely similar, they are indistinguishable. Nonetheless, rates for delivery of inbound international mail are established by the UPU, not by the universal service provider in the country of destination. Fees for delivery of letter post items, called '*terminal dues*', are established in the UPU Convention. Fees for delivery of postal parcels, called '*inward land rates*', are fixed by the Postal Operations Council acting under authority delegated by the UPU Convention. The UPU Convention also establishes fees for supplemental services — e.g., insurance, registration, or tracking — that can be purchased in addition to basic letter post or parcel post service. In almost all cases, UPU rates of remuneration are unrelated to the postage rates that universal service providers charge domestic mailers for similar services. As a result, payments between universal service providers discriminate between foreign and domestic mailers, create economic distortions and, in many cases, restrain competition. The most significant remuneration mechanism, terminal dues, is considered more fully in the next section.

The second public policy issue of concern is customs treatment of international packets. For most of the twentieth century, the international postal service handled only a small number of mostly non-commercial packets. Customs procedures for postal packets originated in the 1920s, long before the recent flood of international e-commerce goods and, at least as importantly, before the onset of the twin plagues of terrorist bombs and synthetic drugs like fentanyl. Unlike other types of international transportation services, universal service providers do not yet provide customs authorities with electronic data on packets conveyed in advance of arrival at the port of entry. Moreover, the UPU

373 *The Economist* recently observed the UPU is one of several intergovernmental organisations which have become a 'clubs that protect producer interests' with result that 'consumers lose out' and 'producers game the system'. Editorial, *The Economist*, 'Agency problems: the bodies for shipping, aviation and postal services are in thrall to producer interests', November 24, 2018, page 15. <https://www.economist.com/leaders/2018/11/24/some-international-regulators-have-been-captured-by-producer-interests>.

Convention exempts universal service providers from liability under national customs laws. In many countries, national laws also provide for special simplified customs treatment for inbound postal packets. The result has been that national customs authorities have much less ability to control imported postal packets than packets or containers imported by express carriers or freight forwarding companies.

The third public policy issue presented by the UPU is the commingling of governmental and commercial functions. In the last two decades, EU MS and many other countries have reformed their postal laws by separating the exercise of governmental authority from the competitive and commercial activities of the universal service provider. The universal service provider has been converted into a normal commercial corporation managed in much the same way as a private corporation and subject to the same laws. The role of government has shifted from that of a monopoly provider of a unique public communications service to that of an impartial regulator whose primary objective is to ensure fair competition between the universal service provider and private competitors while guaranteeing that universal service continues to be provided. Numerous independent studies have concluded that the UPU must likewise make the same transition by separating governmental and commercial functions. But the UPU has resisted all such proposals and remained an intergovernmental entity which employs governmental authority to advance what has evolved into essentially commercial objectives. The core of the incompatibility between modern national postal laws and the organisation of the UPU lies in the power of the Postal Operations Council, a committee of commercially interested postal officials and representatives. The POC's authority to adopt Convention Regulations binding on the governments of member countries presents an opportunity to misuse governmental authority for commercial ends that no modern industrialised country would tolerate at the national level.

6.4 Terminal dues

The UPU system of terminal dues creates a number of economic inefficiencies and misallocations. As a result, they can have negative effects for several categories of stakeholders in the EU, including (i) domestic merchants who compete with foreign online merchants, (ii) domestic mailers generally, (iii) universal service providers that import significantly more e-commerce packets than they export, and (iv) private transportation companies that compete with universal service providers in portions of the international delivery services market.

There are two fundamental flaws embedded in the UPU terminal dues system. First, terminal dues rates are generally set well below domestic postage for similar services, especially, but not only, in industrialised countries. As a result, universal service providers are giving preferential delivery rates to foreign mailers compared to domestic mailers thereby placing domestic e-commerce merchants at a relative competitive disadvantage. Undercharging for inbound delivery services also creates winners and

losers among universal service providers. The winners are the net exporters of letter post, while the losers are the net importers. The second fundamental flaw is that UPU terminal dues are more or less uniform for postal items exchanged among a group of countries. Because the cost of producing postal services varies widely among universal service providers, uniformity of rates benefits universal service providers with relatively low unit costs at the expense of those with relatively high unit costs. Universal service providers with high unit costs include those in high-cost industrialised countries and in large developing countries with low volumes per capita. Among universal service providers the biggest losers are net importers with high unit costs (like the Nordic countries highlighted in Section 6.2, above).

The current terminal dues system is an unintended consequence of what began as a minor and benign compensation practice. Until 1969, national post offices delivered inbound mail for each other without charge. This practice was grounded in a presumption that letters were exchanged between correspondents in roughly equal numbers. However, after World War II, many newly formed countries joined the UPU and demanded compensation when they found that they received much more mail than they dispatched. The UPU was unable to develop a cost-based system of terminal dues, so the 1969 Tokyo Congress set at a low and arbitrary delivery rate believing that some compensation was better than none.

By the late 1980s, however, the UPU terminal dues system was being deliberately manipulated for commercial purposes. The major universal service providers agreed among themselves to keep terminal dues below domestic postage in order to restrain competition in the outbound delivery services market. In a large country like the United States, private transportation companies often convey bulk mail from large mailers to a postal processing centre near the addressees because the private companies provide more efficient transportation networks than the universal service provider even though the universal service provider provides more efficient delivery to the household. At the international level, such competition is impossible if the universal service provider in the origin country has an exclusive right to postal delivery in the destination country at artificially low terminal dues rates. The anticompetitive consequences of the UPU terminal dues system have multiplied with transformation of the international postal service from document to packet services. Larger amounts of money are involved. The UPU terminal dues system is distorting both the international and domestic e-commerce markets.

The terminal dues system established by the 2016 UPU Convention went into force on January 1, 2018, and will be in force until January 1, 2022 (unless amended). While the 2016 Convention introduced marginal improvements, it retains the fundamental flaws of previous Conventions. Details of the current terminal dues system are exceedingly complex, but the basic elements may be summarised as follows. Terminal dues are expressed in the form of a rate per item and a rate per kilogram. Terminal dues for documents in small or large envelopes are different from terminal dues for goods, called

'small packets', and 'bulky documents' (documents that do not fit in standard envelopes) conveyed in packets. For example, the terminal dues rate for a document in a small or large envelope might be EUR 0.40 per item and EUR 3.09 per kg. Accordingly, the terminal dues charge for delivery of a typical large envelope (or 'flat') in the 100 to 250 gram weight step (weighing 164 grams according a recent UPU survey) would be EUR 0.445 (EUR 0.40 plus $0.164 \times \text{EUR } 3.09$). The terminal dues rate for goods and bulky documents provides a higher per item charge and lower per kilogram charge than the terminal dues rate for documents in envelopes. For small flows, this system of charges can be simplified into standard per kilogram rates for both documents and small packets based upon the average composition of of a kilogram of letter post mail.³⁷⁴

Although the cost of delivering a letter or packet is the same regardless of where it comes from, the UPU terminal dues system provides different compensation rates depending on a classification of origin and destination countries into four groups of countries. The four groups are called simply Groups I, II, III, and IV.³⁷⁵ Terminal dues rates are based on these groups as follows:

- *Group I terminal dues.* Group I includes 28 industrialised countries — the United States, Canada, 18 European countries, Israel, Japan, Australia, and New Zealand and 4 very small states.³⁷⁶ Group I terminal dues apply to letter post exchanged between Group I countries.
- *Group II terminal dues.* Group II includes 24 high-level developing countries and territories such as Hong Kong, Estonia, Hungary, Poland, Slovenia, Singapore, and South Korea. Group II terminal dues apply to letter post exchanged between Group II countries and to letter post mail exchanged between these countries and Group I countries.³⁷⁷
- *Group III terminal dues.* Group III includes 41 mid-level developing countries and territories including three EU MS (BG, RO, LT) as well as Brazil, China, Malaysia, Mexico, Romania, Russia, and Thailand. Group III terminal dues apply to letter post exchanged between Group III countries and between these

³⁷⁴ The terminal dues provisions of the 2016 UPU Convention are set out in Articles 28, 29, and 30.

³⁷⁵ UPU, 2016 Istanbul Congress, Resolution C7/2016 (classification of countries and territories for terminal dues and Quality of Service Fund (QSF) purposes). Confusingly, the terminal dues provisions of the UPU Convention do not refer to country groups by number. Instead Group I countries are referred to as 'countries in the target system prior to 2010'. Group II countries are referred to as 'countries in the target system as from 2010 and 2012'. Group III countries are referred to as 'countries in the target system as from 2016'. Group IV countries are referred to as 'countries in the terminal dues transitional system'.

³⁷⁶ The 15 EU countries in UPU Group I are Austria, Belgium, Denmark, Finland, France, Germany, Great Britain, Greece, Ireland, Italy, Luxembourg, Netherlands, Portugal, Spain, and Sweden. The four EFTA countries — Iceland, Liechtenstein, Norway, Switzerland — are also in Group I. In addition, Group I includes three very small European states: Monaco, San Marino, and the Vatican.

³⁷⁷ The 10 EU countries in UPU Group II are Croatia, Cyprus, Czech Republic, Estonia, Hungary, Latvia, Malta, Poland, Slovakia, and Slovenia.

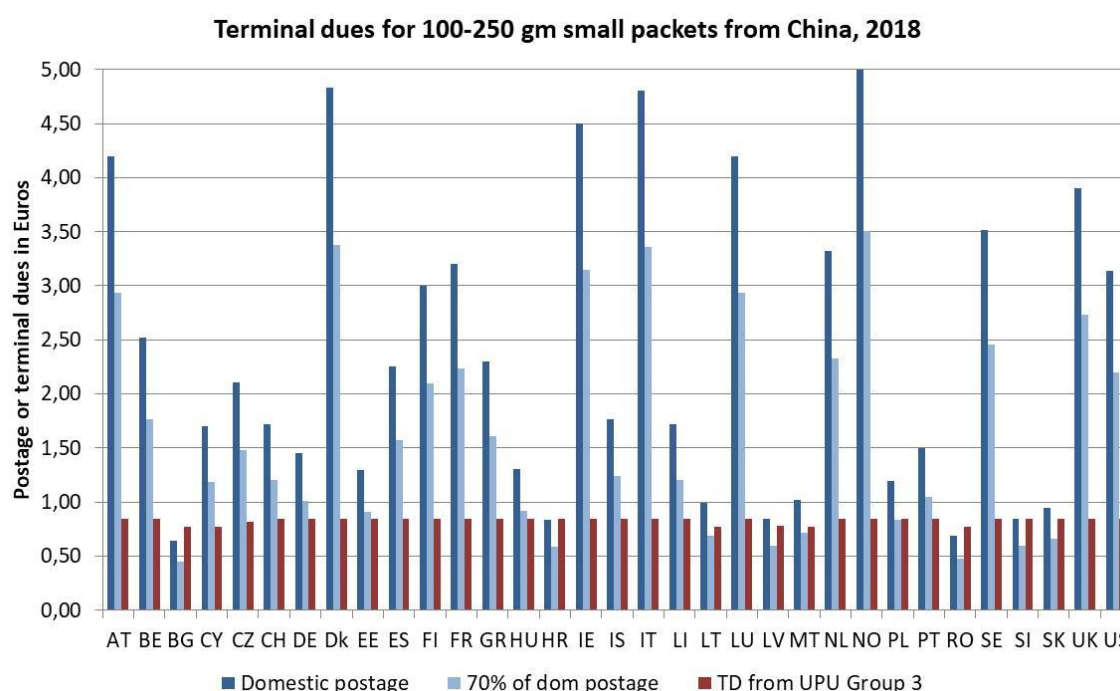
countries, on the one hand, and Group I and Group II countries, on the other.³⁷⁸

- *Group IV terminal dues.* Group IV includes 97 low-level developing countries and territories, including India, Egypt, and Vietnam. Group IV terminal dues apply to all letter post mail sent between Group IV countries and between Group IV countries and all other countries.

In general, Group I terminal dues rates are the highest and the Group IV terminal dues are the lowest, although this ranking does not hold for all weight steps in all cases.

Terminal dues compensate the universal service provider in the destination country only for 'last mile' delivery services. In principle, terminal dues should be less than retail postage rates because the universal service provider in the origin country bears the cost of collection and transportation to the destination country. According to the UPU, terminal dues should be equivalent to about 70% of the retail domestic postage, although UPU terminal dues do not follow this principle in practice because the UPU imposes upper and lower limits on terminal dues rates.

Figure 83 Terminal dues and domestic postage for small packets from China (2018)



Source: Own analysis.

³⁷⁸ The 3 EU countries in UPU Group III are Bulgaria, Lithuania, and Romania.

Table 17 and Table 18 show how UPU terminal dues charges compare full domestic postage and “equivalent domestic postage” (assuming the reasonableness of the UPU's 70% premise) in 2018 for selected weight steps of documents and goods.

From these tables, it is apparent the UPU terminal dues in most, but not all, MS are substantially below the rates charged to domestic mailers for equivalent services. These discrepancies are especially evident in the delivery of small packets, particularly from Group III countries like China (see Figure 83).

Undercharging for delivery of inbound letter post mail has positive and negative effects on EU MS. EU universal service providers lose revenue on inbound international mail, which they must offset by having higher charges for domestic mail, which harm domestic mailers generally. Domestic online merchants suffer particular harm because the universal service provider is giving foreign merchants a competitive advantage by granting them preferential delivery rates. On the other hand post offices and their outbound customers benefit when they send e-commerce packets to post offices in other industrialised countries because they receive the benefit of low postal delivery rates.

For Western European countries as a whole, these positive and negative effects do not balance out. In a recent study, Copenhagen Economics has estimated that in 2018 Western Europe will suffer a negative net negative financial transfer of EUR 1.265 billion in its exchange of letter post mail with the rest of world if all universal service providers charge each other UPU terminal dues rates. Most of the net loss, about EUR 1.0 billion, will be incurred in the exchange of letter post items with Asia, because Asian merchants are sending vast quantities of e-commerce goods to European consumers. Almost all of the net losses are due to the terminal dues charges for delivery of goods rather than documents. Some Eastern European countries, however, appear to have a net gain from UPU terminal dues, mainly in their exchange of postal goods with Western Europe.³⁷⁹

379 Copenhagen Economics, *Main Developments in the Postal Sector (2013-2016)* (2018), 235-36. The UPU's region of 'Eastern Europe & Central Asia' includes 31 countries, 13 of which are members of the EU.

Table 17 Equivalent domestic postage v. terminal dues - documents, 2018

WIK order	ISO-2 country code	Country name	TD Grp 2018	0-20 gram letter				100-250 gram flat							
				Full domestic postage	70 pct of domestic postage	From TD Grp 1	From TD Grp 2	From TD Grp 3	From TD Grp 4	Full domestic postage	70 pct of domestic postage	From TD Grp 1	From TD Grp 2	From TD Grp 3	From TD Grp 4
1	AT	Austria	1	0.800	0.560	0.436	0.348	0.309	0.072	2.700	1.890	0.445	0.355	0.314	0.085
2	BE	Belgium	1	1.680	1.176	0.436	0.348	0.309	0.072	2.520	1.764	0.445	0.355	0.314	0.085
3	BG	Bulgaria	3	0.486	0.340	0.299	0.299	0.299	0.072	0.639	0.447	0.305	0.305	0.305	0.085
4	CY	Cyprus	2	0.410	0.287	0.299	0.299	0.299	0.072	0.640	0.448	0.305	0.305	0.305	0.085
5	CZ	Czech Republic	2	1.721	1.204	0.315	0.315	0.309	0.072	2.112	1.478	0.321	0.321	0.314	0.085
6	CH	Switzerland	1	0.861	0.603	0.436	0.348	0.309	0.072	1.723	1.206	0.445	0.355	0.314	0.085
7	DE	Germany	1	0.700	0.490	0.436	0.348	0.309	0.072	1.450	1.015	0.445	0.355	0.314	0.085
8	Dk	Denmark	1	1.208	0.846	0.436	0.348	0.309	0.072	4.832	3.382	0.445	0.355	0.314	0.085
9	EE	Estonia	2	0.650	0.455	0.348	0.348	0.309	0.072	0.650	0.455	0.355	0.355	0.314	0.085
10	ES	Spain	1	0.650	0.455	0.436	0.348	0.309	0.072	2.250	1.575	0.445	0.355	0.314	0.085
11	FI	Finland	1	1.500	1.050	0.436	0.348	0.309	0.072	3.000	2.100	0.445	0.355	0.314	0.085
12	FR	France	1	0.800	0.560	0.436	0.348	0.309	0.072	3.200	2.240	0.445	0.355	0.314	0.085
13	GR	Greece	1	0.650	0.455	0.436	0.348	0.309	0.072	2.200	1.540	0.445	0.355	0.314	0.085
14	HU	Hungary	2	0.488	0.342	0.348	0.348	0.309	0.072	1.307	0.915	0.355	0.355	0.314	0.085
15	HR	Croatia	2	0.418	0.293	0.348	0.348	0.309	0.072	0.837	0.586	0.355	0.355	0.314	0.085
16	IE	Ireland	1	1.000	0.700	0.436	0.348	0.309	0.072	2.300	1.610	0.445	0.355	0.314	0.085
17	IS	Iceland	1	1.446	1.012	0.436	0.348	0.309	0.072	1.767	1.237	0.445	0.355	0.314	0.085
18	IT	Italy	1	1.100	0.770	0.436	0.348	0.309	0.072	4.800	3.360	0.445	0.355	0.314	0.085
19	LI	Liechtenstein	1	0.861	0.603	0.436	0.348	0.309	0.072	1.120	0.784	0.445	0.355	0.314	0.085
20	LT	Lithuania	3	0.490	0.343	0.299	0.299	0.299	0.072	0.990	0.693	0.305	0.305	0.305	0.085
21	LU	Luxembourg	1	0.700	0.490	0.436	0.348	0.309	0.072	2.800	1.960	0.445	0.355	0.314	0.085
22	LV	Latvia	2	0.570	0.399	0.301	0.301	0.301	0.072	0.850	0.595	0.306	0.306	0.306	0.085
23	MT	Malta	2	0.260	0.182	0.299	0.299	0.299	0.072	1.020	0.714	0.305	0.305	0.305	0.085
24	NL	Netherlands	1	0.830	0.581	0.436	0.348	0.309	0.072	3.320	2.324	0.445	0.355	0.314	0.085
25	NO	Norway	1	1.460	1.022	0.436	0.348	0.309	0.072	3.963	2.774	0.445	0.355	0.314	0.085
26	PL	Poland	2	0.753	0.527	0.348	0.348	0.309	0.072	0.882	0.618	0.355	0.355	0.314	0.085
27	PT	Portugal	1	0.530	0.371	0.436	0.348	0.309	0.072	1.500	1.050	0.445	0.355	0.314	0.085
28	RO	Romania	3	0.559	0.391	0.299	0.299	0.299	0.072	0.688	0.482	0.305	0.305	0.305	0.085
29	SE	Sweden	1	0.879	0.615	0.436	0.348	0.309	0.072	3.516	2.461	0.445	0.355	0.314	0.085
30	SI	Slovenia	2	0.520	0.364	0.348	0.348	0.309	0.072	0.850	0.595	0.355	0.355	0.314	0.085
31	SK	Slovakia	2	0.500	0.350	0.348	0.348	0.309	0.072	0.950	0.665	0.355	0.355	0.314	0.085
32	GB	Great Britain	1	0.758	0.531	0.436	0.348	0.309	0.072	1.584	1.109	0.445	0.355	0.314	0.085
33	US	United States	1	0.419	0.293	0.436	0.348	0.309	0.072	1.716	1.201	0.445	0.355	0.314	0.085

Notes: (1) Terminal dues are calculated from base rates set out in IB Circular 92/2018 (Jul. 3, 2017) using the item-kg rates (high volume) except for Group 4 which uses kg rates.
(2) Average weight per shape and weight step is from Table 7a of the UPU 2018 IPK study, POC C 2 2018.2-Doc 4a. Annex 1 (Oct. 12, 2018). The data are normalized to exclude letter post items over 2 kg and combined into shape categories by assuming that terminal dues on goods in P and G format are assessed by content rather than by shape.

WIK orde r	ISO-2 countr y code	Country name	TD Grp 2018	20-50 gram small packet						100-250 gram small packet					
				Full domestic postage	70 pct of domestic postage	From TD Grp 1	From TD Grp 2	From TD Grp 3	From TD Grp 4	Full domestic postage	70 pct of domestic postage	From TD Grp 1	From TD Grp 2	From TD Grp 3	From TD Grp 4
1	AT	Austria	1	4.200	2.940	0.909	0.753	0.688	0.192	4.200	2.940	1.125	0.932	0.850	0.800
2	BE	Belgium	1	1.680	1.176	0.909	0.753	0.688	0.192	2.520	1.764	1.125	0.932	0.850	0.800
3	BG	Bulgaria	3	0.486	0.340	0.626	0.626	0.626	0.192	0.639	0.447	0.774	0.774	0.774	0.800
4	CY	Cyprus	2	1.700	1.190	0.626	0.626	0.626	0.192	1.700	1.190	0.774	0.774	0.774	0.800
5	CZ	Czech Republic	2	2.033	1.423	0.658	0.658	0.658	0.192	2.112	1.478	0.814	0.814	0.814	0.800
6	CH	Switzerland	1	1.723	1.206	0.909	0.753	0.688	0.192	1.723	1.206	1.125	0.932	0.850	0.800
7	DE	Germany	1	1.450	1.015	0.909	0.753	0.688	0.192	1.450	1.015	1.125	0.932	0.850	0.800
8	Dk	Denmark	1	1.208	0.846	0.909	0.753	0.688	0.192	4.832	3.382	1.125	0.932	0.850	0.800
9	EE	Estonia	2	1.300	0.910	0.753	0.753	0.688	0.192	1.300	0.910	0.932	0.932	0.850	0.800
10	ES	Spain	1	0.650	0.455	0.909	0.753	0.688	0.192	2.250	1.575	1.125	0.932	0.850	0.800
11	FI	Finland	1	1.500	1.050	0.909	0.753	0.688	0.192	3.000	2.100	1.125	0.932	0.850	0.800
12	FR	France	1	0.800	0.560	0.909	0.753	0.688	0.192	3.200	2.240	1.125	0.932	0.850	0.800
13	GR	Greece	1	1.550	1.085	0.909	0.753	0.688	0.192	2.300	1.610	1.125	0.932	0.850	0.800
14	HU	Hungary	2	0.662	0.463	0.753	0.753	0.688	0.192	1.307	0.915	0.932	0.932	0.850	0.800
15	HR	Croatia	2	0.607	0.425	0.753	0.753	0.688	0.192	0.837	0.586	0.932	0.932	0.850	0.800
16	IE	Ireland	1	3.600	2.520	0.909	0.753	0.688	0.192	4.500	3.150	1.125	0.932	0.850	0.800
17	IS	Iceland	1	1.012	0.708	0.909	0.753	0.688	0.192	1.767	1.237	1.125	0.932	0.850	0.800
18	IT	Italy	1	2.900	2.030	0.909	0.753	0.688	0.192	4.800	3.360	1.125	0.932	0.850	0.800
19	LI	Liechtenstein	1	1.723	1.206	0.909	0.753	0.688	0.192	1.723	1.206	1.125	0.932	0.850	0.800
20	LT	Lithuania	3	0.790	0.553	0.626	0.626	0.626	0.192	0.990	0.693	0.774	0.774	0.774	0.800
21	LU	Luxembourg	1	4.200	2.940	0.909	0.753	0.688	0.192	4.200	2.940	1.125	0.932	0.850	0.800
22	LV	Latvia	2	0.610	0.427	0.628	0.628	0.628	0.192	0.850	0.595	0.777	0.777	0.777	0.800
23	MT	Malta	2	0.420	0.294	0.626	0.626	0.626	0.192	1.020	0.714	0.774	0.774	0.774	0.800
24	NL	Netherlands	1	1.660	1.162	0.909	0.753	0.688	0.192	3.320	2.324	1.125	0.932	0.850	0.800
25	NO	Norway	1	5.006	3.504	0.909	0.753	0.688	0.192	5.006	3.504	1.125	0.932	0.850	0.800
26	PL	Poland	2	1.200	0.840	0.753	0.753	0.688	0.192						

6.5 Prospects for reform of the UPU

6.5.1 UPU reform initiatives prior to the 2016 Istanbul Congress

Over several decades, the UPU has repeatedly studied the public policy issues raised in Section 6.3.3, above, but it has proven unable to develop the political consensus needed to adopt fundamental reforms.

The first public policy issue, the need for rationalisation of remuneration practices and specifically terminal dues, has been considered by every UPU Congress since the 1969 Tokyo Congress. Beginning in the 1980s, universal service providers working both inside and outside the UPU have sought to restrain remail competition which bypasses uneconomic terminal dues. These efforts have generated intense scrutiny from US³⁸⁰ and European³⁸¹ competition authorities. A 1997 UPU study conceded,

On the one hand, rates of terminal dues which are not based on the internal tariffs or costs of delivery in the country of destination, create incentives for an economically wrong organization of cross-border transport networks and letter-post streams. Measures, on the other, which seek to prevent bypasses, impair the free exchange of cross-border letter-post items.³⁸²

In 1998, another UPU working party concluded, 'It is . . . essential that costs incurred in delivering inward international mail are recovered by all administrations. This will ensure that equal access is established for all, thereby allowing administrations to operate a commercial relationship and reducing the opportunity for remailing'.³⁸³ As a consequence of such criticism, the 1999 Beijing Congress committed the UPU to introduction of

380 In 1988, a study of terminal dues and remail by the Antitrust Division of the Department of Justice concluded, 'The current terminal dues structure produces distortions in the economic structure of the international mail system. Since terminal dues do not accurately reflect costs, the current system causes a subsidy to flow from some parties to others, provides artificial cost advantages to remailers in some cases and to postal administrations in others, and generally impairs the efficient operation of the international mail system'. US Department of Justice, Antitrust Division, 'Evaluating a Proposed Agreement on Terminal Dues' (1988), 25.

381 In 1992 the European Commission condemned UPU terminal dues and anti-remail practices in its seminal statement on postal policy, the 'Postal Green Paper', European Commission, *Green Paper on the Development of the Single Market For Postal Services*, COM(91) 476 (1992). The Commission declared, 'The existing systems of charging between postal administrations (called terminal dues) is not cost based, leading to significant distortions between remuneration and actual delivery costs incurred. The same principle of basing tariffs on costs should apply to the financial compensation system between postal administrations'. Ibid., 251. In 1999, after years of investigations and negotiations, EU antitrust authorities required European post offices to adopt a new terminal dues agreement for intra-European mail, REIMS II, that would, after a transition period, align terminal dues with 80% of first class or priority domestic postage rates. See James I. Campbell Jr., 'Evolution of Terminal Dues and Remail Provisions in European and International Postal Law' in *The Liberalisation of Postal Services in the European Union*, edited by Damien Geradin (Brussels: Kluwer, 2002), 3-38.

382 UPU, CA C1 1997 Doc 2, Study on the legal, regulatory, technological and commercial environment in relation with the single postal territory principle, para. 5 (Sep. 5, 1997).

383 UPU, POC WP 1.1 1998.1 Doc 3, Annex 2 at 11 (Apr. 14, 1998).

'country-specific' terminal dues in the near future.³⁸⁴ Despite these studies and commitments, between the 1999 Beijing Congress and the 2016 Istanbul Congress the UPU made no significant progress towards aligning terminal dues with the domestic postage rates in each destination country.

During this period, while purportedly looking for ways to reform the terminal dues system, every Congress since the 1989 Washington Congress, has adopted measures to prevent public universal service providers from competing with each other by taking advantage of the differences between terminal dues and equivalent domestic postage rates. The 1989, 1994, and 1999 Congresses focused on restraining remail competition in which some universal service providers accepted and forwarded international mail transmitted by private carrier from mailers located in other countries. The 2004, 2008, 2012, and 2016 Congresses adopted measures intended to prevent commercially-minded universal service providers from establishing extraterritorial offices of exchange (ETOE) in the national territories of other countries and using UPU-based legal privileges to compete against the resident universal service provider.

The second public policy issue, inadequate customs and security controls for postal packets, has been under study at the UPU for a decade. In 2008, the United States proposed mandatory barcodes for small packets in order to facilitate the provision of electronic customs information. This proposal was rejected by the Postal Operations Council three years later.³⁸⁵ Nonetheless, in 2010 discovery of bombs in packets sent from Yemen to the United States (by a non-designated operators) prompted calls for more intense scrutiny of all cross-border packets. The UPU reluctantly recognised it had to upgrade customs and security procedures or it would be unable to prevent national authorities from imposing on universal service providers the same patchwork of national border controls faced by private carriers.³⁸⁶

The UPU began to consider ways to provide advance electronic data to national customs authorities in a format defined and limited by the UPU. The 2012 Doha Congress amended the UPU Convention to add a postal security article that provided 'Member countries and their designated operators shall observe the security requirements defined in the UPU security standards'. At the same time, the new article required 'Any security measures applied in the international postal transport chain must be [...] implemented without hampering worldwide mail flows or trade by taking into consideration the specificities of the mail network' and 'implemented in an internationally coordinated and

³⁸⁴ The Convention was amended to declare that 'The provisions of the present Convention concerning the payment of terminal dues are transitional arrangements, moving towards a country specific payment system'. UPU Convention (1999), art. 47.3. The POC declared '*by 2002, the POC will have to draw up a transition plan* which would lead to the adoption of a system based on each country's specific costs, applicable to all members. UPU, 1999 Beijing Congress, Doc 37, para. 13 (Jul. 19, 1999).

³⁸⁵ UPU, 2008 Geneva Congress, Prop. 25.131.91 (Apr. 24, 2008), rejected by the POC Customs Group, POC C2 2011.1 Doc 5, para. 3 (May 6, 2011).

³⁸⁶ UPU, POC C2 CG 2011.1 Doc 2a Annex 2, para. 1 (Mar. 31, 2011) ('A variety of external factors are converging to create pressure on the postal world to electronically pre-advise information about goods being imported into another country before the physical arrival of the goods themselves').

balanced manner'.³⁸⁷ When the European Union announced in 2014 that it would require advance electronic data on inbound EMS and parcel post shipments as of May 1, 2016, the UPU invoked the postal security provisions of the UPU Convention and forcefully objected. The UPU successfully urged the European Commission to postpone implementation to allow further consultations.

Nonetheless, progress towards implementation of the UPU's own 'global postal model' for electronic transmission of customs and security data has been slow. In late 2017, Australia Post described the status of UPU electronic data systems (the systems used for general customs and security data) as follows:

[I]t is expected to take multiple years even to have our key trading lanes and countries in Group 1 [industrialised countries] providing data of the quality and quantity required to undertake a meaningful GST [sales tax] assessment on each and every item. Further, it is important to note that, many low value items coming into Australia arrive as an untracked service, for which no data is currently provided.³⁸⁸

The shortcomings in the UPU's global postal model highlighted by Australia Post appear to reflect more than transitional issues. The UPU's global postal model is essentially an agreement among universal service providers to comply with certain customs and security provisions. The global postal model is not commercially neutral; it applies only to universal service providers and is unavailable to competing carriers of similar goods. Provisions of the global postal model are not objectively derived from the requirements of national customs laws. They are the product of political compromise among a diverse group of universal service providers with very different interests and technical capabilities. Most fundamentally, the global postal model does not impose liability for violations on customs requirements.³⁸⁹ It is difficult to envision any viable system for the submission of appropriate customs and security data that does not include liability for false or incomplete data.

The third public policy concern, disentangling the governmental and commercial elements of the UPU, has been on the agenda of every UPU Congress since the 1989 Washington Congress. Responding to a resolution adopted by the Washington Congress, in 1992 a specially appointed group of postal experts proposed phased 'separation of the Union's traditional regulatory function from its growing focus on operational issues' ending in 'complete separation from the UPU of all operational activities in a distinct entity supported by contributions from those administrations (not countries) participating in its activities'.³⁹⁰

³⁸⁷ UPU Convention (2012), art. 9 (art. 8 in the 2016 UPU Convention).

³⁸⁸ Australia Post, 'Productivity Commission Consultation on Collection Models for GST on Low Value Imported Goods: Australia Post Supplemental Submission', p. 7 (Sep. 21, 2017), https://www.pc.gov.au/_data/assets/pdf_file/0011/221978/subs002-collection-models.pdf.

³⁸⁹ UPU Convention (2016), art. 23.3 ('Member countries and designated operators shall accept no liability for customs declarations in whatever form these are made or for decisions taken by the Customs on examination of items submitted to customs control').

³⁹⁰ UPU, CE 1992 C3 Doc 2a Add 1, 'Report of the postal experts - summary' (Mar. 24, 1992), paras. 6-11, 30.

In 1996, the German ministry dealing with postal affairs undertook a wide-ranging review of the concept of the 'single postal territory'. The German ministry proposed that

The Universal Postal Convention should commit each member country to offering non-discriminatory transit and delivery services. Non-discriminatory in this context means that private operators are treated in the same manner as postal administrations in respect of price and conditions of access when volume, structure and regularity of mail is comparable.³⁹¹

The German proposal was not only rejected; the study was terminated and components of the study were assigned to other working parties.

In the 1999 Beijing Congress, the governments of the United States and Germany again raised the need for institutional reform. They called for an Extraordinary Congress to be convened in two years to reconsider the mission, structure, and management of the Union's work in light to rise of new forms of competition and the principles of the General Agreement on Trade in Services.³⁹² Debate raged behind closed doors and consumed most of the Beijing Congress. In the end, opponents were able to block floor consideration of the proposal or its underlying concepts. Instead, Congress decided to form a High Level Group after Congress to study the issues. The High Level Group was duly formed. In 2000, a study group sketched out five models for structural reform of the UPU including 'Model one: complete separation of governmental and operational issues into separate organizations'.³⁹³ Although the 'five models paper' would later become famous among advocates for reform, the High Level Group quickly abandoned the models as a basis for further work.³⁹⁴

The 2004 Beijing Congress and the 2008 Geneva Congress both established studies to study the mission and structure of the UPU. ³⁹⁵ After four years, the Structure and Constituency of the Union Project Group formed after the 2004 Congress proposed only further study.³⁹⁶ The 2008 Congress established a study on the impact of new market players in the postal sector on the Union and its mission and activities. The CA's Reform of the Union Project Group retained PricewaterhouseCoopers to prepare an independent assessment. PricewaterhouseCoopers's primary (although cryptic) recommendation was 'clear separation of governmental, regulatory and operational roles'.³⁹⁷ The UPU took no steps to implement this proposal.

³⁹¹ UPU, CA C1 1996 Doc 2, Study on the legal, regulatory, technological and commercial environment in relation with the single postal territory principle (Sep. 18, 1996), para. 42.

³⁹² UPU, 1999 Beijing Congress, Proposals 33 (Apr. 14, 1999) and 60 (Aug. 12, 1999).

³⁹³ UPU, CA HLG SG2 2000.3 Doc 3, Results of the SG 2 brainstorming in select groups on 12 May 2000. Some possible alternative models for the UPU's organizational structure (Jun. 28, 2000).

³⁹⁴ UPU, 1999 Bucharest Congress, Resolution C 110/1999.

³⁹⁵ UPU, 2004 Bucharest Congress, Resolution C54/2004 and 2008 Geneva Congress, Resolution C16/2008.

³⁹⁶ UPU, CA SCU PG 2007.2 Doc 5 (undated).

³⁹⁷ PricewaterhouseCoopers, 'Universal Postal Union Final report – Draft for approval Study of the impact of new market players in the postal sector on the Union and its mission and activities' (Nov. 1, 2101), 68.

6.5.2 The 2016 Istanbul Congress: Integrated Product Plan and Single Council

During the four-year preparation for the Istanbul Congress, the Products Strategy and Integration Group (PSIG) of POC Committee 2 developed another approach to fundamental reform of the UPU. PSIG proposed to reorganise the products of the UPU in a plan called the 'Integrated Product Plan' or IPP. The IPP proposed to replace the letter post, parcel post, and EMS services with two basic postal services: one for documents and one for goods. In each service category, the IPP would provide options with respect to speed of transmission (non-priority, priority, premium) and other service features (untracked, tracked, signed). The IPP also envisioned rationalisation of remuneration provisions so that the destination universal service provider received 'cost-based and sustainable remuneration' and 'efficient compliance with emerging security and electronic customs pre-advice requirements'.³⁹⁸ The PSIG argued that rationalisation of the UPU's products was a necessary commercial response to the growth of e-commerce:

The 2012 Doha Postal Congress called for a more integrated way of working to better understand and capture the opportunities for growth in letters, parcels and EMS services. Both the UPU E-Commerce Forum, held in 2014, and the UPU World Strategy Conference, held in 2015, highlighted the growth in e commerce and aptly brought out the fact that customers require access to simple, affordable and reliable international postal services. However, one barrier to growth was identified as being the complexity of the postal product offering, which is preventing designated operators (DOs) from exploiting the burgeoning opportunities offered by the e-commerce market. [...]

There is a big risk for Posts in maintaining the status quo, especially with regard to the relevance of the network, the processes currently in place, and the sustainability of the UPU³⁹⁹

From a public policy perspective, the IPP promised to alleviate, although not entirely resolve, two of the three longstanding concerns about the UPU: remuneration reform and customs controls. Under the IPP, remuneration between universal service providers would be more cost-based and compliance with national customs and security laws would be more in line with the controls applied to non-postal packets. Many public universal service providers, however, viewed such public policy reforms as directly contrary to their commercial interests. They believed that low remuneration rates and simplified, and therefore inexpensive, customs controls afforded them a competitive advantage against private competitors in the international e-commerce market. Several of largest universal service providers are investing heavily in the development of multinational networks to capture the booming trade in lightweight e-commerce products. The most controversial element of the IPP was the proposed shift of small packets — goods in packets weighing up to 2 kg — from the letter post to a new service category encompassing all goods.

³⁹⁸ UPU, CEP C3 GSIP 2015.3 Doc 3, Annex 1, Integrated product plan – preliminary draft (Jun. 17, 2015), 4-5.

³⁹⁹ Ibid., 1.

Small packet service is the principal postal conduit for e-commerce goods and benefits particularly from low terminal dues and simplified UPU customs treatment.

Faced with strong opposition, the IPP was divided into two steps before submission to the 2016 Istanbul Congress. Step 1 introduced definitions of 'goods' and 'documents' into the UPU Convention and required application of barcodes to small packets (but without specific information). Step 2 was to be developed and decided after the Istanbul Congress.⁴⁰⁰ The largely cosmetic Step 1 was approved by the Istanbul Congress by a minority of votes, with 61 countries supporting Step 1 but 65 countries either opposing (53) or abstaining (12).⁴⁰¹ Opponents included some of the largest and most politically powerful universal service providers such as China, Spain, Germany, India, Kenya, Netherlands, Singapore, South Africa, Switzerland, and the United Kingdom. After the Istanbul Congress, opponents of the IPP were put in charge of the key committees responsible for defining and implementing Step 2. These committees have approached the reforms envisioned by the IPP with caution.

In the four years leading up to Istanbul Congress, the Council of Administration again considered institutional reform of the UPU. The 2012 Doha Congress established a study to review 'ways to better structure and organise and improve the functioning of UPU bodies' and 'all functions of the Council of Administration and the Postal Operations Council with a view to defining those of a governmental nature and those of an operational nature'.⁴⁰² Four years later, CA's Reform of the Union Project Group reported a consensus on the 'need to have a clear separation between governmental/regulatory functions and operational functions', but its final report proposed precisely the opposite: a union of all of the governmental and commercial decision making authority of the UPU into a 'Single Council' of the 60 to 70 member countries elected to the POC and CA in 2016. The Single Council would supervise decisions taken by both the POC and CA.⁴⁰³ The overriding purpose of the Single Council was to give developing countries more authority over UPU policies. Developing countries believed that the reservation of 16 seats in the Postal Operations Council for industrialised countries gave them an inappropriate degree of authority in an agency of the United Nations.⁴⁰⁴

The proposal to restructure the UPU under the direction of a Single Council was opposed by many countries, led by Germany and France. They pointed out that the Single Council was a step backwards in regard to separation of governmental and commercial functions. In lieu of the Single Council proposal, Germany proposal a resolution that would require

⁴⁰⁰ The second version of the IPP was set out in POC C3 PSIG 2015.4 Doc 6 Rev 1 Annex 1 (Oct 23, 2015). The IPP as proposed to the Istanbul Congress was set out in 2016 Istanbul Congress, Doc 39 (Nov. 11, 2018).

⁴⁰¹ UPU, 2016 Istanbul Congress, C3 Report 3 (Oct. 2, 2016) at 2. The votes of individual countries were displayed at Congress but not included in the report.

⁴⁰² UPU, 2012 Doha Congress, Resolution 26/2012.

⁴⁰³ UPU, CA C1 RUPG 2016.1 Doc 2a, Report by the Chairman of the enlarged ad hoc group on UPU reform (Feb. 9, 2016); 2016 Istanbul Congress, Doc 38, Reform of the Union. Proposals concerning structural changes to the Union and faster decision making (Jun. 9, 2016).

⁴⁰⁴ UPU, 2016 Istanbul Congress, Doc 38, Reform of the Union. Proposals concerning structural changes to the Union and faster decision making (Jun. 9, 2016).

the CA to commission an independent analysis of the acts of the UPU 'with the ultimate objective of clearly separating and distinguishing regulations of an operational, technical and commercial nature from regulations of a governmental and/or regulatory nature'. The German resolution further instructed the CA and POC to develop a new structure that would create distinct decision-making bodies for governments and operators.⁴⁰⁵ Germany proposed that the new institutional structure and revised acts should be adopted in an Extraordinary Congress to be held in 2018. Most European countries and the United States agreed with the principles of the German proposal but also considered it politically necessary to accommodate the demand of developing countries for more authority. They supported a proposal by France that was derived from the German proposal. While supporting clear separation of governmental and commercial decision making, the French proposal also provided for the addition for four seats for developing countries on the POC.⁴⁰⁶

Although the proposal for Single Council was supported by a majority of member countries at the Istanbul Congress, it was opposed by a sufficient number of countries to block the supermajority needed to adopt necessary amendments to the Constitution. Neither the proposal to create a Single Council nor the alternative proposals by Germany and France came to vote. Instead, the Istanbul Congress instructed the CA to establish an ad hoc committee to develop a compromise solution to be considered at an Extraordinary Congress in 2018.⁴⁰⁷

Two years later, the 2018 Addis Ababa Extraordinary Congress approved a measure which expanded membership in the Postal Operations Council by adding eight seats, all of which are likely to be filled by developing countries, and eliminating the reservation of seats for industrialised countries. The Addis Ababa Congress did not consider the issue of separation of governmental and commercial functions.

6.5.3 US policy initiatives on UPU reform, August-October 2018

In the United States, as in Europe, there has been growing popular opposition to UPU delivery rates which distort international commerce and favour foreign merchants over domestic merchants and increasing concern over UPU-based customs and security provisions which undercut application of the national customs and security controls to postal packets. In the second half of 2018, the US government announced unilateral steps to address these public policy concerns and notified UPU that it would withdraw from the Union on October 17, 2019, unless it is successful in negotiating new agreements that will

⁴⁰⁵ UPU, 2016 Istanbul Congress, Proposal 11 (May 30, 2016).

⁴⁰⁶ UPU, 2016 Istanbul Congress, Proposal 25. Proposed by France and supported by Argentina, Austria, Bulgaria (Rep.), Denmark, Estonia, Finland, Great Britain, Greece, Iceland, Ireland, Italy, Malta, Monaco, Netherlands, Norway, Portugal, Romania, San Marino, Sweden, the former Yugoslav Republic of Macedonia, United States of America.

⁴⁰⁷ UPU, 2016 Istanbul Congress, Resolution C27/2016.

resolve fundamental, but not clearly specified, problems posed by the acts of the UPU. Details of the new US policies are described in this section.

On August 23, 2018, after an eight-month internal review, the Trump Administration issued a 'Presidential Memorandum',⁴⁰⁸ which set out the legal bases, findings, and objectives of its policy towards the UPU. The Presidential Memorandum begins by reviewing statutory policies towards international postal services and other delivery services. The Presidential Memorandum notes that Congress has required federal agencies to apply US customs laws and other border controls 'in the same manner' to competitive postal products and similar non-postal shipments. Congress also requires the Secretary of State to seek non-discriminatory application of foreign customs laws to outbound US shipments whether transported by the United States Postal Service (USPS) or US private companies. The Presidential Memorandum then reiterates statutory provisions committing the US to promote (i) efficient operation of international postal services and other delivery services, (ii) unrestricted and undistorted competition in the provision of postal and other delivery services, and (iii) a clear distinction between governmental and operational functions in UPU.⁴⁰⁹

The Presidential Memorandum finds that international postal agreements adopted by the UPU are inconsistent with these statutory policies and the US national interest because:

(i) UPU terminal dues, in many cases, are less than comparable domestic postage rates. As a result:

(A) the United States, along with other member countries of the UPU, is in many cases not fully reimbursed by the foreign postal operator for the cost of delivering foreign-origin letter post items, which can result in substantial preferences for foreign mailers relative to domestic mailers;

(B) the current terminal dues rates undermine the goal of unrestricted and undistorted competition in cross-border delivery services because they disadvantage non-postal operators seeking to offer competing collection and outward transportation services for goods covered by terminal dues in foreign markets; and

(C) the current system of terminal dues distorts the flow of small packets around the world by incentivizing the shipping of goods from foreign countries that benefit from artificially low reimbursement rates.

(ii) The UPU has not done enough to reorient international mail to achieve

408 'Presidential Memorandum for the Secretary of State, Secretary of the Treasury, Secretary of Homeland Security, Postmaster General, and Chairman of the Postal Regulatory Commission: Modernizing the Monetary Reimbursement Model for the Delivery of Goods Through the International Postal System and Enhancing the Security and Safety of International Mail' (Aug. 23, 2018) (hereafter, 'US Presidential Memorandum'). <https://www.whitehouse.gov/presidential-actions/presidential-memorandum-secretary-state-secretary-treasury-secretary-homeland-security-postmaster-general-chairman-postal-regulatory-commission/>.

409 US Presidential Memorandum §§ 2(a), 2(b), citing 39 U.S.C. §§ 407(a), 407(e) (2012).

a clear distinction between documents and goods. Without such a distinction, it is difficult to achieve essential pricing reforms or to ensure that customs requirements, including provision of electronic customs data for goods, are met.⁴¹⁰

As a result, the Presidential Memorandum concludes that —

The United States must seek reforms to the UPU that promote the policies outlined in this memorandum. Such reforms shall provide for:

(i) a system of fair and nondiscriminatory rates for goods that promotes unrestricted and undistorted competition; and

(ii) terminal dues rates that:

(A) fully reimburse the USPS for costs to the same extent as domestic rates for comparable services;

(B) avoid a preference for inbound foreign small packets containing goods that favors foreign mailers over domestic mailers; and

(C) avoid a preference for inbound foreign small packets containing goods that favors postal operators over private-sector entities providing transportation services.⁴¹¹

The Presidential Memorandum directed the State Department to '*seek agreement on future Convention texts that comport with the policies of this memorandum*' in meetings of the UPU, including in the Extraordinary Congress to be held in Addis Ababa in the first week of September 2018. After the Extraordinary Congress, the Secretary of State was directed to provide by November 1, 2018, '*a report summarizing the steps being taken to implement this memorandum*'. If the Secretary determined that 'sufficient progress' had not been achieved, the Secretary was obliged to include '*recommendations for future action, including the possibility of adopting self declared rates*'.⁴¹²

The Secretary of State did not obtain agreement on the policies of the Presidential Memorandum at the Extraordinary Congress in Addis Ababa. Indeed, the State Department representative did not mention the Presidential Memorandum until the final meeting of the Addis Ababa Congress in a short speech that consisted of six sentences, the last of which conveyed good wishes to all delegates for a safe trip home. National delegations left Addis Ababa with the impression that the US had indicated a willingness to postpone implementation of the Presidential Memorandum in return for the approval of minor changes in a resolution directing the Postal Operations Council to prepare a

⁴¹⁰ US Presidential Memorandum § 2(c).

⁴¹¹ US Presidential Memorandum § 3(a).

⁴¹² Presidential Memorandum, § 4. See also § 3(b) ('If negotiations at the UPU's September 2018 Second Extraordinary Congress in Ethiopia fail to yield reforms that satisfy the criteria set forth in subsection (a) of this section, the United States will consider taking any appropriate actions to ensure that rates for the delivery of inbound foreign packets satisfy those criteria, consistent with applicable law').

'Integrated Remuneration System' for consideration by the 2020 Abidjan Congress and introduction in 2022.⁴¹³

On October 17, 2018, the White House announced that the State Department had submitted its report on the Addis Ababa Congress as required by the Presidential Memorandum. The report noted that sufficient progress has not been made on agreements to reform the acts of the UPU in line with the policies of the Presidential Memorandum. The White House stated that the President had agreed to take two actions recommended in the State Department report.⁴¹⁴ First, the US will adopt 'self-declared rates for terminal dues as soon as practical, and no later than January 1, 2020'. Second, the US 'will also file notice that the United States will withdraw from the UPU'. This notice was delivered to the UPU on October 17, 2018, and begins a one-year withdrawal process as set forth in the UPU Constitution. The White House announcement further declares that 'During this period, the Department of State will seek to negotiate bilateral and multilateral agreements that resolve the problems discussed in the Presidential Memorandum. If negotiations are successful, the Administration is prepared to rescind the notice of withdrawal and remain in the UPU'.

For the US Postal Service to introduce 'self-declared rates' for delivery of inbound international packets, the US Postal Service must submit proposed rates to the US Postal Regulatory Commission for review in the same manner as for normal domestic rates. On November 16, 2018, the Postal Service filed with the US Postal Regulatory Commission petitions which request the Commission to clarify the regulatory treatment of self-declared rates for inbound packets services. The US Postal Service has asked the Commission for resolution of these threshold issues in 60 days. After resolution of these issues, the US Postal Service will be required to propose new rates for delivery of inbound packets pursuant to the policies set out in the Presidential Memorandum. As a practical matter, it appears that new rates for the delivery of inbound small packets (possibly including inbound postal parcels) could be implemented by the US Postal Service as soon as July 2019, and not later than January 1, 2020, depending on the amount of advance notice provided to foreign universal service providers and private carriers.

On October 24, 2018, President Trump signed the STOP Act into law.⁴¹⁵ The STOP Act directs the Secretary of Homeland Security to adopt new regulations requiring the Postal Service to arrange for the advance electronic transmission of customs and security data for 'international mail shipments' to the US Customs and Border Protection. Data requirements for mail shipments shall be '*comparable to the requirements for the*

⁴¹³ UPU, 2018 Addis Ababa Congress, Resolution C6/2018.

⁴¹⁴ White House, 'Statement from the Press Secretary' (Oct. 17, 2018), <https://www.whitehouse.gov/briefings-statements/statement-press-secretary-38>. The report by the State Department has not been made public.

⁴¹⁵ The Synthetic Trafficking and Overdose Prevention Act of 2018, or 'STOP Act', is Title VIIIA of the Substance Use-Disorder Prevention that Promotes Opioid Recovery and Treatment for Patients and Communities Act, Pub. L. No. 115-271, ___ Stat. ___ (2018) (H.R. 6, 115th Cong., 2d Sess., enrolled and presented to the President for signature, Oct. 16, 2018).

transmission of such information imposed on similar non-mail shipments of cargo'.⁴¹⁶ The Postal Service is required to provide advance electronic customs data for 70% of inbound mail shipments — including 100% of mail shipments received from China — by December 31, 2018. By December 31, 2020, the Postal Service is required to provide data for 100% of inbound mail shipments. The STOP Act specifically provides that it will take effect as US law even if it violates obligations of US under the acts of the UPU. In such case, the STOP Act directs the Secretary of State to negotiate appropriate amendments to the acts of UPU found to be inconsistent with the STOP Act.⁴¹⁷

6.5.4 UPU response to US policy initiatives on UPU reform

In October 2018, the UPU's Postal Operations Council and Council of Administration held their regular fall meetings in Bern. Under normal procedures, the POC and CA could be expected to approve the preparation of studies by working parties relating to development of future UPU remuneration rates (i.e., terminal dues and inward land rates or successor provisions). The results of these studies would normally be reported to the POC and CA in April 2019 meetings and, if approved, would be used to prepare specific remuneration proposals for consideration by the POC and CA in fall 2019 meetings. Final proposals would be approved in POC and CA meetings in February 2020 for submission to the Abidjan Congress to be held in fall 2020. After approval by the Abidjan Congress, new remuneration provisions would be incorporated into the 2020 UPU Convention and enter in force on January 1, 2022.

On October 25, 2018, however, the Council of Administration decided to adopt a fast-track approach towards UPU remuneration reform in an effort to head off US withdrawal from the UPU. The fast-track timetable was introduced in a meeting of the CA's Committee 2, Universal Service Obligation, Regulatory Affairs and Postal Regulation. Committee 2 is co-chaired by Jack Hamande, a member of the Council of the Belgian Institute for Postal Services and Telecommunications (BIPT), and Matamo Ndaro, a senior staff member of the Kenyan Communications Authority. The gist of the new timetable is to develop new remuneration rates for approval in the POC and CA plenary meetings in April 2019. To do so, the relevant POC and CA working parties have accelerated the planned studies and met in January and February to review the results of studies and develop proposals. Chairman Hamande announced that the new rates, if approved by the POC and CA in April 2019, will be submitted to the full UPU membership for approval as amendments to

⁴¹⁶ Synthetics Trafficking and Overdose Prevention Act of 2018, Pub. L. No. 115-271, § 8003(a)(1), ____ Stat. ____, ____, *amending* the Trade Act of 2002, Pub. L. No. 107-210, § 343(a)(3)(K), *codified* 19 U.S.C. § 2071 note.

⁴¹⁷ Synthetics Trafficking and Overdose Prevention Act of 2018, Pub. L. No. 115-271, § 8004, ____ Stat. ____, ____.

the 2016 UPU Convention and introduction on January 1, 2020. This is, however, an extremely ambitious objective.⁴¹⁸

6.5.5 Implications of US initiatives for the European Union

As explained above, the US initiatives with respect to UPU reform include two elements: introduction of non-discriminatory self-declared rates for postal delivery of inbound goods and withdrawal from the UPU on October 17, 2019, unless the UPU adopts appropriate reforms consistent with US policies. Nonetheless, it appears that in principle the American initiatives offer opportunities for the advancement of EU policies and interests.

US introduction of non-discriminatory self-declared rates will not harm the European Union as a whole and will offer a possibility for significant benefits. Introduction of self-declared rates by the US on letter post items received from the EU implies that the EU universal service providers will, in turn, assess self-declared rates for delivery of letter post items received from the United States. Reciprocal introduction of self-declared rates will eliminate net financial transfers resulting from terminal dues. According to Copenhagen Economics, in 2018 Western Europe will have a negative net financial transfer of about EUR 58 million in the exchange of letter post mail with North America if all letter post items are exchanged at UPU terminal dues rates.⁴¹⁹ This estimate must be taken as a rough approximation since some exchanges between the EU and North America are based on bilaterally agreed rates rather than on UPU rates. Moreover, the estimate for Western Europe, a UPU-defined region, does not include EU universal service providers in the UPU region for Eastern Europe and Central Asia⁴²⁰ some of which will likely lose a positive net financial transfer with North America. Nonetheless, the Copenhagen Economics estimate is sufficiently robust to indicate that the EU will likely receive a small but positive financial gain from the introduction of self-declared terminal dues rates in the exchange of postal goods between the EU and US.

More importantly, the introduction of self-declared rates for delivery of postal goods exchanged between the EU and US appears to open the door to a wider application of self-declared rates that would be financially beneficial. The US regime of self-declared rates will include postal goods received from the major Asian universal service providers including China and Singapore. This would set a precedent that the EU could plausibly invoke. According to the estimates of Copenhagen Economics, the exchange of letter post

⁴¹⁸ Amendments to the UPU Convention between Congresses are more difficult to adopt than changes to the Convention at Congress. Amendments between Congresses must be approved by a ballot of members and a proposal must be approved by a two-thirds majority of the votes cast. In contrast, in normal or Extraordinary Congress proposed changes to the Convention require approval by a simple majority of votes. UPU Convention (2016), arts. 38.1, 38.3.1.

⁴¹⁹ Copenhagen Economics, *Main Developments in the Postal Sector* (2013-2016) (2018) at 235-36. The 19 EU member states in the UPU region Western Europe are Austria, Belgium, Croatia, Cyprus, Denmark, Finland, France, Germany, Great Britain, Greece, Ireland, Italy, Luxembourg, Malta, Netherlands, Portugal, Slovenia, Spain, and Sweden.

⁴²⁰ The 9 EU member states in the UPU region Eastern Europe and North Asia are Bulgaria, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, and Slovakia.

items between Western Europe and the Asia-Pacific region will result in a negative net financial transfer of about EUR 1 billion in 2018. Even if this estimate is approximate, it is apparent that EU MS will benefit substantially from the introduction of self-declared rates in the exchange of small packets with major Asian e-commerce countries. In addition, introduction of self-declared rates will benefit EU online merchants by eliminating the competitive advantage that merchants in North America and Asia enjoy because of their access to preferential postal rates for delivery of goods in the EU.⁴²¹

The US threat to withdraw from the UPU raises more fundamental problems and perhaps an opportunity for more substantial reforms. A US exit would reduce the effectiveness of the UPU by making it a less comprehensive organisation. Other countries may be tempted to leave as well. Moreover, if the US withdraws from the UPU, the operational procedures for exchanging mail between the US Postal Service and other universal service providers would be thrown into doubt. The 2016 UPU Convention provides that only 'designated operators' may use the UPU forms and documentation which are required in the exchange of mail between universal service providers.⁴²² It would be obviously impractical to develop a new set of documents and forms for exchanging mail between the US and other countries. At the same time, it would be contrary to the interests of the EU (and other countries) to refuse to exchange mail with the US merely because the US Postal Service is no longer a 'designated operator' within the terms of the UPU Convention.

On the one hand, a successful US exit from the UPU could offer an instructive and valuable precedent for the EU. Today it is difficult to foresee solutions to the operational difficulties that will be encountered by a major universal service provider trying to maintain international postal services in a non-UPU country.

On the other hand, if the US were successful in persuading the UPU to adopt fundamental reforms, it is likely that the direction of such reforms would be broadly consistent with EU policies. The August 23rd Presidential Memorandum touches on each of the three basic issues summarised in Section 6.3.3, above. The primary theme of the Presidential Memorandum is elimination of preferences and distortions in delivery rates for inbound international postal goods that are rooted in UPU rate-setting.⁴²³ The Presidential Memorandum and the STOP Act also seek to limit or supersede UPU provisions that have hampered submission of 'advance electronic customs data that are needed to enhance targeting and risk management for national security and to facilitate importation and customs clearance'.⁴²⁴ And the Presidential Memorandum cites with approval the US statutory policy of promoting 'a clear distinction between governmental and operational responsibilities with respect to the provision of international postal services and other

⁴²¹ See Andy Bounds and Michael Pooler, 'UK retailers squeezed by postal subsidies for Chinese sellers', *Financial Times*, Sep. 6, 2018, <https://www.ft.com/content/3af8bfb8-ad3a-11e8-94bd-cba20d67390c>.

⁴²² UPU Convention (2016), art. 13.1 ('Unless otherwise provided by the Acts of the Union, only designated operators shall use UPU forms and documentation for the operation of postal services and exchange of postal items in accordance with the Acts of the Union').

⁴²³ US Presidential Memorandum § 2(d).

⁴²⁴ US Presidential Memorandum § 2(c)(ii).

international delivery services [...] by intergovernmental organizations'. These US policies all appear compatible with EU postal legislation.

The US strategy for fundamental reform of the UPU and its chances of success are unclear. Although the Presidential Memorandum cites several worthy principles, the US government has not explicitly identified which reforms it considers necessary to allow it to rescind its notice of withdrawal from the UPU. Nor it is evident that the US will be able to collect sufficient support among UPU member countries to adopt fundamental reforms. Some reforms are likely to require amendment of the UPU Constitution and General Regulations. These acts cannot be amended until the next meeting of the UPU Congress. The next regular Congress convenes in Abidjan in September 2020; however, there is also a possibility of holding an Extraordinary Congress in the second half of 2019. Continuation of US membership in the UPU will likely depend on a clearer and more flexible approach by the US and a very substantial degree of cooperation between the US, EU MS, and other reform-minded member countries of the UPU.

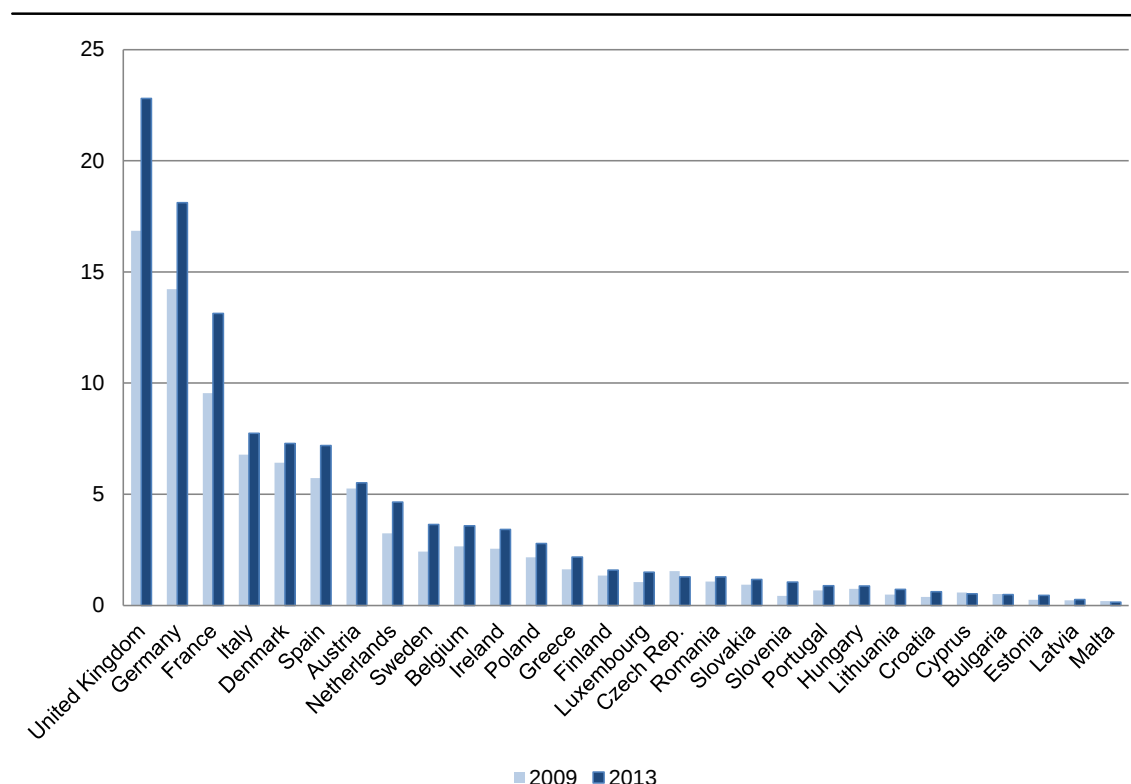
6.6 Customs and taxes

Many e-commerce items imported into the EU are low-value consignments for which no VAT or customs duties are paid. The European Commission estimates the number of these shipments to amount up to 115 million items for all 28 MS in 2013, an increase by about 28% compared to 2009.⁴²⁵ There are some countries in which this development is more pronounced than in others. For example, low-value consignments from outside the EU to Austria have increased by only 5%, whereas low-value shipments to Slovenia have more than doubled, although from a much lower level (Figure 84).⁴²⁶ Large MS (UK, DE, FR, IT, ES) and those with well-developed e-commerce markets (DK, AT, NL) have imported much more low-value goods in absolute terms.

⁴²⁵ See European Commission (2015), Assessment of the application and impact of the VAT exemption for importation of small consignments, Final report, May 2015, p. 37.

⁴²⁶ Ibid.

Figure 84 Low-value items imported to the EU from non-EU countries (millions)



Source: based on European Commission (2015), Assessment of the application and impact of the VAT exemption for importation of small consignments, Final report, May 2015

Currently, low-value consignments from outside the EU are exempt from VAT if the intrinsic value of the item is below the threshold defined by Directive 2009/132/EC (10 Euros, may be extended to 22 Euros). Most MS have set the threshold at 22 Euros, while some MS (BG, CY, DK, HR, HU, RO, UK) apply lower limits.⁴²⁷

Table 19 provides an overview of the current and future value thresholds for VAT and customs duties for imports from non-EU countries to EU MS. Sellers within the EU have to charge VAT irrespective of the value, and are thus suffering from a competitive disadvantage compared to non-EU sellers.

⁴²⁷ See European Commission (2015), Assessment of the application and impact of the VAT exemption for importation of small consignments, Final report, May 2015, p. 8.

Table 19 Overview on import duties for low-value consignments 2018 and 2021

Value of shipment	2018	2021
Below 22 Euro	No VAT No customs duties	VAT No customs duties
Below 150 Euro	VAT No customs duties	VAT No customs duties
More than 150 Euro	VAT Customs duties	VAT customs duties

As reports by the European Commission (TAXUD) and various press reports suggest, e-commerce goods bought from outside the EU can be systematically undervalued, or declared as gifts and therefore falsely exempted from VAT. The European Commission estimates the loss of VAT due to undervaluation and fraud to be even higher than the VAT lost due to the de-minimis threshold: lost VAT due to thresholds is estimated to amount up to EUR 535 million in 2013,⁴²⁸ and to EUR 1 billion in 2015, while lost VAT due to undervaluation and fraud is estimated at another EUR 4 billion.⁴²⁹ A major source of fraudulent VAT evasion is the so-called ‘fulfilment house fraud’.

Case study 16: Fulfilment house fraud

Under the current VAT legislation, VAT on goods purchased online from sellers outside the EU is due at the point of import but only if the value is above the threshold. In contrast, goods which are already located within the EU at the time of the purchase would have to be charged with VAT. Online sellers from outside the EU have developed a practice of evading VAT called ‘fulfilment house fraud’.

Fraudulent online sellers from countries outside the EU may ship bulk goods to fulfilment houses within the EU, often via sea transport due to low transport costs. Purchases made by European customers on online marketplaces are then served from these fulfilment houses without charging VAT, as if they had been shipped from Asia. From the online seller’s point of view, this practice provides the double benefit of being able to offer at lower prices and reducing delivery times to meet customer expectations for fast delivery.

Sources: Interviews with customs experts; Expert Panel on Customs and VAT

A mystery shopping study commissioned by UPS showed that VAT and customs duties are less likely to be charged when goods are shipped by universal service providers than by express carriers.⁴³⁰ A report by the German Federal Court of Auditors showed that less than 1% of postal shipments bearing CN 22 forms are controlled at random, of which 22% contained undervalued or counterfeit items or violated import restrictions.⁴³¹ A recent survey among postal and express operators provided estimates on the share of shipments

⁴²⁸ Ibid, p. 46. See also EC (2015), VAT aspects of cross-border e-commerce – Options for modernisation, Final Report, Lot 1, October 2015.

⁴²⁹ See EC, presentation by DG TAXUD, EU VAT for imports of low value goods.

⁴³⁰ See Copenhagen Economics (2016), E-commerce imports into Europe: VAT and customs treatment, Study for UPS, May 2016.

⁴³¹ See Federal Court of Auditors/Bundesrechnungshof (2010), Annual Report.

controlled at random, ranging between 1 to 2% by customs authorities in Latvia, and 10 to 15% in Bulgaria.⁴³²

In order to establish a level playing field for EU sellers, and to fight undervaluation and fraud, the Commission initiated the VAT e-commerce packet, including the amendment of the VAT Directive 2006/112/EC. The VAT de-minimis rule for the importation of (e-commerce) goods will be abolished in 2021. The level of customs (de-deminis) duties remains unchanged. From 2021 on, VAT will apply to all commercial shipments including e-commerce shipments irrespective of their value and simplifications for VAT registration, VAT declaration and VAT payment in the EU are offered via the use of an Import One Stop Shop if the VAT is charged at the point of destination. In this situation, the event triggering VAT will be the purchase, not the import.

The abolition of the VAT de-minimis rule implies a major change for customs procedures of USPs. Even though this challenge was anticipated by the changes required for customs security purposes for many years, it is not clear all USPs are sufficiently prepared. Today, customs procedures for low-value items are very different depending on type of operator – designated USP or not (see Table 20). USPs may use the form CN 22 for low-value items and benefit from simplified customs procedures for these items, which do not need to be presented to customs, except in the case of random controls. Non-USP carriers such as express carriers have to carry out a full customs procedure under current VAT legislation, and provide documentation on the value of the item. From 2021 on, a new regime will apply but the type of customs declaration to be used is currently under negotiation. It is very likely both USPs and express carriers will have to use some kind of electronic system for customs procedures. In this case, USPs will have to present all shipments containing goods to customs to be cleared. This would result in a substantial increase of shipments under customs procedures. Customs experts interviewed for this study expect volumes under customs procedures will increase drastically, and warn about the substantial additional resources that would be required from universal service providers, customs authorities, shippers, and tax authorities (that collect VAT).

⁴³² See European Commission (2015), Assessment of the application and impact of the VAT exemption for importation of small consignments, Final report, May 2015, Annex J.

Table 20 Overview on customs declaration procedures for low-value consignments 2018 and 2021

Value of shipment	USP (2018)	Express carrier (2018)	USP (2021)	Express carrier (2021)
Below EUR 22	CN 22	Customs declaration, paper-based or electronic	Electronic customs declaration (currently negotiated unless further delays/changes)	Electronic customs declaration (currently negotiated unless further delays/changes)
Below EUR 150	CN 22	Customs declaration, paper-based or electronic		
More than EUR 150	CN 22 / CN 23	Customs declaration, paper-based or electronic		

Source: based on European Commission (2015), Assessment of the application and impact of the VAT exemption for importation of small consignments, Final report, May 2015

The standard customs procedure for non-USPs requires a single administrative document when importing shipments. Some MS allow simplified customs procedures for low-value consignments imported by non-USPs. In six MS, the customs declaration can be made in verbal form (see Table 21), or, even more informal, a low-value shipment is considered to be customs cleared by the act of crossing the border in four countries.⁴³³

Table 21 Customs clearance of items under VAT de-minimis for non-USPs

Act of crossing the border	HR, DE, LU, SI
Verbal declaration	BE, CZ, EE, IT, PT, SK
Single administrative document (SAD)	BG, ES, FI, HU, LI, LT, MT, PL, RO, SE
Electronic single administrative document	AT, CY, DK, FR, GR, IE, NL, UK

Source: based on European Commission (2015), Assessment of the application and impact of the VAT exemption for importation of small consignments, Final report, May 2015

While simplified customs procedures facilitate trade, they might be at odds with collecting VAT and securing intellectual property rights. Customs authorities seem to carry out counterfeit controls with very different levels of intensity. For example, Bulgarian authorities detected 700 infringements of intellectual property rights with 1.1 million articles (all transport means including postal traffic), while the UK detected an only slightly higher number of cases (1,076 with 1.4 million articles). Other EU MS such as Italy and Spain detected almost 4,000 cases each.⁴³⁴ While there are no figures of intellectual property rights infringements transported by Posts on country level, statistics for all EU

⁴³³ See European Commission (2015), Assessment of the application and impact of the VAT exemption for importation of small consignments, Final report, May 2015, p. 17.

⁴³⁴ See European Commission (2018), Report on the EU customs enforcement of intellectual property rights: Results at the EU border, 2017, Annexe 1.

MS show that postal traffic accounts for the majority of detected cases (65%) but only 17% of the value.⁴³⁵

Case study 17: Electronic customs procedures under the UCC

Although the implementation of the Union Customs Code requires Posts as well as other transport operators to submit customs declarations in fully digitised format, the fourteen trans-national and three national IT systems required under the UCC are not operational yet. Customs experts interviewed for this study expressed doubt that the systems can be fully operational in time. To be able to use these systems, USPs need to digitise their processes for customs declarations.

While express carriers already use electronic means for customs purposes, manual processes are still common among designated postal operators. There is no full picture as to the status quo of electronic customs procedures used by Posts, but only some designated postal operators seems to apply them already. Customs experts interviewed for this study expect that most EU USPs will not be ready to process customs data electronically by 2020 as originally required by the UCC. The target date for implementation was prolonged to end-2022 at the time this report is being finalised.

Sources: European Commission (2018), Report from the Commission to the European Parliament and the Council on the implementation of the Union Customs Code, COM(2018) 39 final; Interviews with customs experts; Experts Panel on Customs and VAT organised for this study.

6.7 Conclusions

E-commerce imports to the EU increase substantially

Volumes of e-commerce goods sent through the postal streams between non-EU and EU countries are increasing massively. In particular, China plays an important role for e-commerce purchases from European consumers. This trend is very likely to continue within the next years for two reasons. First, EU consumers will become more familiar with online shopping across borders and shop also from Asian shops. Second, Asian e-retailers will continue to improve their online shops, e.g. by translating product descriptions to more European languages. Among European USPs, there are on the one hand those to whom these items are a financial burden but some USPs have been successful in turning these streams into a business opportunity.

UPU terminal dues remain below local delivery cost as UPU struggles to reform

The international exchange of e-commerce goods between designated postal operators is governed primarily by the Universal Postal Convention (UPU Convention) and associated Regulations adopted by the Universal Postal Union (UPU), an intergovernmental organisation founded in 1875. Until the final decades of the twentieth century, the essential function of the UPU was to facilitate the exchange of documents and a small volume of non-commercial goods between government postal administrations. In the last two decades, and especially in the last decade, the main focus of the UPU has shifted to

⁴³⁵ Ibid, Annexe 10.

promoting the commercial interests of the corporatised (and often privatised) successors to the postal administrations in the exchange of international e-commerce goods.

The UPU's application of a legal framework designed for traditional postal services to the new market of international e-commerce goods has substantially exacerbated three long standing policy concerns with UPU governance. First, the UPU Convention provides that designated postal operators must deliver inbound packages — especially those weighing less than two kilograms — at rates that are in many cases substantially below the rates charged to domestic mailers for similar services. This creates a preference for foreign e-commerce merchants that disadvantages domestic merchants and distorts international trade. Second, the UPU Convention provides for simplified customs controls for e-commerce shipments transported by designated postal operators (using UPU documentation). These provisions result in reduced security and undercharging of VAT and customs duty for e-commerce goods sent by postal service compared to similar goods transmitted by other modes of transport. Third, the UPU's Postal Operations Council, a standing committee of forty countries, both manages the commercial and operational affairs of the UPU and adopts Regulations which are binding on member countries. This combination of governmental and commercial functions is fundamentally inconsistent with European regulatory principles.

Aligning terminal dues with the domestic cost of delivery is not only important for imports from other world regions, but also for intra-EU packets: UPU terminal dues continue to serve as a starting point for rate negotiations between USPs, including for intra-EU traffic.

Terminal dues are being discussed intensively in 2019

The UPU has undertaken numerous studies of these policy concerns over several decades but failed to adopt appropriate reforms. Another reform plan, the Integrated Product Plan, developed in preparation for the 2016 Istanbul Congress, has likewise achieved little yet. Recently, the United States has undertaken decisive steps to deal with these policy concerns, raising concerns that are similar to those of many EU Member States (most importantly: terminal dues below national delivery cost). First, the US announced that they will introduce non-discriminatory 'self-declared rates' for delivery of international postal goods 'as soon as practical, and no later than January 1, 2020'. Second, the US announced that it will withdraw from the UPU on October 17, 2019, unless negotiations to resolve fundamental policy concerns are successfully concluded by that date.

In October 2018, the UPU resolved to speed up work on a new remuneration system, originally intended for inclusion 2020 UPU Convention and introduction on January 1, 2022. Under this 'fast-track' schedule, the UPU's standing committees will seek agreement of a new remuneration system by April 2019 and request the membership of the UPU to adopt the new system as an amendment to the 2016 UPU Convention that will go into force on January 1, 2020. The purpose of the new remuneration system is to satisfy US concerns relating to remuneration and dissuade the US from withdrawal. This

timetable is, however, extremely ambitious in light of the complexity of the issues at stake and the difficulties of amending the UPU Convention between normal Congresses.⁴³⁶

In broad terms the fundamental reforms of the UPU sought by the US are similar to reforms long supported in EU policy studies, Commission communications, and legislative measures. A fundamental reform of the UPU along the lines outlined by the US and continued US participation in the UPU are in the interest of the EU. At present, it appears that UPU reform and continuation of US membership in the UPU will likely depend on a clearer and more flexible approach by the US and a high level of cooperation between the US, the EU, and other reform-minded member countries of the UPU.

Full application of import VAT on all postal imports will become mandatory in 2021, but designated operators are not sufficiently prepared yet

About 115 million low-value e-commerce items have been imported into the EU in 2013 for which no import VAT or customs duty has been paid. The major part of low-value goods has been imported to large countries with well-developed e-commerce markets, the TOP3 being UK, Germany and France. To collect VAT more effectively, fight fraudulent e-commerce and create a level playing field for European and Asian online retailers in terms of VAT, the Commission has decided to abolish the VAT exemption for items with a value below 22 Euros in 2021. This will require changes in customs procedures, namely for USPs that currently apply simplified import procedures to low-value shipments. Freight forwarders and express operators (including subsidiaries of many EU USPs) are already applying full customs procedures, including electronic advance notification, for all items and are calling for a level playing field.

USPs should work to cope with new VAT legislation and adapt their systems in order to avoid unnecessary delays from 2021 on. This will require collaboration between EU USPs and foreign (exporting) postal operators in Asia and other parts of the world (and possibly e-commerce platforms and e-retailers directly) since requirements for documentation and advance notification will need to be met by exporting postal operators and their customers in the first place, and this information will then need to be received and processed by receiving USPs in the EU.

USPs expect substantial cost increases and delays, as USPs in the EU will have to present millions of additional items to customs (to make sure import VAT is properly paid) in 2021, while digitised customs solutions might not be entirely in place to ensure efficient processing. For the significant volumes that are traded on e-commerce platforms (e.g. Alibaba, Amazon Marketplace, Rakuten etc.), responsibility for paying import VAT will be with the platforms, and these platforms possess all necessary information to ensure

⁴³⁶ It appears possible that the UPU may try to convene an Extraordinary Congress in the second half of 2019. Although, as noted above, it is easier to amend the Convention in a normal or Extraordinary Congress (a simple majority of votes is required) than by a ballot between Congresses (a two-thirds majority of votes is required), it should be noted that to convene an Extraordinary Congress in the first place requires the consent of two-thirds of the entire UPU membership. UPU Constitution (2016), art. 15.

compliance with EU VAT legislation. For the remaining postal imports, however, exporting postal operators (mostly in Asia) and importing postal operators in Europe will need to develop processes quickly to avoid disruptions at the EU customs border in 2021.

7 Developments of employment in the delivery sector

7.1 Overall sector employment

The parcel sector is a labour intensive sector. USPs are traditionally the main employers in each Member State, joined by a growing number of parcel carriers all over the EU. Alongside USPs, there are more than 70,000 companies with postal and courier activities, and 1,813,200 employees in total (2017).⁴³⁷

The USPs, that employ postmen and -women for the delivery of letters and parcels, are still very important employers in the sector. Currently, they deliver not only a combination of letters and parcels in one round, but also on dedicated parcel routes. In most Northern and Western EU MS, USPs account for more than 50% of the total parcel volume. In the Southern EU MS and most of the Eastern EU MS the share varies from 20-50% and in some Eastern EU MS it falls below 20%.⁴³⁸ The market volume share is reflected in the total number of employers.

Apart from Portugal, Lithuania, Luxembourg, Belgium, and Germany, the total number of employees of USPs has been reduced from 2013-2017 as parcel activities did not compensate for sharply declining letter volumes (see Table 22). Furthermore, employment numbers of USPs with high market shares in B2C parcel delivery have also declined, e.g. in AT, DK, FI, FR, NL, NO, SE, SI, and the UK.

⁴³⁷ Based on Eurostat [lfsa_egan22d], extracted on 20 Feb 2019; including Norway and Iceland; no data available for Luxembourg.

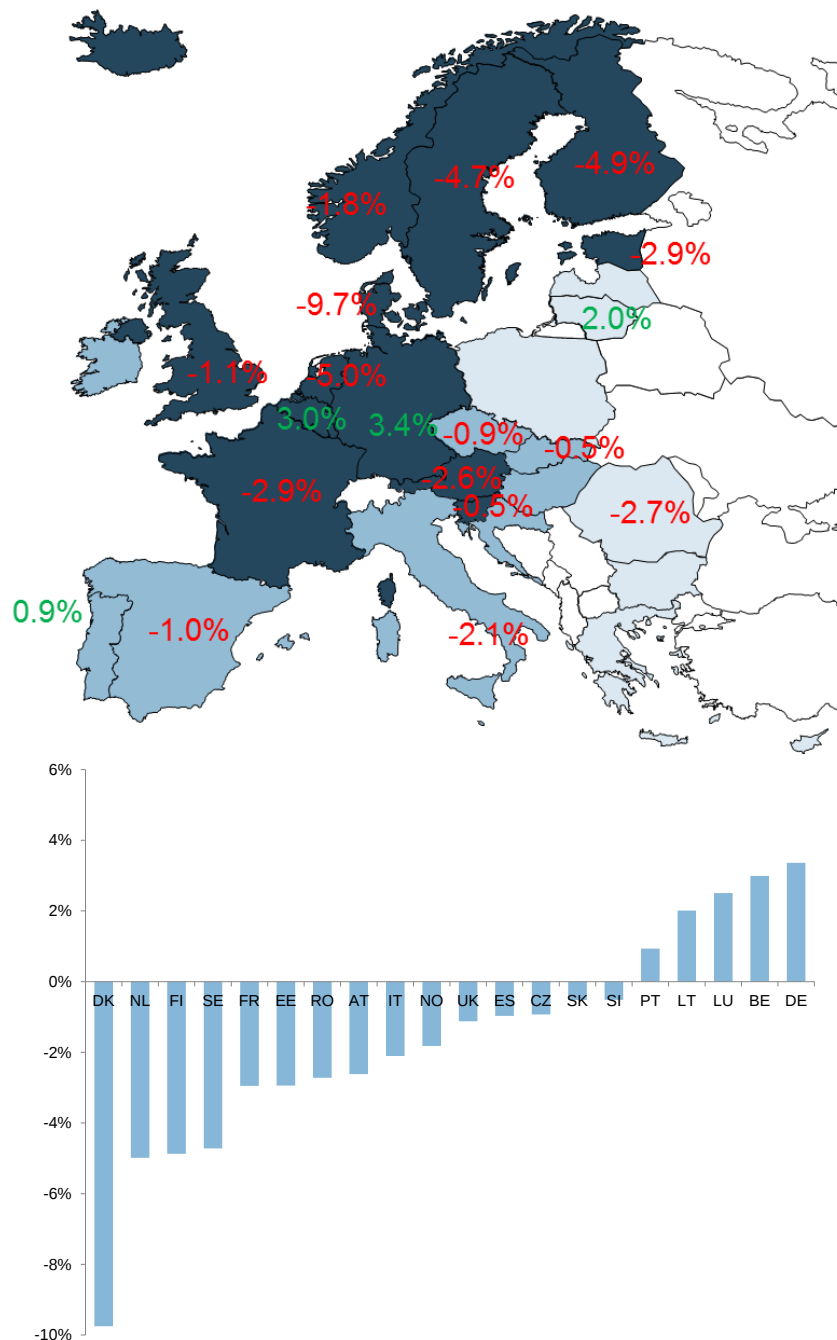
⁴³⁸ See Section 3.3.3 for details.

Table 22 Development of employment by USP (2013-2017)

Country	Year	Employment	CAGR	Years
AT	2017	17,463	-2.6%	CAGR 2013-2017
BE	2017	25,323	3.0%	CAGR 2015-2017
CZ	2017	23,132	-0.9%	CAGR 2014-2017
DE	2017	183,679	3.4%	CAGR 2014-2017
DK	2017	8,645	-9.7%	CAGR 2013-2017
EE	2017	2,239	-2.9%	CAGR 2013-2017
EL	2016	8,118	n.a.	n.a.
ES	2017	52,476	-1.0%	CAGR 2013-2017
FI	2017	16,595	-4.9%	CAGR 2013-2017
FR	2017	191,889	-2.9%	CAGR 2013-2017
HU	2016	28,273	n.a.	n.a.
IE	2016	11,779	n.a.	n.a.
IT	2017	138,000	-2.1%	CAGR 2015-2017
LT	2016	4,737	2.0%	CAGR 2014-2016
LU	2017	4,371	2.5%	CAGR 2013-2017
NL	2017	25,279	-5.0%	CAGR 2013-2017
PT	2017	11,708	0.9%	CAGR 2013-2017
RO	2016	25,270	-2.7%	CAGR 2013-2016
SE	2017	19,550	-4.7%	CAGR 2013-2017
SI	2017	5,822	-0.5%	CAGR 2013-2017
SK	2016	13,446	-0.5%	CAGR 2013-2016
UK	2017	142,579	-1.1%	CAGR 2013-2017
No data available for BG, CY, HR, LV, MT, PL				

Source: WIK based on annual reports of USPs and NRAs.
Employment by headcount.

Figure 85 Development of employment by USP (2013-2017)



Source: WIK based on annual reports of USPs and NRAs. CAGR 2013-2017. IT, BE: CAGR 2015-2017. CZ, DE: CAGR 2014-2017. LT: CAGR 2014-2016. SK: CAGR 2013-2016. No (time-series) data available for BG, CY, EL, HR, HU, IE, LV, MT, PL.

The working environment of USPs has changed due to developments in technology, user needs and changes in business models, shifting its focus from letter mail deliveries to increasing parcel deliveries, and has led to new wage policies, more flexibility in working hours, subcontracting schemes, and the development and implementation of new

technological trends in the postal and courier sector. The emergence of new players in the delivery market, either founded by USPs or consisting of new market entrants, has changed the employment and working conditions in the sector over the last twenty years.

Some USPs have dedicated subsidiaries for parcel and express services. For example, Deutsche Post with DHL Parcel Europe, La Poste in France with GeoPost, DPD Group (international brand of GeoPost), and Chronopost, Royal Mail with Parcelforce (within UK), and GLS (international).

Main delivery companies with large road-based B2C delivery networks across Europe include

- DHL Parcel Germany and DHL Parcel Europe (Deutsche Post DHL)
- DPD Group (La Poste)
- GLS (Royal Mail)
- Hermes.⁴³⁹

These parcel carriers are still expanding their B2C delivery network. Their growth has an impact on the total workforce in the delivery sector. However, not all of them directly employ drivers for parcel delivery. Hermes, GLS, and DPD solely rely on so-called system partners, companies which are subcontracted for parcel delivery; companies which are subcontracted for parcel delivery on a regular basis and in defined regions. DHL and UPS⁴⁴⁰ also subcontract, but a significant share of delivery staff is employed directly.

Besides these companies, there are many small express and parcel carriers that specialise in B2B express delivery, courier point-to-point services, or food delivery as well as companies working as subcontractors for USPs or larger carriers. The number of postal, parcel and courier companies in the EU amounted to 70,682 in 2015.⁴⁴¹

In the EU-28, the whole industry employed 1,793,200 in 2017.⁴⁴² The majority of these employees is engaged in sorting and delivery tasks.⁴⁴³ Among European USPs, the proportion of delivery staff varies from 20% (BG) to 69% (SE) (see Figure 86). The share of delivery staff among other companies of the sector will be substantially lower as most of them use their own staff only for sorting while subcontracting third parties for delivery tasks.

⁴³⁹ See Chapter 3 for details on market shares: Apex Insight estimates that in Europe the universal service providers of the three largest EU markets Germany (Deutsche Post DHL), France (La Poste Group) and the UK (Royal Mail Group) and their respective pan-European parcel networks, DHL Parcel, DPD and GLS, and the global integrators DHL Express, UPS and FedEx/TNT are the market leaders in Europe with an estimated market share of around 66%..

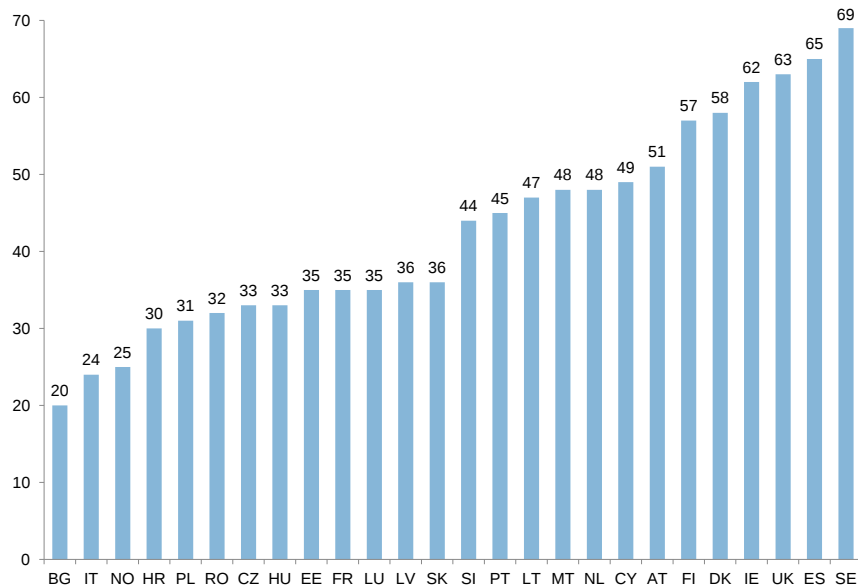
⁴⁴⁰ The German union Verdi suggests that UPS works with up to 40% subcontractors in delivery (CEP-Research 21 March 2013).

⁴⁴¹ The data refers to the NACE Rev. 2, Division 53 "Postal and courier activities", Eurostat [sbs_na_1a_se_r2], retrieved 6 August 2018.

⁴⁴² Based on Eurostat [lfsa_egan22d], retrieved 20 February 2019; excluding Norway and Iceland, no data available for Luxembourg. The data refers to NACE Rev. 2, Division 53 "Postal and courier activities".

⁴⁴³ Eurostat 2018. The figure includes total sector employment.

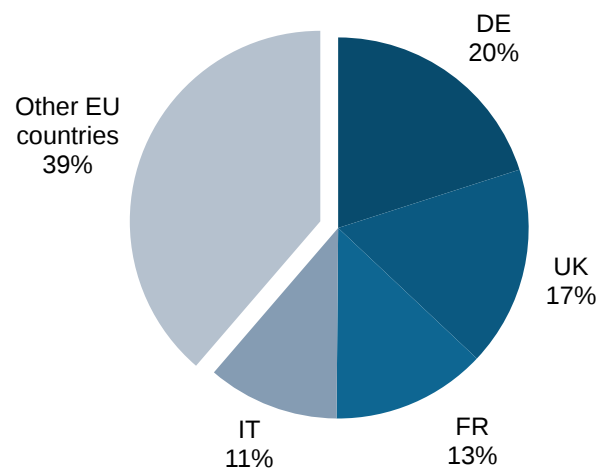
Figure 86 Percentage of delivery staff at USPs (2016)



Source: WIK based on UPU. No data available for BE, DE, EL, IS.

It is worth mentioning that active companies in the postal and courier sector in Germany, Italy, France, and the UK employ more than 1 million persons, thus accounting for about 60% of the total workforce in 2017 (see Figure 87).

Figure 87 Share of postal and courier sector employment by country (2017, EU-28)



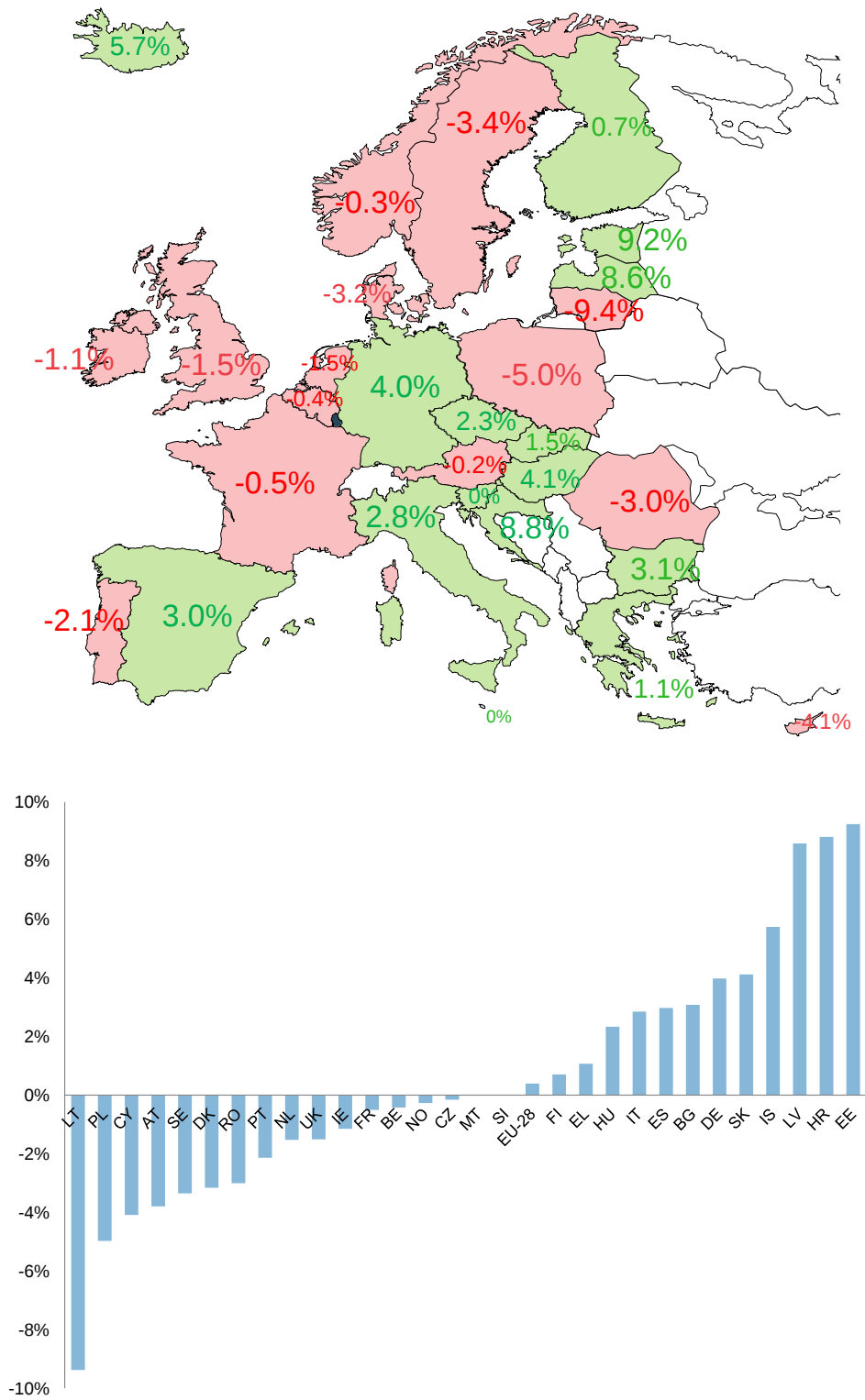
Source: WIK based on Eurostat [lfsa_egan22d], extracted on 20 Feb 2019.

Table 23 Development of employment in postal and courier activities (2013-2017)

Country	Employment 2013	Employment 2017	CAGR 2013-2017
EU-28	1,765,300	1,793,200	0.4%
EU-28/EEA	1,785,200	1,813,200	0.4%
AT	30,700	26,300	-3.8%
BE	35,400	34,800	-0.4%
BG	21,700	24,500	3.1%
CY	1,300	1,100	-4.1%
CZ	48,400	48,100	-0.2%
DE	307,600	359,500	4.0%
DK	22,400	19,700	-3.2%
EE	3,300	4,700	9.2%
EL	13,800	14,400	1.1%
ES	97,300	109,400	3.0%
FI	21,100	21,700	0.7%
FR	240,000	235,200	-0.5%
HR	11,700	16,400	8.8%
HU	43,500	47,700	2.3%
IE	15,500	14,800	-1.1%
IS	1,200	1,500	5.7%
IT	179,100	200,400	2.8%
LT	8,600	5,800	-9.4%
LU	1,300	n.a.	n.a.
LV	4,100	5,700	8.6%
MT	900	900	0.0%
NL	67,000	63,000	-1.5%
NO	18,700	18,500	-0.3%
PL	135,400	110,400	-5.0%
PT	18,100	16,600	-2.1%
RO	46,100	40,800	-3.0%
SE	38,400	33,500	-3.4%
SI	7,600	7,600	0.0%
SK	21,700	25,500	4.1%
UK	323,400	304,300	-1.5%

Source: Headcounts. WIK based on Eurostat [lfsa_egan22d], extracted on 20 Feb 2019; no time-series data available for Luxembourg.

Figure 88 Development of employment in postal and courier activities (CAGR 2013-2017)



Source: Headcounts. WIK based on Eurostat [lfsa_egan22d], extracted on 20 Feb 2019; no data available for Luxembourg.

Statistics regarding sector employment reveal that employment increased in twelve MS between 2013 and 2017. In most of these countries, this growth in sector employment overcompensated the decline in USP employment. Notwithstanding, overall sector employment has declined on average in fifteen MS despite growing e-commerce markets.

Employment figures in total postal and courier activities are barely going up (in the EU-28 plus Norway and Iceland, growth of 0.4% p.a. between 2013 and 2017). In many MS, the increase in parcel deliveries has not made up for the decrease in letter volumes. At first sight, companies appear to currently employ more people (postal operators, express couriers, international carriers), but declines in employment at several USPs, as a result of decreasing letter volumes, are a concern and implies that further changes could be expected.

In some MS, strains on the labour market, for example in terms of lack of qualified staff, is a challenge for growth in sector employment. Recruitment problems differ for each country. In Germany, the Netherlands, Belgium, Ireland, and the UK, drivers are in short supply, particularly during peak seasons. The Christmas holidays in 2018, due to the huge number of parcels, were a stress test for future work organisation and employment relationships.

Furthermore, employment models and relationships are changing in the delivery sector. Multiple companies emerge and expand, but we also observe the emergence of more atypical contracts, i.e. jobs that are not full-time and with open-ended contracts. Part-time work, self-employment, as well as employees from temporary work agencies and seasonal work occur more regularly as “non-standard” employment alternatives. These alternatives are able to meet the needs of some employment seekers as a part-time occupation, but it can also lead to the polarisation of the labour market.

All of the abovementioned factors will influence the development of sector employment in the future. Today, it is hard to say whether growth in e-commerce will compensate for the decline in letter mail volumes and result in a higher overall postal and parcel sector employment. Despite technological progress, e.g. delivery by drones or supported by robots, physical delivery still prevails and will remain dominant for several years to come. However, labour markets in many MS experience recruitment problems because of demographic changes (aging societies), lack of qualified drivers and lack of attractiveness of the sector. Hiring from abroad, i.e. from other MS (e.g. Bulgaria, Czech Republic, Latvia, Lithuania, Poland, Romania, Slovakia) or even from outside the EU (e.g. Ukraine, the Philippines) is beginning to take place. Research provides evidence on how a lack of employees in some MS as well as difficulties in recruitment of qualified drivers lead to skill shortages, sometimes even in markets with high unemployment rates.

7.2 Development of employment relationships

7.2.1 Wages

USPs and parcel carriers are facing the challenge to adapt their business models to become more flexible and efficient. The segment of letter deliveries is still influenced by its history as a legally protected monopoly and the legacies of employment relationships that have been established by the USPs. In contrast, the segment of parcel and express services has been open to competition for many years and consequently they have to endure different forms of work organisation and wage policies.

In recent decades, employment and working conditions in the sector have changed during the transition process towards a more competitive environment. As a result, we observe a larger variety of employment relationships. Employment relationships within USPs are generally organised by company collective labour agreements (CLAs) or by civil servant employment relationships. Usually, USPs follow a two-tiered strategy, protecting vested rights of their existing employees and introducing new rules for new employee recruitments. Civil servants employment relationships still exist at, for example, Deutsche Post, La Poste, and Österreichische Post but are in a process of being phased out (see Case study 18).

Today, employment relationships in the delivery sector include

- Two-tiered employment relationships at USPs
 - Civil servants with existing contracts;
 - Employees hired on the basis of new company CLAs⁴⁴⁴;
 - Subcontracted companies or individuals. The ability of companies to hire subcontractors is often limited by conditions in company CLAs. It also depends on national labour legislation and regulations which differ between MS.
- Employment relationships at USPs parcel subsidiaries and parcel carriers
 - Direct employment based on national, sector or, if existing, company CLAs
 - System partners (subcontracted companies or individuals) with service contracts

Both types of companies might hire temporary workers (time limited contracts, i.e. seasonal workers) or temporary agency workers. This means that a person has a temporary contract with an intermediary work agency and is assigned to work for a parcel delivery company. The wage paid is determined by the intermediary work agency and will

⁴⁴⁴ More than two-tiered patterns occur. In a first step, CLAs which established comparable employment relationships to the civil servants were introduced, in following negotiations CLAs introduced stronger divergence.

be much lower than the standard wage paid by the USP or carrier.⁴⁴⁵ Some MS have introduced labour regulations on agency work and company CLAs at some companies might limit or prohibit their employment.⁴⁴⁶ The advantages of intermediary work agencies for parcel companies include saving on transaction costs by partly outsourcing recruitment and to create a pool of workers from which permanent vacancies can be occupied.

Case study 18: Two-tiered system in Germany

At Deutsche Post, modernisation and transitional changes started in the 1990s and had been almost finished in 1999. A two-tiered wage schedule for delivery exists since 2000. At the end of 2014, a major conflict about the unilateral introduction of a new wage policy occurred between the USP and the main service sector union in Germany, Verdi.

By founding 49 subsidiaries as DHL Delivery GmbHs for parcel deliveries, Deutsche Post had breached the former CLA that limited outsourcing of parcel delivery to 990 parcel delivery routes. Deutsche Post founded these local subsidiaries to introduce a more flexible wage scheme for parcel delivery workers. Subcontracting decisions are left to local companies for their own flexibility.

The union served notice of cancelling the existing CLA concerning working hours and claimed to reduce weekly working hours by two hours per week without wage adjustments. During the first half of 2015 more than 32,000 workers of Deutsche Post went on strike for a total of 46 days (mail centres, delivery, transport). The aim was to prevent Deutsche Post from shifting parcel deliveries to the newly founded "DHL Delivery GmbH" which would make use of a lower wage schedule based on a sector CLA (German logistics industry CLA). In the end, a different company CLA between Deutsche Post and Verdi confirmed the new two-tiered system from July 2015 to December 2019.

The founding of subsidiaries for parcel deliveries could not be prevented, however, Deutsche Post made several concessions. For example, existing contracts cannot be switched to the new company. Growth of the new subsidiaries is limited to new recruitments. Before 2014, Deutsche Post had increased the number of fixed-term contracts to 26,000. After founding its new subsidiaries, the company offered them permanent contracts in the new DHL Delivery GmbHs with lower wages. With the 2015 CLA, 3,750 parcel deliverers who had a fixed-term contract with Deutsche Post before becoming permanent employees of one of the DHL Delivery GmbHs, had the right to go back to Deutsche Post in case of enforced redundancies or insolvency. In total, 7,634 parcel deliverers of Deutsche Post who were already working at one of the DHL Delivery GmbHs remain employees of Deutsche Post. Only new recruitments will be employed at one of the new regional subsidiaries.

⁴⁴⁵ While still having to comply with the EU Directive on Temporary Agency Work (Directive 2008/104/EC), which lays down the principle of non-discrimination, regarding the essential conditions of work of employment, between temporary workers and workers who are recruited by the user company.

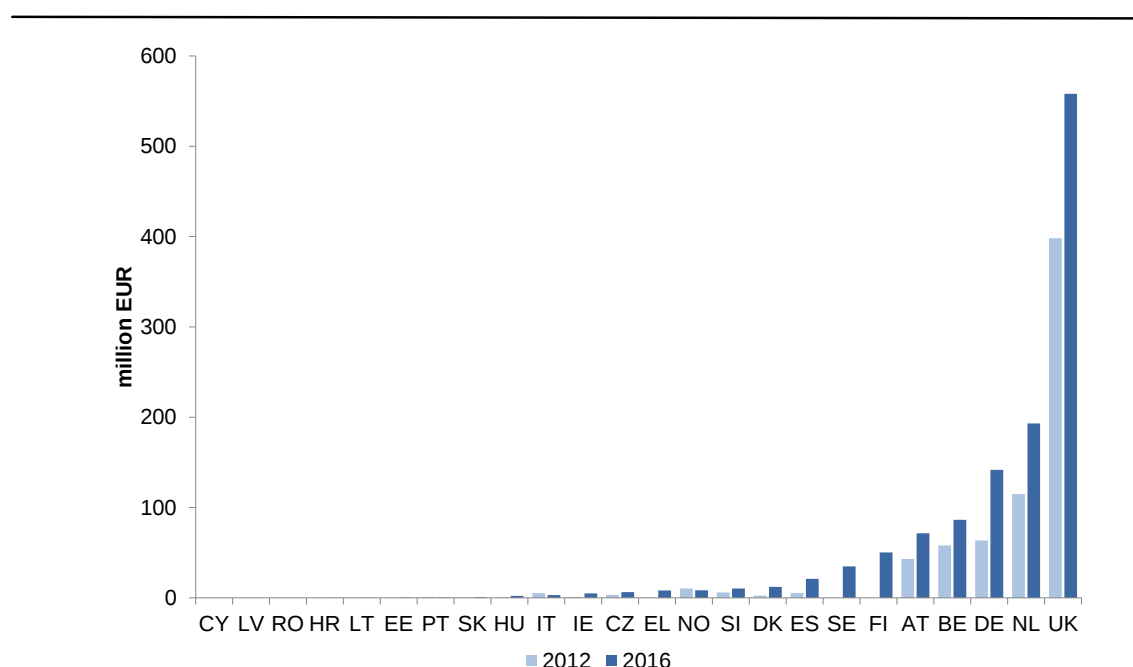
⁴⁴⁶ About 8.7 million people in 2013 had worked as temporary agency workers in Europe. Directive 2008/104/EC allows the EU to regulate the employment conditions of temporary agency workers. Eurofound 2016, Representativeness of the European social partner organisations: Temporary agency work sector, p. 5.

Despite the founding of DHL Delivery GmbHs, parcel deliveries on non-combined routes remain a part of Deutsche Post. This means that the status quo is maintained. Only new recruitments assigned to parcel deliveries will be part of the new regional DHL Delivery GmbHs. In March 2018, the media reported that Deutsche Post plans to manage the 46 regional DHL Delivery companies as so-called joint operations under the umbrella of Deutsche Post AG. Verdi rejected this plan in a media statement since the regional CLAs with different working and payment conditions would distort the existing uniform conditions.

Source: WIK research based on „Ein Erfolgsmodell zerlegt sich“, Postmaster Magazin, 4/2015, Bundesnetzagentur (2015), Informationen zu den wesentlichen Arbeitsbedingungen im Briefbereich / Gründung der DHL Delivery Regionalgesellschaften, Deutsche Post DHL (2015), Investor Relation Presentation, Deutsche Post DHL (2015), Tarifabschluss, press release, 5 Jul 2015, Verdi (2015), Schutz und Sicherheit durchgesetzt, Tarfbewegung 2015, 12/2015. WIK-Consult (2013), Review of Postal Operator Efficiency, WIK-Consult (2016), Review of the Projected Costs within Royal Mail's Business Plan.

In the postal and courier sector, payments to temporary work agencies for hiring temporary agency workers have risen noticeably only in Austria, Belgium, Germany, Finland, the Netherlands, and the UK over the last five years (see Figure 89). The European country with the highest share of agency workers by far is the UK (EUR 558 million of payments for hiring agency workers in 2016) followed by the Netherlands (EUR 193 million) and Germany (EUR 142 million). In CY, EE, EL, HR, HU, IE, IT, LT, NO, PT, RO, SI, and SK, payments for agency workers did not exceed EUR 10 million in 2016 (Eurostat).

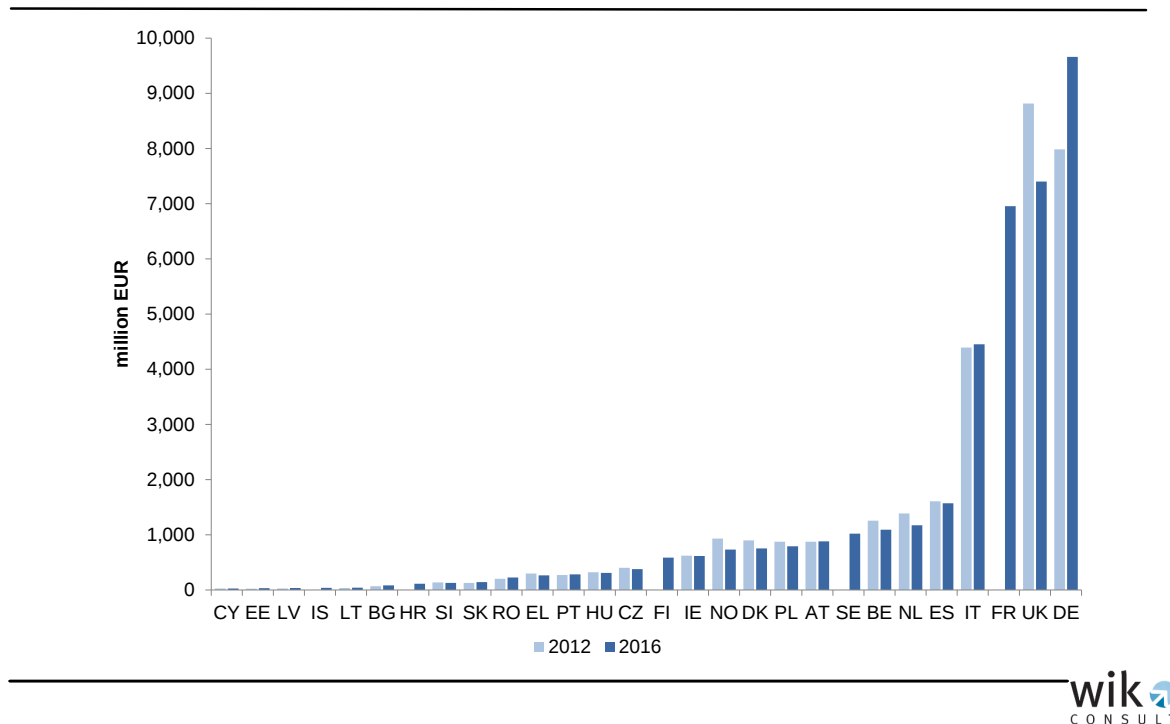
Figure 89 Payments for agency workers in the postal and courier sector in million Euro (2012-2016)



Source: WIK based on Eurostat [lfsa_qoe_4a6r2], extracted on 20.8.2018.
No data available for BG, FR, IS, LU, MT, PL.

Overall spending on wages only increased in some MS in recent years (DE, FR) (Figure 90). In other countries, wages were decreasing (BE, DK, ES, IE, NL, NO, PL, SE and especially the UK).

Figure 90 Postal and courier activities: Wages and salaries in million Euro



Source: WIK based on Eurostat [lfsa_qoe_4a6r2], extracted on 20.8.2018.
No data available for LU, MT.

USPs and international express carriers typically pay well above the minimum wage. For smaller parcel and express carriers working as subcontractors for larger companies, the minimum wage functions as a reference point for hourly payments. However, subcontractor cascades are not transparent and there are incidents of working conditions that fall short of the legal minimum standards defined by national and EU labour legislation. Because their remuneration schemes are usually not based on hourly or monthly payments with fixed hours, it is difficult to determine whether self-employed drivers meet the minimum wage of a country.

For example, the total wage paid by a USP could be based on

- Monthly payments based on hourly rates
- Drop-off performance bonuses per parcel
- Other extra payments (e.g. 13th month pay)

In such a “standard” remuneration scheme, there could be additional bonuses or compensation schemes for rural routes where drop-off performance bonuses are not easily achieved (see Figure 91). Overtime payments are being abolished more regularly

by many USPs and substituted by part-time workers who are compensated by hour (without bonus payment) or by converting overtime compensation into additional time off.

Other forms of remuneration may be more performance oriented and consist of a minimum monthly payment based on hourly rates and a guaranteed minimum hourly payment per week. Alternatively, a drop-off performance bonus for a successful first attempt delivery could be higher and form a more important component for total wage.

Figure 91 Examples of remuneration schemes in parcel delivery

Option 1 „Standard“	Option 2 „Performance“	Option 3 „Self-employed“
☐ Fixed weekly hours (full-time or part-time) ☐ Monthly payment based on per hour rates ☐ Drop-off performance bonus ☐ Other extra payments (e.g. 13th months pay) ☐ Different schemes compensate rural routes	☐ Minimum monthly payment based on per hour rates ☐ Guaranteed minimum hours per week ☐ Drop-off performance bonus for first delivery	☐ No fixed hours ☐ On call ☐ Fixed payment per drop ☐ Use of own/leased car

Source: WIK research based on expert interviews.

The driver's remuneration is volume based, i.e. he receives a fixed payment per drop. Additional factors include the use of the driver's own car or leasing a carrier's branded car. An example of the change of self-employed drivers' remuneration is provided by PostNL which had to introduce new forms of remuneration after conflicts resulted in strike action in 2015 (see Case study 19).

Another factor adding to the workload, but not always reflected in the remuneration schemes, is time required for collection of parcels on the route and loading the vehicle at the start of work.

Case study 19: Remuneration of parcel deliverers in the Netherlands

At PostNL; there is a strong emphasis on part-time work and full separation of indoor and outdoor letter delivery. Only economy products (letters and small standardised packets that fit into letter boxes) are delivered by part-time deliverers, all other products are delivered via the parcel network. If items do not fit in a letter box they will be re-delivered via the parcel network. Parcel delivery is fully subcontracted. In parcel delivery there are about 1,150 self-employed deliverers and about 400 workers with permanent contracts.

Unions criticised the status of “owner drivers” as working exclusively for PostNL (bogus self-employment). In 2015, PostNL introduced the “Sustainable Delivery Model” to increase quality and flexibility. The company offered four options: remain self-employed with an increase in remuneration of 10% under the condition that the deliverers receive a new certification, i.e. either become a PostNL employee, enter into an PostNL subcontractors employment contract, or go out of business.

In 2015, these freelancers went on strike and PostNL again offered them either permanent jobs at the company or higher remuneration as self-employed drivers (increased payment of about 10%). The offer was mostly rejected and strikes continued, while PostNL continued to negotiate with the union and with self-employed drivers. By the end of 2015, 120 of the freelance drivers had chosen to become PostNL employees and 500 decided to remain independent.

Source: WIK research based on “Continuing disruption to PostNL services”, Post & Parcel, 17 Jul 2015. PostNL Annual report 2015. AbvaKabo FNV (2009): What has Postal Liberalisation delivered?. The case of the Netherlands. A report for UNI Global Union. August 2009. WIK-Consult (2013), Review of Postal Operator Efficiency, WIK-Consult (2016), Review of the Projected Costs within Royal Mail’s Business Plan.

To sum up, our research shows that working conditions in the delivery sector are two-fold. On the one hand, there are companies whose working conditions are regulated by CLAs at company level (or at least at sectoral level which results in lower standards and wages). On the other hand, there are companies in which collective agreements are not applied at all while having to comply with minimum requirements set by national and EU labour law. These are often small and medium-sized companies which account for the largest share of the total number of sector employees in several MS.⁴⁴⁷

We can assume that for these companies, the minimum wage functions as a wage policy reference. Since statistics on overall wages in the sector, especially for subcontractors, are not available, a look at the minimum wage provides an indication of wage levels at SME postal and courier companies. Today, except for Austria, Cyprus, Denmark, Finland, Italy, and Sweden (where minimum wages don’t exist), all MS have established a monthly minimum wage, ranging from EUR 261 in Bulgaria to EUR 1,999 in Luxembourg. Germany, Ireland, and the UK refer to per hour minimum wages (see Table 24).⁴⁴⁸ In 2018, high-range MS with minimum wages of around EUR 1,450 or more per month include Belgium, France, Germany, Ireland, Luxembourg, Netherlands and the United Kingdom. Mid-range MS with monthly minimum wage rates of between EUR 650 and EUR 900 include Greece, Malta, Portugal, Slovenia and Spain, and low-range MS with

⁴⁴⁷ Comprehensive information on all employers in the sector is not available to this study. For an overview of several operators and arguments, see Claus Zanker, 2018, Branchenanalyse Logistik, p. 122.

⁴⁴⁸ For an overview of Eurostat analysis on minimum wages in Europe see https://ec.europa.eu/eurostat/statistics-explained/index.php/Minimum_wage_statistics#Minimum_wages_expressed_in_purchasing_power_standards

monthly minimum wage rates of around EUR 500 or less include Bulgaria, Croatia, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania and Slovakia.⁴⁴⁹

Table 24 Nominal levels of statutory minimum wage applicable in the EU MS in 2018 – Ranking

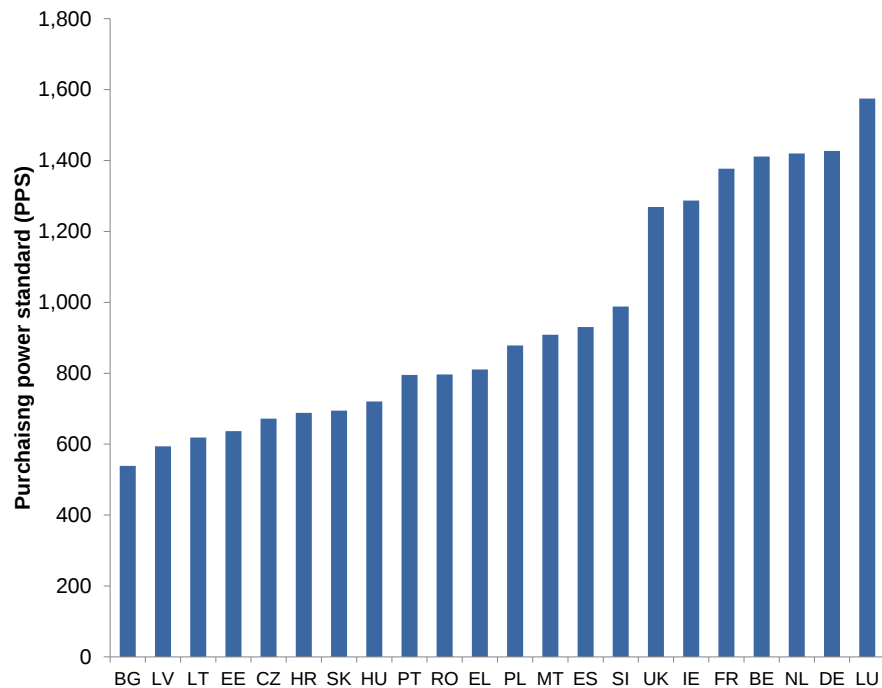
Nominal levels of statutory minimum wage applicable in the EU Member States in 2018					
Country		Effective since	Level of minimum wage in national currency	Period	Converted monthly minimum wage in EUR
High-range	Luxembourg	1 January 2017	1,998.59 EUR	Month	1,998.60
	Ireland	1 January 2018	9.55 EUR	Hour	1,614.00
	Netherlands	1 January 2018	1,578.00 EUR	Month	1,578.00
	Belgium	1 June 2017	1,562.59 EUR	Month	1,562.60
	France	1 January 2018	1,498.47 EUR	Month	1,498.50
	Germany	1 January 2017	8.84 EUR	Hour	1,497.80
	United Kingdom	1 April 2018	7.83 GBP	Hour	1,462.60
Mid-range	Spain	1 January 2018	735.90 EUR	Month	858.60
	Slovenia	1 January 2018	842.79 EUR	Month	842.80
	Malta	1 January 2018	172.51 EUR	Week	747.50
	Greece	14 February 2012	586.08 EUR	Month	683.80
	Portugal	1 January 2018	580.00 EUR	Month	676.70
Low-range	Poland	1 January 2018	2,100.00 PLN	Month	502.60
	Estonia	1 January 2018	500.00 EUR	Month	500.00
	Slovakia	1 January 2018	480.00 EUR	Month	480.00
	Czech Republic	1 January 2018	12,200.00 CZK	Month	477.30
	Croatia	1 January 2018	3,438.80 HRK	Month	462.50
	Hungary	1 January 2018	138,000 HUF	Month	444.10
	Latvia	1 January 2018	430.00 EUR	Month	430.00
	Romania	1 January 2018	1,900.00 RON	Month	407.30
	Lithuania	1 January 2018	400.00 EUR	Month	400.00
	Bulgaria	1 January 2018	510.00 BGN	Month	260.80

Source: Network of Eurofound Correspondents (Eurofound (2018): Statutory minimum wages 2018, Publications Office of the European Union, Luxembourg).

Minimum wages generally differ across MS, but the gap between MS' minimum wages is considerably smaller after purchasing power standards are taken into account (see Figure 92).

⁴⁴⁹ For a detailed analysis of minimum wage across all sectors in Europe see Eurofound (2018), Statutory minimum wages 2018, Publications Office of the European Union, Luxembourg.

Figure 92 Monthly minimum wage by country (EU-28, 2016)



Source: Eurostat. AT, CY, DK, FI, IT, SE: no generally applicable minimum wage in 2016.

Eurostat classifies EU MS into three different groups where national minimum wages (2016) were

- lower than PPS 750: Bulgaria, Latvia, Lithuania, Estonia, the Czech Republic, Croatia, Slovakia and Hungary
- national minimum wages were at least PPS 750 but lower than PPS 1,000: Portugal, Romania, Greece, Poland, Malta, Spain and Slovenia
- at least PPS 1,000: Belgium, Ireland, France, Germany, Luxembourg, the Netherlands, and the United Kingdom.

MS with relatively low minimum wages in euro terms tend to have lower price levels and therefore relatively higher minimum wages when expressed in purchasing power standard (PPS). Conversely, MS with relatively high minimum wages in euro terms, tend to have higher price levels and their minimum wages in PPS terms are therefore often lower. The adjustment for price levels partly smoothes the gaps in the minimum wage rankings.

It can be observed that an increasing number of wage policies at parcel carriers are not time-based but rather based on volume. Instead of fixed working hours, drivers are paid by workload, i.e. a predetermined workload has to be delivered in a certain timeframe. These remuneration schemes might be less transparent regarding the average payment per hour and one may suspect that drivers are exposed to not earning the defined minimum wage per hour or month. For example, if they face traffic congestion, poor

weather conditions, unexpected delays or if the routes are designed with tight time frames, then the minimum wage might not be reached. In contrast, they are able to earn more in favourable circumstances.

7.2.2 Flexibility in working hours

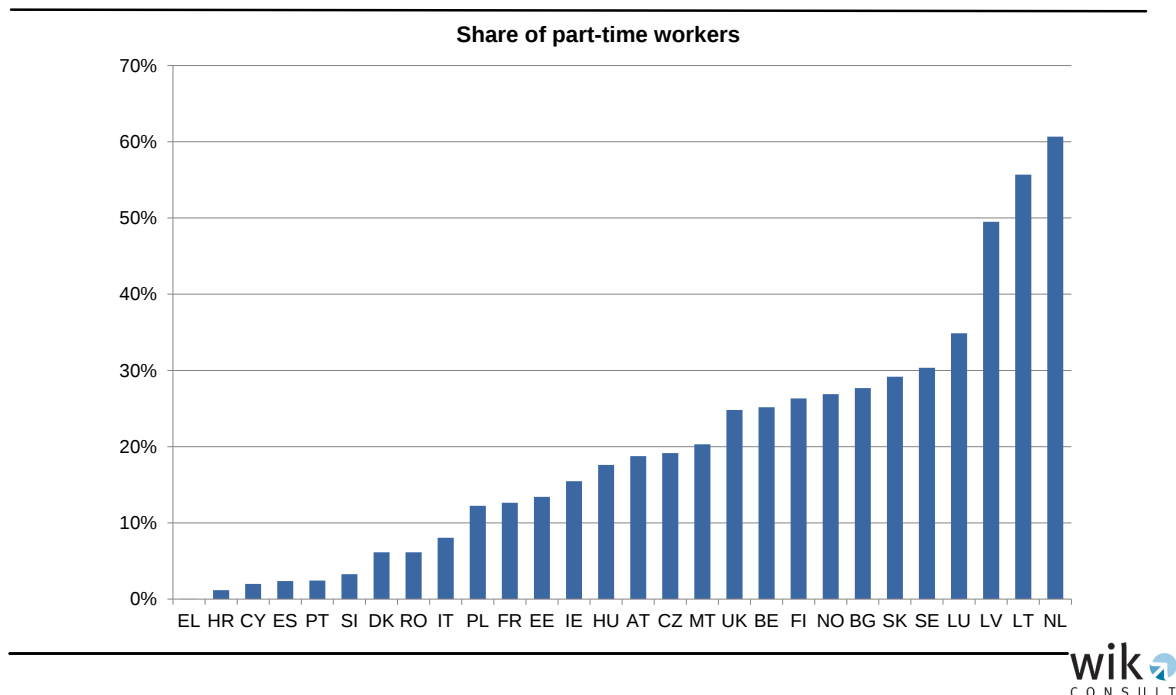
All USPs basically face the same principal challenge: an ongoing decline in the volume of letter deliveries and growing competition of parcel markets. With regard to efficient resource planning and the need for more flexible working hours, some USPs are trying to enhance part-time work spans. This may result in more time on the road for full-time parcel deliverers as sorting tasks are mainly done by part-time workers. Part-time work might also be sensible in strenuous areas of work (night shifts, heavy lifting work). However, workers' representatives underline the need for “standard” (full-time) work contracts to earn a living wage.

Therefore, part-time work presents a major issue in collective bargaining and USPs part-time work might be limited by current CLAs.⁴⁵⁰ For example, at Royal Mail the number of part-time positions is limited (around one quarter of total workforce). A change from full-time to part-time work is only possible with the consent of the individual employee. At Deutsche Post, the share of part-time workers is around 40%. In sorting, part-time employees prevail, whereas deliveries rely more exclusively on full-time employees. However, Deutsche Post does not follow a full-time approach like La Poste, for example, which employs about 90% full-time workers who are assigned a combination of delivery and sorting tasks. At PostNord in Denmark and Sweden, options to increase part-time work are also limited. Nonetheless, labour legislation in Sweden affords part-time employees the right to apply for more working hours. In contrast, Dutch PostNL has the highest share of part-time workers with more than 60%.

As a result, part-time workers at USPs usually do not form the majority of employees (see Figure 93). Protection of vested rights in CLAs often prevents a higher share of part-time workers. A switch from full-time to part-time can only be made voluntarily. Some USPs and carriers, who strives for more flexibility, intensify the search for subcontracting solutions or other alternatives when part-time solutions are limited.

⁴⁵⁰ See WIK-Consult (2016), Review of the Projected Costs within Royal Mail's Business Plan, p. 64ff.

Figure 93 Share of part-time workers at USPs (2016)



Source: Based on UPU Statistics. Headcounts. No data available for DE, IS and PT.

In fact, most parcel carriers nowadays use a full range of time flexible staff. For example,

- Multi-level subcontracting via large service partners: Payment of a service partner is based on competitive tendering for delivery in an area. There are negotiations about rates, and a call for proposals beforehand. Once the tender is won, the service partner might employ own personnel or self-employed drivers.⁴⁵¹
- Agency workers: Agency workers are usually subject to different work conditions than permanent staff, while being covered by the minimum requirements set by the EU Directive on Temporary Agency Work (2008/104/EC). They are primarily employed by an employment agency and assigned work for a parcel carrier for a limited period.
- Self-employed drivers who deliver parcels: Self-employed drivers have to own, to have access to, or to lease a delivery vehicle. The driver will insure the delivery vehicle and the business. Self-employed drivers are paid per drop. There are no guaranteed hours, no sick pay, no holiday pay and no redundancy payment.
- Zero-hour contracts: An employee might work any assigned number of hours in warehousing or parcel deliveries from full-time to “zero hours” during a week. Zero-hour contracts are legally permitted and widespread in the UK.⁴⁵² The employer

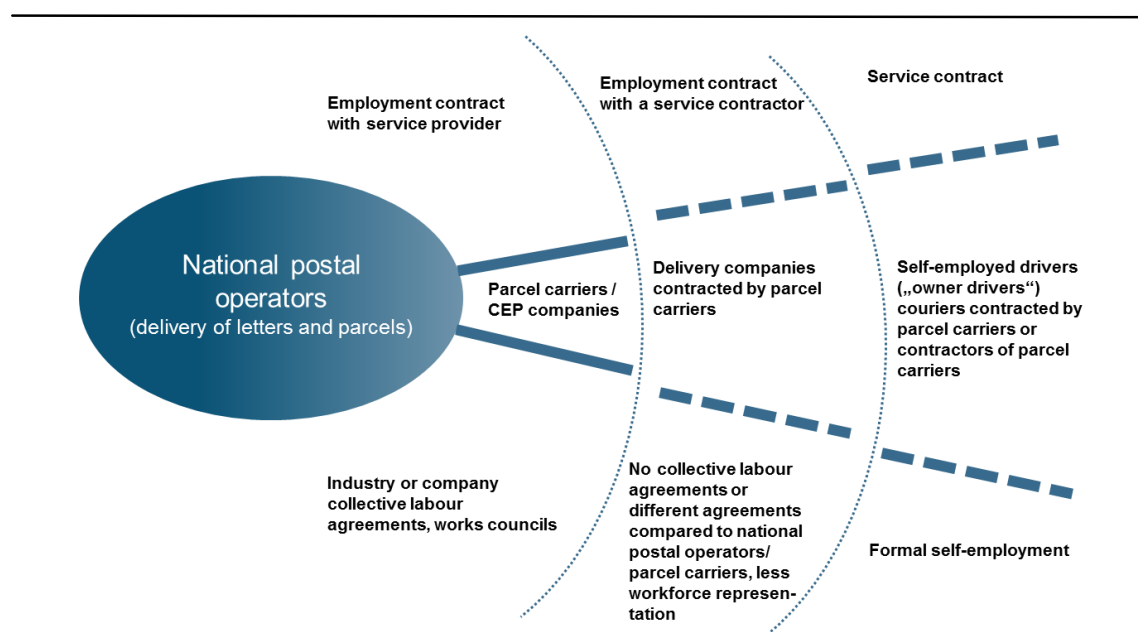
⁴⁵¹ We will deal with subcontracting in the following chapter.

⁴⁵² Another sector where zero-hour contracts are common is hotel and catering industry, e.g. in Germany. However, the German labour law requires to define a minimum weekly workload of 10 hours.

cannot guarantee any work load, while the employee agrees to be available for work as and when required (see Case study 20).

Segments of flexibility are presented in Figure 94. Different types of contracts can be observed depending on the type of parcel delivery company, i.e. employment contracts with a service provider (USP, carrier), employment contract with a service (sub-) contractor, and a service contract (as a self-employed driver). This is linked to the issues of collective labour agreements, varying from industry or company CLAs and workplace representation to self-employment.

Figure 94 Segments of flexibility in parcel delivery



Source: WIK based on Haidinger (2012), p. 27⁴⁵³.

A variety of contract options results in more flexibility to react to changing workload and parcel volumes. Flexibility is important in e-commerce due to peak seasons, certain weekday peaks, and new service offers (e.g. Sunday delivery, nominated time delivery, instant delivery). USPs have envisaged flex-time schedules and often require amendments to existing CLAs. During our research, we found examples of how cooperation with flexible partners, including existing subcontractors as well as sharing economy options, is established. Outsourcing is increasingly becoming a response to achieve more flexibility for many companies, where part-time and short-term contracts are

⁴⁵³ See Haidinger, Bettina (2012), On the move in Global Delivery Chains: Labour Relations and Working Conditions in the Parcel Delivery Industries of Austria, Germany, the Czech Republic and Hungary. SODIPER Synthesis Report, Work Packet 6. SODIPER ("Social Dialogue and Participation Strategies: Challenging Precarious Employment Relations in the Global Delivery Industry") was coordinated by FORBA and was funded by the European Commission's DG Employment.

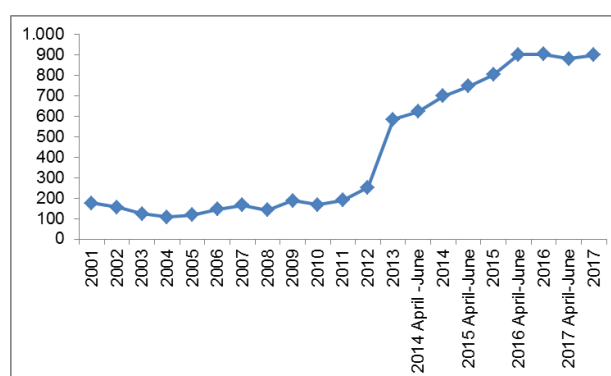
likely to increase and partnerships with start-ups from the sharing economy (delivery apps) are monitored, financed or bought up by established market actors.

Case study 20: Full flexibility by zero-hour contracts in the UK

In the UK, a survey in November 2017 indicated that there were 1.8 million contracts (6% of all employment contracts) that did not guarantee a minimum number of working hours. The British Office for National Statistics defines zero-hour contracts as “no guaranteed hours contracts (NGHCs)” as opposed to on-call work where a predetermined number of hours will be paid. The total number of NGHCs remained stable during the last year.

Employees with “zero-hours contracts” are more likely include young job seekers, part-time workers, women, and students in full-time education. On average, they usually work 25.2 hours a week. When asked in a survey if they want to work more hours, just over one quarter responded with a “yes”.

Employment on a 'zero-hours contract' in UK (in Thousand)



Source: ONS

28% of businesses with employment of 250 and over make some use of NGHCs, compared with 5% of businesses with employment of less than 10. In the “Transport, Arts, and Other Services” sector, 8% of employees had zero-hour contracts. Whereas most delivery companies, especially in the food sector, rely on self-employed drivers, zero-hour contracts are apparently used for warehouse activities in e-commerce. Trade unions are critical about zero-hour contracts, which risks workers being exposed to precarious employment relationships.

Source: ONS - Office for National Statistics (UK) based on Labour Force Survey (October to December 2017) ONS survey of businesses, November 2017.

7.2.3 Subcontracting

Subcontracting is widely established in the postal and courier sector. The biggest carriers in the European e-commerce markets, GLS and DPD, solely rely on so-called system partners and recruit companies which are subcontracted for parcel deliveries. Hermes uses subcontracting for about 95% of their delivery volume. DHL and UPS also use subcontracts, but to a lesser extent (UPS: ~40% (estimated by Verdi), DHL: 5%).⁴⁵⁴ The main share of their delivery staff is employed directly.

⁴⁵⁴ See Presentation of Deutsche Post DHL Group, Citi Pan European Business Services Conference, March 2016.

The share of subcontracted staff is not only determined by company CLAs but also depends on national regulations which differ among MS.⁴⁵⁵ From the view of employment relationships and working conditions, the issue is not only whether companies use subcontractors, but ensuring a certain level of quality of subcontracting practices and working conditions for the subcontractors.

“Blurring boundaries between employment and self-employment”⁴⁵⁶ in parcel deliveries have been reported in studies⁴⁵⁷ and in the press⁴⁵⁸, and the issue of vulnerable posted workers has been analysed regarding subcontracting practices:

“Though there is a lack of reliable data on the extent of subcontracting in the context of crossborder service provision and posting, there has been plenty of evidence arising from research studies, and sector-specific experiences have highlighted that sub-contracting – often with the involvement of employment agencies - is an extensive practice in the building and construction sector as well as in transport, shipbuilding, hotels and restaurants, and other service sectors.”⁴⁵⁹

In the press, subcontracting is often mentioned in the context of illegal working conditions where work is outsourced to self-employed drivers who are likely to be bogus self-employed. For instance in the UK, circumstances of bogus self-employment have been brought to light by a number of court rulings in 2018.⁴⁶⁰ Grid economy workers have successfully claimed to be bogus self-employed and gained compensation for it. The

⁴⁵⁵ For example, Royal Mail does not use subcontracting but its subsidiary Parcelforce does. At La Poste 85% of parcels is delivered by own staff but within the La Poste Group subcontracting to system partners is the norm. At Deutsche Post there is no subcontracting for combined delivery (letters and parcels) till the end of 2018. At PostNL, parcel delivery is almost fully subcontracted. No subcontracted parcel delivery exists at PostNord Denmark but at PostNord Sweden. See WIK-Consult, 2016, Review of the Projected Costs within Royal Mail's Business Plan, for details in subcontracting schemes at majore USPs.

⁴⁵⁶ Eckhard Voss et.al., 2016, Posting of Workers Directive – current situation and challenges, study by the European Parliament's Policy Department for Economic and Scientific Policy, upon request of the Committee on Employment and Social Affairs, p. 40.

⁴⁵⁷ See Enforcement Directive 2014/67/EC which focussed on improving the provisions of the existing Posted Workers Directive 96/71/EC. For an overview of issues see Eckhard Voss et.al., 2016, Posting of Workers Directive – current situation and challenges.

⁴⁵⁸ Recently, in summer 2018, there were reports on raids for illegal employment relationships in parcel delivery in Germany (See NDR Rundfunk “Paketfahrer: “Zum Teil mafiöse Strukturen””, <https://www.ndr.de/nachrichten/schleswig-holstein/Paketfahrer-Zum-Teil-mafioese-Strukturen,subunternehmer104.html>, “So leben die Paketfahrer in der Region”, Hannoversche Allgemeine, 23 Aug 2018, <http://www.haz.de/Umland/Burgwedel/Grossburgwedel-Hermes-Fahrer-wohnen-im-alten-Bahnhof>. “Razzia: Zoll kontrolliert beim Paketzusteller Hermes in Hückelhoven”, Aachener Nachrichten 15 Jan 2018 https://www.aachener-nachrichten.de/lokales/heinsberg/polizei-und-zoll-razzia-beim-paketzusteller-hermes-in-hueckelhoven_aid-24406129.. See also from 2017: „Razzia bei Paketzusteller GLS: Der hohe Preis der billigen Pakete“, Aachener Nachrichten 13 Dec 2017, https://www.aachener-nachrichten.de/nrw-region/razzia-bei-paketzusteller-gls-der-hohe-preis-der-billigen-pakete_aid-24406121. „Ermittlungen gegen Subunternehmer von Paketdienst Hermes“, Verkehrs Rundschau, 30 Nov 2017, <https://www.verkehrsrundschau.de/nachrichten/ermittlungen-gegen-subunternehmer-von-paketdienst-hermes-2040448.html>.

⁴⁵⁹ Eckhard Voss et.al., 2016, Posting of Workers Directive – current situation and challenges, p. 40.

⁴⁶⁰ For example, in UK Deliveroo deliverers have challenged their employment status at the High Court. Courts had also ruled that individuals working for Uber and Addison Lee were workers and not self-employed contractors (Financial Times, June 15, 2018).

general problem of new forms of working conditions in the sharing economy was highlighted by a study which analysed the successful delivery start-up, Deliveroo, which is also active in several MS apart from the UK (see Case study 21).

Case study 21: Subcontracted self-employed deliverers in the gig economy – Deliveroo

The labour market has significantly changed through the influence of platform delivery apps. There has been a phenomenal growth in what has become known as the 'gig economy'. The report "Delivering justice? A report on the pay and working conditions of Deliveroo riders" finds that a sizeable number of couriers receive low wages and "appalling treatment because they were classed as 'self-employed', despite much of their working life being controlled by the company" (p. 3).

Deliveroo reports earnings of GBP 10 per hour on average, but point out that the company can only be held accountable for the work done for Deliveroo. Since most deliverers are working for multiple companies at the same time, their overall earnings might be higher. Deliverers reported earnings to the study team as low as GBP 2 to GBP 6 per hour. The average earnings reported vary from GBP 5 to GBP 12 per hour. The highest earnings reported included hourly amounts of GBP 9 to GBP 17.

Despite the fact that the hourly rate is fairly regularly around the UK hourly minimum wage (GBP 7.83), the deliverer neither receives sick or holiday pay nor employer pension contributions etc.

Some deliverers also pointed out that the pressure of being paid per drop means that riders are forced to deliver more pieces more quickly, which involves taking more risks on the road.

The study concludes that the absence of minimum labour standards in a workforce that has a large surplus of readily available riders, is the root cause of insecurity." The authors stipulate that Deliveroo should offer a flexible worker status to drivers who want to gain a more secure position. Workers who value flexibility should be offered guaranteed hourly rates of no less than the National Living Wage for the duration that people are logged in and available for work. They also call for legislation to protect workers' rights in the sharing economy.

Source: Frank Field MP and Andrew Forsey, 2018, Delivering justice? A report on the pay and working conditions of Deliveroo riders, July 2018,

Problems occur if subcontracting continues through "cascades" thereby building increasingly nontransparent and potentially an "endless" chain of subcontracted companies (see Figure 95). Even self-employed drivers are assumed to "subcontract" their parcel volume to others in case of excessive workload, illness, or holidays. Consequently, in the context of potentially nontransparent subcontracting chains, absence of liability is regarded as a major problem. Union representatives have highlighted the need for action regarding a comprehensive subcontracting liability for clients, i.e. USPs or carriers.⁴⁶¹

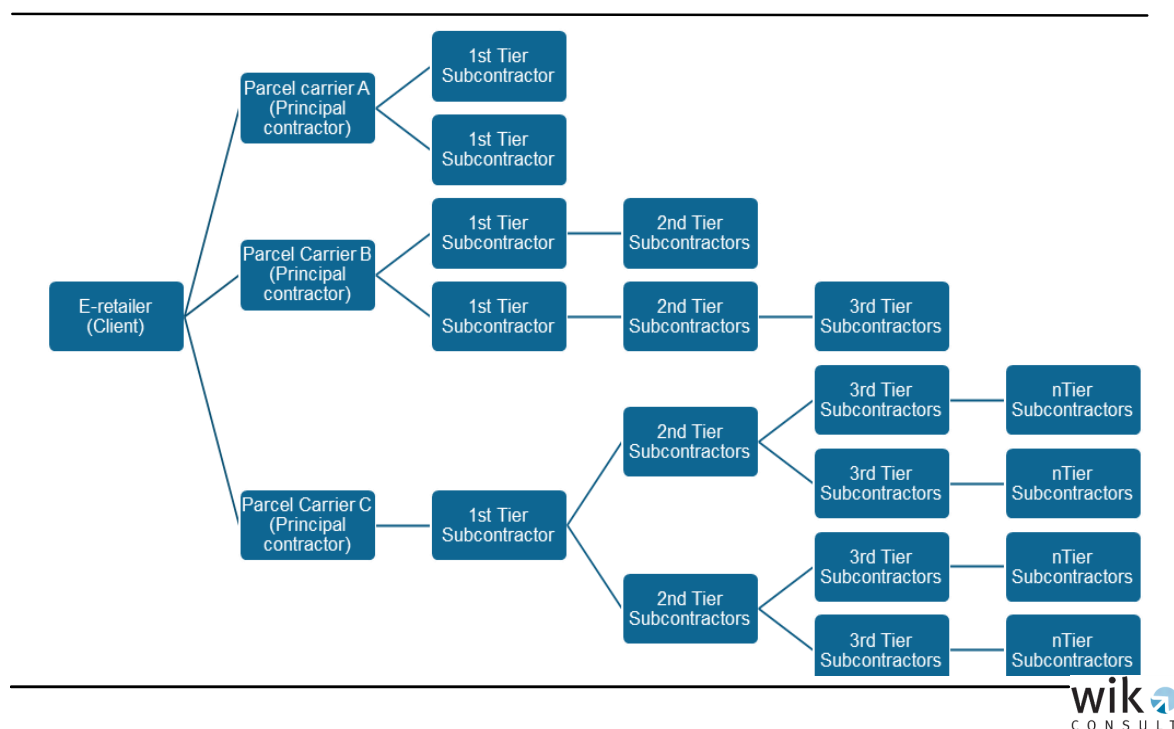
In a recent study, the topic for more regulation on liability in subcontracting chains at a European level was analysed.⁴⁶² The authors concluded that a European legal framework

⁴⁶¹ One of the latest calls for action originate from Verdi, 2018, Paketdienste: ver.di fordert Maßnahmen gegen schlechte Arbeitsbedingungen, press release 14 Nov 2018.

⁴⁶² Heinen, Alexander, Axel Müller, Bernd Kessler, Richard Giesen, Antonio Debiasi (2017), Liability in Subcontracting Chains: National Rules and the Need for a European Framework, Study for the JURI committee, European Union, June 2017.

is already in place after the adoption of the Enforcement Directive⁴⁶³. However, the question remains, if this legal framework is effectively applicable or would need revision.

Figure 95 Stylized subcontracting chain in the parcels industry



Source: WIK research based on Alexander Heinen et. al. (2017), Liability in Subcontracting Chains: National Rules and the Need for a European Framework, expert interviews.

Sub-contractors, i.e. system partners for parcel deliveries, are solely responsible for the contractual conditions of their couriers. The client compensates sub-contractors based on the volume of parcels delivered or routes covered. The method of payment and the amount is based on the individual contractual agreement between the USP/carrier and the transport company.

For some time, recruitment agencies have been increasingly assigning job seekers from Eastern Europe to fill staff vacancies of parcel carriers. Once in a foreign country, people are often not aware of their rights or do not insist on their rights for fear of losing their job. Recently, some action was taken to prevent the exploitation of vulnerable workers from Eastern Europe by an initiative of the Bulgarian Post. With their program “Preventing labour exploitation through a national campaign”⁴⁶⁴ they informed potential migrants of methods for recruiting an illegal workforce in different economic sectors.

⁴⁶³ Directive 2014/67/EU of the European Parliament and of the Council of 15 May 2014 on the enforcement of Directive 96/71/EC concerning the posting of workers in the framework of the provision of services and amending Regulation (EU) No 1024/2012 on administrative cooperation through the Internal Market Information System.

⁴⁶⁴ Bulgarian Post received the PostEurope Winners 2018 “Coups de Coeur”, see <https://www.youtube.com/watch?v=6TdJNoVkoj8> for details in English.

An example of an extensive labour law with respect to subcontractor relationships can be found in France.⁴⁶⁵ Liability is a core aspect and relevant for the transportation and parcel delivery sector. The obligations are adopted by La Poste not only in its legal obligations regarding liability for the conduct of subcontractors, but also in its Ethics Charter that each subcontractor has to sign. Subcontracting is further limited to single-tiered relationships. Furthermore, the subcontractors have to be registered in France. They are selected in the context of a highly regulated and transparent purchasing consultation process to ensure compliance (see Case study 22).

Union representatives, but also scientists and representatives of companies state a two-tiered labour market in the postal and courier sector. Some experts even observe a split of the labour market and wonder whether this divide will grow larger in the future. USPs and carriers alike claim that flexibility is crucial to future development due to the extremely uneven distribution of e-commerce deliveries during the year (e.g. peak demand around Christmas). From this background, outsourcing and subcontracting will continue. Determining whether there should be general or sectoral regulations within the MS or on a European level, presents an important task for further research and policy making discussions. This is a prominent issue of general labour policies for many sectors, and not unique to the postal and courier sector.

⁴⁶⁵ For an historic overview see Eurofound, 2008, Liability in subcontracting processes in the European construction sector: France.

Case study 22: Special case of limited subcontracting in France

The French “Due Diligence Act” requires companies from 2018 onwards to identify all social and environmental risks induced by them or by their subcontractors. Companies must publish their plan to prevent environmental, human rights and corruption risks on their own activities as well as those of their subsidiaries, subcontractors and suppliers, in France and abroad. The new legislation imposes an obligation to monitor a wide range of risks related to fundamental rights (child labour, forced labour, disrespect of freedom, premises not complying with safety standards, environmental damage, etc.). The obligations apply to companies with more than 5,000 employees in France, or 10,000 employees if the head office is based abroad. Such a broad regulation appears to be unique as it comprises not only the activities of the company itself, but also that of its subcontractors or suppliers with whom they maintain an “established commercial relationship”. La Poste does not maintain an established commercial relationship with its subcontractors as they are regularly put back into competition, but it has chosen to fully implement this law.

Regarding parcel activities, subcontracting makes it possible to adapt to the high variability of flows. La Poste, like all the other companies in the parcel and express market, in France and worldwide, also uses subcontracting, but to a lesser extent. The use of subcontractors by La Poste represents only about 15% of the parcels distributed in France: it is among the lowest shares of parcel deliveries for the sector as the company mostly employ postmen that deliver 85% of Colissimo parcels.

The subcontractors that La Poste works with are companies, all registered in the Register of Carriers in France. It contracts with these companies in the context of a strict, highly regulated and transparent purchasing consultation process. According to French law, it is up to the subcontractor to ensure the regular hiring of employees (valid driving license, training of the appropriate driving staff ...), to pay the corresponding social charges, and to respect all regulations and laws that govern its activity; at no time can La Poste intervene in the organisation of the subcontracting company. La Poste is committed to responsible purchasing and has drafted an Ethics Charter that specifies the health, safety and environmental requirements to which suppliers must comply. All subcontracting companies under contract with La Poste have to sign this ethics charter: respect for health and safety at work; to refrain from any form of harassment; act to prevent psycho-social risks; promote the rise of employees' skills by eliminating all discrimination. In adhering to French law, as soon as La Poste receives an alert, they investigate it and, if the subcontractor is found to be in breach of the Ethics Charter, the contract is terminated. Taking it one step further, La Poste refuses subcontracting in cascades because it wants to control its end-to-end purchase procedures.

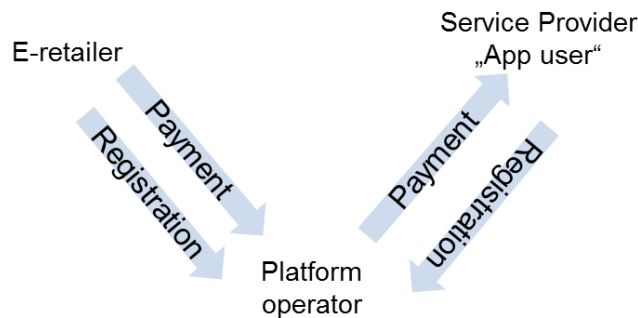
Source: WIK research based on Expert panel employment discussion. LOI n° 2017-399 du 27 mars 2017 relative au devoir de vigilance des sociétés mères et des entreprises donneuses d'ordre. Expert interview La Poste.

7.3 Future trends in labour markets

Sharing economy deliveries present new options for e-retailers. Shared or crowd-sourced deliveries are based on internet matching platforms and involve private consumers or registered couriers as delivery agents (see Figure 96).

The e-retailer registers with the platform and concludes a contract for delivery services (online or offline). The e-retailer then integrates the delivery service into the shop system or uses the platform API. After that, any person is able to download the platform app and to register with the company as a deliverer. Some platform operators might run background checks or personal job interviews before they accept a deliverer. The registered person receives payment on a case-by-case basis from the platform operator after the delivery is made.

Figure 96 Platform functions as intermediary - E-retailer and deliverer have no contract



Source: WIK research.

When the e-shopper orders a purchase and selects a delivery method via a platform service (e.g. instant delivery), the e-retailer relays the purchase to the platform provider. The e-retailer decides whether to charge the e-shopper for the delivery or not. The platform sends the order via app to all app users and the potential deliverer accepts the offer within a certain short time frame via click (e.g. 10 sec). The successful applicant receives the delivery details, picks up the goods and drives to the e-shopper (usually sharing economy deliveries are done by bicycle). The e-shopper confirms the receipt of the order to the e-retailer (and indirectly to the platform) with a click. Subsequent to the delivery, it is customary to rate the deliverer. Thereafter, the platform operator pays a fixed drop-off rate to the deliverer. It also creates an internal performance index for the registered person.

These low-cost and flexible business models based on web applications allow new market entrants without a delivery infrastructure of vehicles or employees to organise delivery in a local area or even nationally. Today, examples illustrate potential exclusions of certain regions as these delivery alternatives are only evolving in inner city areas (see Case study 23). A growing number of traditional parcel delivery companies engage in these new alternatives as e-retailers demand flexible delivery schedules for same day or even instant deliveries. For point-to-point same-day deliveries, crowdsourced options allow lower delivery prices than existing delivery processes.

In addition, e-commerce of food and beverages is a strong driver of this development. Amazon Fresh expanded by more than 50% in each of its three major markets in 2017, but other market actors have also reported a growing demand.⁴⁶⁶

If goods are delivered by “on-call” deliverers, mostly cyclists in inner city areas, legal issues like liability for damaged goods or tax and insurance issues currently remain

⁴⁶⁶ “Online Grocery Set To Boom In 2018 (As Amazon Acknowledges Online Grocery A Tough Market To Crack)”, Forbes, 1 Mar 2018.

unsolved. Because of this, the long-term business prospects of the sharing economy in delivery still seems uncertain. However, the example of Stuart.com (see Case study 24) shows how these obstacles can be overcome and how sharing economy deliveries do not necessarily result in poor working conditions (see Case study 21).

As part-time delivery workers, individuals are able to generate additional income. Crowdsourced delivery is useful for casual workers and individuals who prefer flexible working times. Legal uncertainties such as employee status and insurance issues could be solved at a national level, but could also be addressed by the variety of working conditions offered by the app provider (see Case study 24).

Experts estimate that less than 1% of the workforce in Europe is currently engaged in forms of sharing economy working environments.⁴⁶⁷ The wide dissemination of sharing economy solutions for deliveries will mostly depend on

- The number of potential couriers – which is higher in densely populated areas. Platform based delivery is not likely to be offered in remote regions.
- E-retailers demand in terms of same-day and instant delivery low-cost options.
- Acceptance of e-shoppers for uncommon delivery solutions. In practice, e-shoppers seem to be less concerned and make use of less reliable, slower delivery options in particular if the goods are of lesser value.
- Solving regulatory issues and addressing employment relationship questions at company, sector level and possibly at national and EU level.

In an effort to reinforce Europe's social dimension and as part of the roll-out of the European Pillar of Social Right, the Commission proposed the initiative on transparent and predictable working conditions in December 2017. Its aim is to broaden and modernise existing obligations to inform each worker of his/her working conditions, and create new minimum standards to ensure that all workers benefit from more transparency and predictability. On 7 February 2019 a provisional agreement was reached between the EU co-legislators for a new directive to create more transparent and predictable working conditions, in particular for workers in non-standard forms of employment, including platform workers, such as on-demand drivers or couriers.

467 For a recent and comprehensive study on platform work see Eurofound 2018, Employment and working conditions of selected types of platform work.

Case study 23: Parcify (former: Bringr) – Delivery app by Bpost

The bpost Bringr app linked people who wanted to send goods to others who were willing to pick them up and deliver them. There is a compensation/remuneration for this service. The exact price depends on, among other things, the weight of the parcel and the distance over which it has to be transported. The deliverers are not paid by bpost but the app needs to follow national regulation in the delivery market: “People who offer their services through the app have no contractual links with bpost but should respect the applicable regulatory framework” (bpost press release 20 Jun 2016). bpost piloted the collaborative platform app in the Antwerp region. Pick-ups outside of the Antwerp region were not possible, but the delivery address could have been anywhere in Belgium. This is an example of a crowdsourced platform, innovative example managed by bpost.

Unions in Belgium point out how drivers use the app for generating additional income. In contrast, problems remain regarding low wages based on case-by-case delivery, and unregulated working conditions.

In 2018, Bringr and Parcify joined forces for the delivery of parcels. Existing Bringr users are able to use the same account on the Parcify app. The price for a parcel delivery starts from EUR 6. The delivery includes full track & trace.

Source: WIK research based on Expert panel employment discussion. Bpost press release 20 Jun 2016.

Case study 24: Stuart.com – “The responsible platform”

Created in 2015, Stuart is an on-demand technology platform that connects e-retailers to a fleet of geolocated independent couriers for the delivery of goods, especially the last mile in urban regions. Stuart joined the La Poste Group in March 2017. Stuart is available in France, the United Kingdom, and Spain within 20 cities. Currently, the platform also relies on the DPD Group delivery network.

La Poste has been working together with Stuart to implement several social benefits for the platforms' couriers in France. Compared to other delivery platforms, it has solved the liability and insurance problems by taking out liability insurance in partnership with AXA, and since March 2016 also added a complementary health insurance scheme in partnership with Mutuelle Générale. Options for personal accident insurance are also available and deliverers receive safety and health instructions and equipment. In addition, Stuart deploys an offer with partners for the purchase or financing of cargo or electric bikes at reduced prices. In cooperation with La Poste, the platform has developed training and qualification programs, and assistance dedicated to finding housing.

Deliverers active on the platform: 64% are students, 14% are employees (fixed-term or permanent contracts), 14% are self-employed, artisans, intermittent or civil servants, 8% are registered as job-seekers. The average age of deliverers is 26, less than 13% of couriers are over 30 years old. 71% of bicycle couriers connect less than 4 hours a day to the platform (45% connect less than 10 hours a week); 9% connect more than 6 hours a day and less than 10% connect 35 hours or more per week.

Source: WIK research based on Expert panel employment discussion. More info on <http://www.stuart.com>.

7.4 The role of social partners and social dialogue in the parcel sector

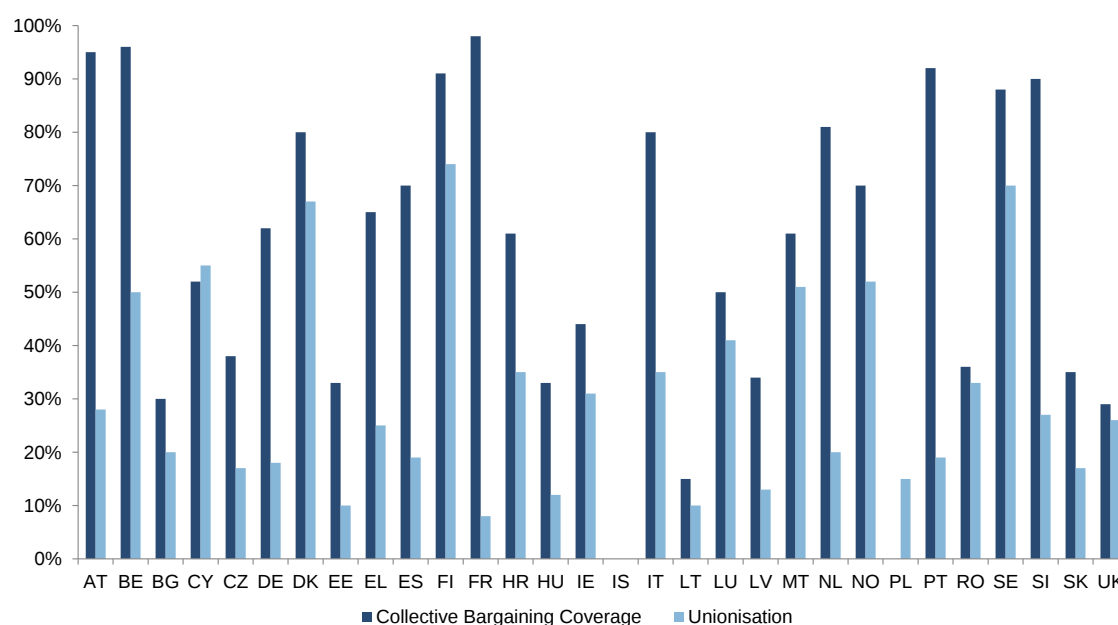
The postal sector is an area with a traditionally active union membership of civil servants and other employees. However, the percentage of people who are sector related union members is not published. Several unions within the EU have merged into larger entities bringing together different unions of the service sector, including postal and courier, warehousing, transport, e-commerce, and other areas of activities. For appropriate

approximations on collective bargaining coverage and unionisation in the MS, we look at overall figures in EU-28/EEA.

Collective bargaining coverage and unionisation vary in the MS. A high collective bargaining coverage does not necessarily accompany high union membership figures (see Figure 97). Nonetheless, we can assume that at USPs collective bargaining coverage is nearly 100%. This does not imply that one CLA is valid for all employees as a two-tiered system can apply.

In the EU, CLAs are principally negotiated on company and industry level (12), only company level (10), or only on sector level (6) (see Figure 98 and Table 25). In MS with sector CLAs, there is a greater chance of coverage of a larger share of employees in the whole postal and courier sector.⁴⁶⁸ As already mentioned, employees at small and medium-sized parcel carriers and at subcontracted companies are less likely to have company CLA based contracts. If their employer does not apply sector CLAs or they do not exist, parcel drivers work on other, mostly volume based remuneration schemes, often oriented at minimum wage thresholds.

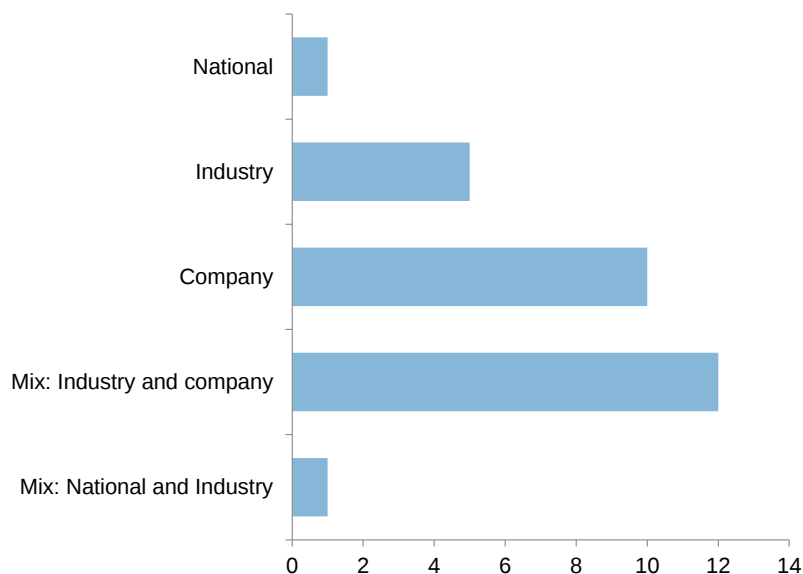
Figure 97 Collective bargaining coverage and unionisation in EU-28/EEA



Source: European Trade Union Institute (ETUI) 2015.

⁴⁶⁸ See L. Fulton (2015) Worker representation in Europe. Labour Research Department and ETUI. Produced with the assistance of the SEEurope Network, online publication available at <http://www.worker-participation.eu/National-Industrial-Relations>.

Figure 98 Level of collective bargaining in EU-28/EEA



Source: ETUI 2015.

Table 25 Collective bargaining coverage, unionisation, principal level of collective bargaining – overview per country

Country	Collective Bargaining Coverage	Unionisation	Principal Level of Collective Bargaining
AT	95%	28%	Industry
BE	96%	50%	National (sets framework)
BG	30%	20%	Company
CY	52%	55%	Industry and company
CZ	38%	17%	Company
DE	62%	18%	Industry
DK	80%	67%	Industry – but much left to company negotiations
EE	33%	10%	Company
EL	65%	25%	Industry – but crisis and consequent legal changes have given greater role to company negotiations
ES	70%	19%	Industry – but new law gives precedence to company agreements
FI	91%	74%	Industry – but much left to company level negotiations
FR	98%	8%	Industry and company
HR	61%	35%	Industry and company
HU	33%	12%	Company
IE	44%	31%	Company
IS	n.a.	n.a.	n.a.
IT	80%	35%	Industry
LT	15%	10%	Company
LU	50%	41%	Industry and company (varies with sector)

Country	Collective Bargaining Coverage	Unionisation	Principal Level of Collective Bargaining
LV	34%	13%	Company
MT	61%	51%	Company
NL	81%	20%	industry (also some company)
NO	70%	52%	national and industry
PL	10-15%	15%	Company
PT	92%	19%	Industry
RO	36%	33%	industry and company
SE	88%	70%	industry – but much left to company negotiations
SI	90%	27%	Industry
SK	35%	17%	industry and company
UK	29%	26%	Company

Source: ETUI 2015.

At EU level, the European Sectoral Social Dialogue Committee (SSDC) for the postal sector was created in 1999 by a Commission decision notably to encourage and promote the social dialogue in the postal sector and allied service sector and allow social partners negotiations and agreements. It is composed of two representative social partners organisations: PostEurop for the postal operators and UNI Europa Post & Logistics for the trade unions.⁴⁶⁹ At the SSDC, the transformation of the postal sector is widely analysed in study topics and joint declarations manifest the outcome of discussions. The Joint Declaration on Postal Sector Evolution signed in 2012 states “The post sector is in a process of continuous and rapid change. [...] there needs to be a balance between an appropriately rewarded workforce and the requirement for adaptability to the new market circumstances.”⁴⁷⁰ In another project, the SSDC stressed that there is a real need for raising the awareness of social partners on new activities in the sector, in particular digital and e-commerce services. This led to a “Joint declaration on the role of social dialogue in the transformation” in 2016.⁴⁷¹ Currently the SSDC Postal Sector Evolution working group project “Trend research for the postal sector in 2030” is continuing to examine future trends and their impact on the postal and courier sector. First results and future scenarios are expected in 2019.

These joint activities should, not hide the fact that many disputes occur and that the transformation process is accompanied by crucial negotiations on wages, contract types, and/or worktime.⁴⁷² Furthermore, it should be acknowledged that these negotiations are first and foremost focussed on the core part of postal services and currently only partially

⁴⁶⁹ <https://ec.europa.eu/social/main.jsp?catId=480&langId=en&intPagId=1846> and <http://www.postsocialdialog.eu>

⁴⁷⁰ SDC (2012), Joint Declaration on Postal Sector Evolution 2012, <http://www.postsocialdialog.eu/?nodeId=94415> and 2012/14 SDC Project Developing a quality postal service in the digital age, final report.

⁴⁷¹ SDC (2016), “Joint declaration on the role of social dialogue in the transformation”, December 2016.

⁴⁷² See Main Developments in the Postal Sector (2013-2016), p. 166ff for examples.

include e-commerce activities. In the years to come, working conditions in parcel delivery will still depend on the outcome of these national bargaining processes. Discussion and negotiation formats are expected to exist at EU, at national and at company level.

An important future challenge will be to manage flexibility in employment and working conditions according to EU labour law and social standards while at the same time adapt social dialogue to new evolution in parcel delivery and e-commerce as a whole. Today, interaction with new market players, especially e-retailers, seems uncommon and agreements are mostly limited to well-established stakeholders.

E-commerce touches on several potential conflict areas and many new market-entrants combine them under one roof: delivery of e-commerce items, road transport and logistics, warehousing etc. Key questions raised by the dynamic development of e-commerce include how to address future problems and whether to include new stakeholders in the existing dialogue or how to establish new discussion forums with a new mix of participants.

It could be argued that the postal sector is and will be unique for a long time, following its own interests in a sector-regulated market and therefore has to be treated separately. However, emerging issues like subcontracting cascades, sharing economy working environments, or bogus self-employment are all part of a broader picture and should be regulated in principle and not (postal and courier) sector related.

If new market players are expected to take part in a social dialogue, there are several obstacles to overcome. Firstly, e-retailers, especially international integrators from the US or Asia do not currently play an active part in the discussions. Secondly, the question regarding who the employer is and who should get involved, is not easy to answer. Sharing economy working environments are not widespread today, but they are disrupting existing traditional relations and their contractual relationships remain unclear. Thirdly, one might argue that e-commerce only acts as a catalyst for some already existing issues, its challenges could be addressed by existing regulations and that room is created for innovative experiments and solutions, especially regarding employment. Thereafter, e-commerce related employment and working conditions would need to be enforced by national labour laws.

However, the social aspect of e-commerce discussions has to be acknowledged and areas of concern have to be addressed in future. In-depth discussions among stakeholders should address how to establish alert mechanisms and how social dialogues could address future e-commerce challenges. This could be addressed at national as well as European level, which would continue to serve as a platform for broader involvement and participation.

7.5 Conclusions

Increasing employment in the EU parcel delivery sector, and increasingly flexible models for employment

The dynamic development of e-commerce and the growing demand for parcel deliveries has led to more demand for drivers, new wage policies, more flexibility in working conditions, subcontracting schemes, and the development and implementation of new technological trends in the postal and courier sector.

More than 70,000 companies with postal and courier activities, including the USPs, employ 1.8 million people in total (2017, Eurostat). The continuing development of overall sector employment is characterised by an increasing number of parcels, triggered by widespread growth in e-commerce across Europe, especially in the main markets France, Germany, and the UK. Volume growth leads to more employment opportunities in the parcel industry. However, employment in postal and courier activities is barely increasing (in EU-28, Norway and Iceland, 0.4% 2013-2017, Eurostat).

Growth in parcel deliveries offers an opportunity for USPs to compensate declining employment in the letter market

For the USPs, growth in parcel delivery is an opportunity to compensate employment decline in letter operations by increasing employment in parcel operations. However, apart from Portugal, Lithuania, Luxembourg, Belgium, and Germany, the total number of employees at USPs declined during the last five years. At several USPs, a decrease in employment due to a decline in letter volumes has not been reversed yet, and severe cuts may still be expected in future .

A substantial number of USPs have founded subsidiaries, meaning that employment growth occurs outside traditional USP employment relationships. New employees are hired under new conditions while new market entrants negotiate their own contracts or have no delivery staff at all but subcontract to SME-sized companies or self-employed drivers.

In the largest parcel markets, carriers are finding it increasingly hard to recruit qualified drivers. In Germany, the Netherlands, Belgium, Ireland, and the UK, drivers are in short supply, particularly during peak seasons. One possible solution to this persistent obstacle involves hiring drivers from abroad, i.e. from other Member States (e.g. Bulgaria, Czech Republic, Latvia, Lithuania, Poland, Romania, Slovakia) or even outside the EU (e.g. Ukraine, the Philippines).

The ongoing transformation process in the postal sector and the popularity of fast and convenient e-commerce enhance the need for efficient and flexible delivery solutions. Regarding wage policies, this resulted in a practice consisting of two-tiered employment relationships at USPs (civil servants and employees hired on the basis of new company

CLAs) and at USP parcel subsidiaries and other parcel carriers (direct employment based on national or sector or, if existing, company CLAs). The latter engages system partners (subcontracted companies or individuals) to a high extent, whereas USPs also subcontract but the extent of subcontracting depends on regulations in company CLAs which are often a limiting factor.

To save transaction costs and gain more flexibility, temporary agency workers' engagements have risen noticeably in Austria, Belgium, Germany, Finland, the Netherlands, and the UK over the last five years.

No common trends in wages and working conditions in the Member States

Overall, wages increased only in some Member States during the recent years (DE, FR). In other Member States, wages were decreasing (BE, DK, ES, IE, NL, NO, PL, SE and especially the UK). Pressure on wage levels will probably persist because of the growing market power of large e-retailers.

Today, USPs and international carriers pay well above the minimum wage and recruitment problems in terms of finding qualified drivers are one of the reasons why this is unlikely to change soon. The minimum wage functions as a reference point for hourly payments at smaller parcel and express couriers working as subcontractors for larger companies. Furthermore, working conditions are very diverse among Member States. On the one hand, there exist companies whose working conditions are regulated by collective labour agreements on company level (or at least on sectoral level which means lower standards and wages). On the other hand, there is a large number of small and medium-sized companies in which collective agreements do not apply.

An increasing number of wage policies at parcel carriers are not time-based, but rather based on volume. Instead of fixed working hours, drivers are paid by workload – a defined workload has to be delivered in a certain timeframe. These remuneration schemes might be less transparent regarding the average payment per hour and risk exposing drivers to earning below the minimum wage per hour or month.

One of the key challenges for carriers is peak demand in e-commerce deliveries. The significant demand fluctuations require more flexible employment arrangements. This has already resulted in a two-tiered labour market consisting of one part which is based on company or sector collective labour agreements and another part, where there is some evidence of working conditions that fall short of minimum standards defined by International, European and national labour legislation. Overall, we see a large variety of employment relationships today and this trend may persist in future.

Diverse practices of subcontracting in the Member States' parcel markets

Subcontracting is widely established in the parcel delivery sector. In some Member States, trade unions have criticised subcontracting practices and the working conditions at subcontractors, especially where self-employed subcontractors are charged with parcel

delivery. In media reports in several Member States, subcontracting is often mentioned as a cause for poor working conditions and bogus self-employment, although there is no comprehensive statistical evidence to assess working conditions at subcontractors in general. Problems occur if subcontracting “cascades” are formed, that reduce transparency for e-retailers and consumers, and lead to unclear responsibilities between the parties involved (particularly in the case of complaints regarding application of EU labour law).

Subcontracting has become a common practice in parcel delivery as it enhances flexibility and will remain important in future developments. Notwithstanding, subcontracting regulations differ substantially among Member States. Existing regulations are often limited to certain sectors which do not include postal and parcel carriers (one exception being France). Whether there should be general or sectoral regulations within the Member States and/or complemented at a European level, presents an important task for further research and policy making discussions. This issue is a matter of general labour policies for many sectors, and not an issue confined to the postal and courier sector alone. Therefore, we argue that general and horizontal labour policy instruments in the Member States are better suited to address the issues than specific rules for postal sector employment

Less than 1% of the workforce in Europe participates in a sharing economy working environment. In the postal and courier sector, the long-term business prospects are still uncertain, but these options have proved potential sources for major disruptions. Legal uncertainties (liability, tax, insurance etc.) remain. The further dissemination depends on whether the platform providers find a way to offer flexible employment options while at the same time avoid precarious working conditions. The discussion about possible regulations are only just beginning in some Member States.

Continuing need for social dialogue

The need for social dialogue in the delivery industry is uncontested among the stakeholders. In future, it could be discussed in depth how to establish alert mechanisms for precarious working conditions. Furthermore, it should be considered how a social dialogue can address future e-commerce challenges at national and European level, continuing to serve as a neutral mediator and a platform for broader involvement and participation.

8 Environmental aspects of delivery services

8.1 Negative environmental effects of parcel delivery services

Parcel delivery services are part of transport services of goods that are responsible for a variety of emissions negatively affecting the ecosystem, the vegetation and the human health. Direct emissions, which arise mostly from the operation of transport vehicles, have to be distinguished from indirect emissions, e. g. caused by vehicle or energy production. This study will focus on direct emissions of parcel delivery, with carbon dioxide (CO₂), nitrogen oxides (NO_x), particulate matter (PM) and noise emissions being the most important.

The emission of greenhouse gases (GHG) affects the global atmosphere in a way that is expected to provoke climate change. CO₂ is considered being the most harmful GHG and the one that makes up the largest share of emissions. The EU MS have committed to reducing their CO₂ emissions by 40% by 2030 (relative to 1990). As set in the Transport White Paper, the goal for the transport sector is to reduce GHG emissions to 20% below their 2008 level by 2030 in order to contribute to the European goal.⁴⁷³ Transport emissions are significant and have been rising in the past years. In 2016, the transport sector contributed 27% of total EU-28 GHG emissions.⁴⁷⁴ This places a special responsibility on parcel delivery service providers, in terms of potential savings and efficiency gains. The postal industry reports decreasing emissions per parcel in the past five years, accounting for 424 g CO₂ per item in 2017 on average.⁴⁷⁵ However, rising parcel volumes pose a challenge on carriers regarding the carbon footprint of delivery. For example, DPDHL reports that because of increasing transport volumes direct emissions from own operations have been increasing by 3.9% in 2017.⁴⁷⁶

Besides the climate impacts of GHG, air pollutant emissions also have regional and local impacts. The emission of sulphur dioxide (SO₂) and NO_x contributes to acid rain, which can cause harmful effects on soil, forests and waters. Effects can occur far from the emission source as acid particles may be transported long distances before falling to earth. High concentrations of NO_x emissions are a main cause of photochemical smog, often formed over cities. Smog is a serious problem especially in dense urban areas, causing a variety of health problems. PM, SO₂, NO_x and carbon monoxide (CO), are the most important components of local air pollution. Urban freight is responsible for up to 50% of urban PM and NO_x emissions.⁴⁷⁷ Local air pollution can be harmful to the human health and damage the biosphere. Health risks associated with local air pollution depend

⁴⁷³ EU (2011), White Paper on transport.

⁴⁷⁴ See <https://www.eea.europa.eu/data-and-maps/indicators/transport-emissions-of-greenhouse-gases/transport-emissions-of-greenhouse-gases-11>.

⁴⁷⁵ Including all direct and indirect emissions (scope 1, 2 and 3). IPC (2018), Postal Sector Sustainability Report 2018.

⁴⁷⁶ DPDHL (2018), Corporate Responsibility Report 2017, p. 66.

⁴⁷⁷ See ALICE / ERTRAC Urban mobility WG (2014), Urban Freight research roadmap.

on the concentrations of pollutants and exposure time. Air pollutants that are emitted in densely populated areas cause more harm than pollutants emitted in remote areas since high concentrations of pollutants increase negative impacts. Apart from air pollution, traffic is the main cause of local noise pollution, negatively affecting human and animal health. High noise levels can cause a variety of physiological and psychological health problems.⁴⁷⁸

Table 26 Local, regional and global effects of delivery air pollutants

Air pollutants	Spatial extent of effects		
	Local	Regional	Global
CO ₂			Greenhouse effect
SO ₂	Local air quality	Acid rain	
NO _x	Local air quality	Acid rain, photochemical smog	Greenhouse effect (indirect impact)
CO	Local air quality	Photochemical smog	Greenhouse effect (indirect impact)
PM	Local air quality		

Source: Transport Research Laboratory (1999), Methodology for calculation transport emissions and energy consumption, p. 20-21.

Carriers increasingly act to reduce the environmental effects of parcel delivery. Measures and progress are being reported in the companies' annual reports or published in separate "corporate social responsibility reports". Major carriers especially set themselves quantitative goals, focusing on a decrease of CO₂ emissions and an increase of environmental friendly delivery vehicles in their fleet. Industry initiatives, such as IPC's EMMS⁴⁷⁹ allow carriers to compare emissions and to exchange experiences on green delivery solutions. Key drivers behind company initiatives to green their logistical systems are cost benefits, corporate image, competitive differentiation and compliance with government regulation.⁴⁸⁰ Since public awareness for the topic grows, demand from private and business customers and investors for carbon neutral delivery also play an increasing role.

Measures reported by carriers in order to lower the environmental effects of cross-border and domestic parcel delivery mainly focus on efficiency gains, shift of transport mode and the implementation of alternative vehicles and fuels.

Types and amounts of air pollutants depend on distance, transport mode and fuels used. Air transport unquestionably causes the most emissions per tonne-kilometres in parcel

⁴⁷⁸ See WHO (2011), Burden of disease from environmental noise. Quantification of healthy life years lost in Europe.

⁴⁷⁹ The Environmental Measurement and Monitoring System (EMMS) is an initiative consisting of 20 parcel delivery service providers from five continents. The program provides a common carbon measurement and reporting structure for participants and reports the development of the combined carbon emissions. See www.ipc.be/services/sustainability/sustainability-emms.

⁴⁸⁰ See McKinnon et al. (2010), Green logistics: improving the environmental sustainability of logistics, p. 17.

delivery. Air freight accounts for 656 g CO₂ per per tonne-kilometres on average compared to freight transport by heavy-duty trucks ranging from 66-72 g CO₂ per tonne-kilometres, implying up to ten times higher emission values for air transport.⁴⁸¹ UPU figures show, that the global number of e-commerce items transported by air has been growing continuously, reaching over 400 million items in 2015. With over 225 million items China accounts for the biggest share of e-commerce transported by air in 2015.⁴⁸² Low UPU terminal dues for postal import parcels and small packets from China to the EU contribute to increasing air transportation (see Section 6.4). The big environmental impact of aviation is being reflected in CO₂ reports of carriers executing air transportation. At UPS, global airline fuel accounts for approximately 60% of the company's total GHG emissions in 2017, DHL reports a share of 70%.⁴⁸³ Both report increasing airline fuel consumption in the last years due to increasing shipping volumes. Although alternative jet fuels with the potential to improve air quality are being developed, their large scale deployment is constraint by availability and costs.⁴⁸⁴ Some carriers engage in initiatives in order to support innovations in alternative fuels and aircraft technologies, such as the Commercial Alternative Aviation Fuels Initiative and aireg e.V. UPS reports that the purchase of more fuel-efficient aircrafts, reduction of on-board weight and fuel-saving flight practices contributed in reducing the negative impact of air transport.⁴⁸⁵ Other measures include shift from air transport to other modes of transport like road service, as reported e. g. by Royal Mail.⁴⁸⁶ UPS expanded options for rail freight transport between China and Europe, offering a more environmentally friendly alternative to air and ocean freight services.⁴⁸⁷ Waterway and rail transportation cause substantially less air pollution per tonne-kilometres than air and conventional road transportation. Compared to waterborne transport, electric rail service emits significantly less NO_x.⁴⁸⁸

Heavy-duty trucks used for long-distance road transportation are responsible for about 25% of CO₂ emissions from road transport in the EU and for approximately 6% of total EU emissions.⁴⁸⁹ Large goods vehicles are subject of progressively tightening EU emission standards (Euro Norm), resulting in declining emissions from new vehicles. In order to decrease long-distance road transport emissions, many carriers report continuously renewing their fleet with fuel efficient trucks meeting higher emission standards. In 2017, 60% of heavy-duty trucks used by carriers in Germany are meeting Euro 6 standards; a

⁴⁸¹ Ibid., p.44.

⁴⁸² See UPU (2017), Towards better measurement of e-commerce flows and readiness, presentation of Dr. José Ansón at UNCTAD e-commerce week, 27 April 2017, slides 10 and 12.

⁴⁸³ See UPS (2018), UPS 2017 Corporate Sustainability Progress Report; and DPDHL Group (2018), Corporate Responsibility Report 2017.

⁴⁸⁴ ICCT (2017), Mitigating international aviation emissions: risks and opportunities for alternative jet fuels.

⁴⁸⁵ UPS (2018), UPS 2017 Corporate Sustainability Progress Report.

⁴⁸⁶ During 2017–18, Royal Mail replaced air transport with road services between Newcastle and East Midlands Airport. Royal Mail plc (2018), Corporate Responsibility Report 2017-18, p.78.

⁴⁸⁷ UPS (2018), UPS 2017 Corporate Sustainability Progress Report.

⁴⁸⁸ Alan McKinnon et al. (2010), Green logistics: improving the environmental sustainability of logistics, p. 44.

⁴⁸⁹ See https://ec.europa.eu/clima/policies/transport/vehicles_en.

50% higher share compared to the total stock of heavy-duty vehicles.⁴⁹⁰ Technological advances, like lightweight vehicle design, reduced air and tire-rolling resistance and speed limiters can contribute to lowering fuel consumption. Other measures reported by carriers are testing and implementation of alternative fuels like liquefied natural gas (LNG) and compressed natural gas (CNG). An example being Česká pošta: In 2015 the carrier purchased a large number of vehicles that run on CNG, currently comprising 20% of the companies' fleet.⁴⁹¹ Natural gas accounts for lower direct NO_x, PM and noise emissions compared to diesel. However, the environmental advantages are controversial. Taking into account emissions arising from production and distribution ("well-to-wheel") lowers the benefits.⁴⁹² The use of battery-powered trucks is generally not seen as a suitable solution in short and medium term, neither by carriers nor by environmental experts.⁴⁹³

Finally, data analysis and IT-assisted planning tools enable carriers to identify potential improvements in network structure, route planning and vehicle load, enhancing delivery efficiency and reducing the total kilometres driven.⁴⁹⁴ Measures that help to increase efficiency are an important driver of environmental improvements and a good example of aligning economic and environmental objectives.

8.2 Last-mile delivery contributes to congestion and air pollution

Urban areas with high traffic volumes are especially affected by PM, NO_x, SO₂ and noise pollution. Transport is the main cause of air pollution in cities. Conventionally-fuelled delivery vehicles are still predominant for last-mile delivery. In the case of Germany, 96% of courier, express and parcel delivery vehicles are powered by diesel and petrol.⁴⁹⁵ Light-duty vehicles produce around 15% of the EU's emissions of CO₂. Delivery only accounts for a small share of road traffic.⁴⁹⁶ However, emissions rise when vehicles accelerate from idling conditions.⁴⁹⁷ Frequent stops in order to deliver parcels as well as stop-and-go traffic caused by congestion lead to higher emissions. In case of insufficient freight loading zones and parking spaces double parking is a widespread and tolerated habit in many areas, undermining the flow of traffic.⁴⁹⁸ Stop-and-go-traffic can increase CO₂ and PM emissions up to 100% and NO₂ emissions up to 70% compared to moving

⁴⁹⁰ 40% of all heavy-duty trucks in Germany meet Euro 6 standards in 2017. BIEK (2018), BIEK-Kompendium Teil 3.

⁴⁹¹ Ceska posta (2016), Annual report 2018; and Ceska posta (2018), 2017 Annual Report.

⁴⁹² IPCC (2014), Climate Change 2014: Mitigation of Climate Change. Contribution of Working Group III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change, p. 615.

⁴⁹³ Interviews with parcel delivery service providers and environmental organisations.

⁴⁹⁴ See e.g. UPS (2018), UPS 2017 Corporate Sustainability Progress Report; DPD (2017), Corporate Social Responsibility Report 2016; GLS (2018), 3rd Sustainability Report 2016/2017.

⁴⁹⁵ BIEK (2018), BIEK-Kompendium Teil 3.

⁴⁹⁶ In Germany, parcel, express and courier services account for less than 1% of total road traffic, according to BIEK (2018), BIEK-Kompendium Teil 1.

⁴⁹⁷ Anju Goel and Prashant Kumar (2015), Characterisation of nanoparticle emissions and exposure at traffic intersections through fast-response mobile and sequential measurements, in: Atmospheric Environment, Vol. 107, April 2015.

⁴⁹⁸ According to IHK 80% of freight delivery stops in Cologne (Germany) are done in double parking. See IHK (2018), Die Ladezone im Blickpunkt: Anforderungen an die Güterversorgung in Köln und Leverkusen, p. 23.

traffic.⁴⁹⁹ In order to improve air quality and disturbances from traffic, cities increasingly react by introducing traffic access restrictions and low emission zones, imposing challenges for carriers. Local restrictions are expected to increase in future, since cities like London and Paris have been announcing ambitious emission-reduction strategies in the past years.⁵⁰⁰

Addressing the environmental and regulatory challenges of last-mile delivery, carriers are increasingly testing and introducing innovative vehicles, such as electric delivery vans, e-trikes and cargo-bikes. Electric vehicles are ideally suited for stop-and-go traffic in urban areas. However, they still release PM pollution from wearing tyres, brakes and road surface.⁵⁰¹ For a more comprehensive analysis of the environmental impacts of electronic vehicles, energy and vehicle production as well as recycling should be considered. The number of electric vehicles in IPC's EMMS group has more than doubled compared to 2016, representing 11% of the postal fleet in 2017.⁵⁰² They are mostly being used for last-mile delivery because of their limited battery capacity. However, electric delivery vehicles are mostly not yet integrated in day-to-day business, as pointed out in interviews with carriers. Many carriers experience difficulties in finding suitable vehicles, since market development started slowly in the past years. In order to find new and suiting mobility solutions, carriers collaborate with automobile manufacturers, start-ups and research institutes. Hermes recently entered cooperation with Mercedes-Benz and is planning to introduce 1,500 newly developed electric transporters in the next two years.⁵⁰³ UPS expands its electric fleet by continuously converting diesel-powered vans to battery electric power, starting seven years ago.⁵⁰⁴ DPDHL purchased former university spin-off StreetScooter in order to develop electric vans according to their needs, integrating them successfully in their day-to-day business (see Case study 25).

⁴⁹⁹ BVL (2018), Factsheet Emissionen in der Logistik.

⁵⁰⁰ See e. g. Greater London Authority (2018), Mayor's Transport Strategy.

⁵⁰¹ See Victor Timmers and Peter Achten (2016), Non-exhaust PM emissions from electric vehicles, in: Atmospheric Environment, Vol. 134, June 2016.

⁵⁰² IPC (2018), Postal Sector Sustainability Report 2018, p. 49-51.

⁵⁰³ Interview Michael Peuker, Hermes Germany, Sustainability Manager/New Mobility, 14 November 2018.

⁵⁰⁴ UPS (2017), UPS 2016 Corporate Sustainability Report.

Case study 25: StreetScooter (DPDHL)



With the StreetScooter, DPDHL has collaborated with StreetScooter GmbH and institutes within RWTH Aachen University to develop its own electric delivery vehicle. A project group led by RWTH Aachen University started the development in 2010 with the objective of building an electric vehicle at competitive rates. Collaboration with DPDHL started in the following year, leading to a purchase of the start-up by DPDHL in 2015. The carrier turned to StreetScooter because established manufacturers did not meet the company's expectations. The van is being designed primarily for delivery in mid-sized towns and rural areas. It has a range of up to 80 km. In order to meet the requirements of parcel delivery, postmen have been involved in the development process, giving information on the operation of vehicles in day-to-day use. Previous testing point out that acceptance of the electric vans amongst employees is very high. A stable operation of electric delivery vehicles is possible and can be cost-efficient. The company expects to save up to 4 t CO₂ per year and vehicle compared to conventional delivery vans. In 2017 DPDHL operates over 5500 StreetScooters, mostly in Germany, as part of their daily operations. The international roll-out is planned to be intensified in 2018.

Sources: www.dhl.com/content/dam/downloads/g0/press/publication/Fact_Sheet_StreetScooter_Work_and_Work_L_EN.pdf, retrieved 23 October 2018; www.erneuerbar-mobil.de/projekte/co2-freie-zustellung, retrieved 23 October 2018; www.futurelab-aachen.de/streetscooter-wie-alles-begann/, retrieved 25 October 2018; and Jens Clausen (2017), Der Post-StreetScooter: Fallstudie im Rahmen des Projekts Evolution2Green-Transformationspfade zu einer Green Economy.

Besides electric vans, carriers are testing a wide range of innovative electric vehicles in order to find solutions designed for different purposes and areas of operation (see the example of CTT in Case study 26). Small electric vehicles, like electric scooters, trikes or e-bikes, offer more loading capacity and speed compared to conventional cargo-bikes. They take less room on the streets, thus can contribute in reducing traffic and congestion.

Case study 26: VEDUR (CTT)



VEDUR is an innovative, egg-shaped, electric delivery vehicle. The vehicle was developed by the Portuguese start-up UOU mobility and adapted to the carrier's needs in cooperation with CTT. It can carry an estimated 75 kg/1m³ of deliveries and cover approximately 45 km, helping the company to address increasing parcel volumes and weights. 12 VEDUR vehicles were acquired by CTT and soon will start operating in urban centres in Portugal. Since tests in a pilot project in Aveiro, Portugal, 2017 went well the company is planning to purchase more vehicles in 2018. CTT is increasingly expanding their electric fleet which currently corresponds to 10% of the company's total fleet. The company expects to reduce up to 877 kg CO₂ per vehicle and year.

Sources: www.ipc.be/sector-data/sustainability/case-studies/ctt; CTT (2018), Sustainability Report 2017; and Interview Maria Rebelo, CTT, Sustainability and Environment, 9 November 2018.

As reported by carriers, the lack of series production of electric vehicles and their high acquisition costs compared to conventional vans are challenging. Low prices for combustible fuels and diesel-vans result in high opportunity costs. A charging infrastructure needs to be installed, resulting in high additional investments. Carriers report to usually charge electric vans at their own facilities, since battery capacity of most vans is sufficient for a working day. Once implemented, most carriers expect cost-neutrality of electric vehicles in the long-run. Economic efficiency depends on various

assumptions, including the development of diesel-prices, the expected service life of electric vehicles and disposal fees.⁵⁰⁵

Cargo-bikes gained traction amongst parcel delivery service providers. Many carriers are conducting pilot projects or use cargo-bikes as regular delivery vehicles in urban areas. A big variety is being tested: two-, three-, four-wheeled bicycles, with or without electric support and different sized loading spaces. Cargo-bikes are a very environmental friendly delivery method and a permitted delivery option in most restricted urban areas. They are smaller than traditional delivery vehicles and sometimes allowed on bicycle pathways, thus reducing the traffic volume. A comprehensive assessment of pilot projects that introduced e-bicycles in 20 European cities estimated emission savings of approximately 0.7 t CO₂e per year and bike on average.⁵⁰⁶ Since cargo-bikes offer limited storage space and velocity, they work best in dense, urban areas with short delivery routes, offering more flexibility and agility in parcel delivery. Low acquisition costs facilitate their implementation. However, interviews with delivery service providers pointed out that the establishment of cargo-bike solutions needs a lot of testing, research and experience. Similar to electric vans, the lack of series production of suitable delivery bicycles is challenging. The hub network has to be modified and knowledge of bicycle mechanics and delivery by bike has to be accumulated. Also a functioning bicycle infrastructure in the cities is needed. Due to these difficulties some carriers outsource cargo-logistics to local, experienced delivery service providers as subcontractors, as in the case of Txito (see Case study 27).

505 Ct. BIEK (2017), Innovationen auf der Letzten Meile: Bewertung der Chancen für die nachhaltige Stadtlogistik von morgen.

506 In the framework of PRO-E-BIKE project, e-bikes have been introduced for different services such as post, parcel, food delivery or other services. In total 76 e-bikes have been tested. See PRO-E-BIKE (2018), Assessment of environmental impact, economic and societal competitiveness.

Case study 27: Txita (Donostia-San Sebastián, Spain)



Txita is a white label delivery service provider in Donostia-San Sebastián, Spain. They conduct B2B as well as B2C last-mile delivery by cargo-bikes. Amongst their clients are DHL, SEUR, TIPS@ and Correos Express. The companies deliver their parcels to Txita's centrally located hub, provided by the local administration, where they get dispatched to the bicycles. Txita delivers parcels from different companies consolidated in order to optimise their routes and vehicle load. Different tracking devices for each company are being used. Cargo-bikes are not branded with the parcel companies logos.

In 2009 the European Union selected Donostia-San Sebastián to participate in "CIVITAS ARCHIMEDES" project, aiming at increasing the share of sustainable modes of transport, improving energy efficiency and providing safer and more convenient travel services in medium-sized urban areas. Amongst other measures, the local administration supported the establishment of Txita as an environmentally friendly last-mile delivery service provider. Donostia-San Sebastián implemented a variety of restrictions for traffic, such as reducing unloading lots and closing the Old City for delivery transport. Cargo-bikes are an environmentally friendly solution to comply with the restrictions. From 2014 to 2017 Txita and the city administration of Donostia-San Sebastián took part in the European project "Cyclelogistics Ahead" as partners. As a result, the project helped Txita improve their services and the city administration made different actions to further improve the sustainable delivery of goods.

Today, the company continues to operate on a profitable basis. Demand for their service is high as carriers had to react to the traffic restrictions. Txita offers a convenient last-mile solution for carriers. Because of their experience and know-how with cargo-bike mechanics and delivery processes the company is confident that they will continue to have an advantage compared to carriers inexperienced in cycle-logistics."

Sources: www.txita.com; IHK (2018), Die Ladezone im Blickpunkt: Anforderungen an die Güterversorgung in Köln und Leverkusen; and Interview Harri Zuazo Linacisoro, Txita, 6 November 2018.

Replacing conventional diesel-vans by electric vans with similar volume doesn't require major changes in last-mile hub networks. Last-mile delivery by small electric vehicles, cargo-bikes or on foot however, requires modifications. Easy accessible urban micro hubs, close to the respective delivery areas are necessary. Shortening delivery routes by conducting multiple short trips starting from the hubs offsets disadvantages of low speed and storage volume of the vehicles. For carriers, this means subdivision of the "conventional last-mile" into a consolidated supply of urban micro hubs by trucks, followed by delivery to the customer by cargo-bikes or likewise. Especially in dense urban areas suitable hub spaces are often not available or available at high costs, challenging the economic viability of the concept. Cooperation with local administrations can be an important factor of success for establishing cost-efficient micro hub solutions. See Case study 28 for an example of successful testing of the concept by UPS.

Case study 28: Urban Micro Hubs (UPS)



In 2015 UPS started testing last-mile delivery by urban micro hubs as a pilot project in cooperation with the City of Hamburg. Containers are being prepared in nearby depots and then brought into the city every morning, serving as urban micro hubs. The containers are being placed in four locations around the city centre according to agreements with the local administration, allowing last-mile delivery to be conducted by foot, cargo-bike or electric cargo-bike in the whole of the downtown harbour area. Due to the restricted radius and loading capacity of cargo-bikes micro hubs are cost-efficient for UPS only in very dense areas with centrally located hubs. Low acquisition costs, low fuel and energy consumption and better customer access account for some of the advantages of cycle-logistics. However, efficiency drops because cyclists have to return several times per day to the hub in order to reload parcels. Since space is limited and expensive in high-dense urban areas, provision of suitable spaces for the containers is a main challenge. Project evaluation in the City of Hamburg showed that delivery starting from a micro hub can decrease CO₂, NO_x and PM emissions substantially in the respective delivery area.

Because of satisfying results UPS further develops the concept. The company started to implement and test the solution in other cities such as Munich, Frankfurt and Dublin. An implementation in London is scheduled for 2019.

Sources: HSBA (2017): Last-Mile-Logistics Hamburg: Innerstädtische Zustelllogistik; and Interview Peter Harris, UPS, Director of Sustainability UPS Europe, 15 November 2018.

Alternative vehicles offer opportunities for an environmental friendly last-mile parcel delivery. While small vehicles, like cargo-bikes, in combination with micro hubs have potential in dense urban areas, electric vans can replace conventional vehicles in most urban and rural areas. The innovative vehicles not only help to reduce the environmental impact of delivery but also can contribute to a good brand image, because of their very good visibility and acceptance amongst the public and delivery drivers. Interviews with carriers point out that most don't expect financial gains, but hope for cost-neutrality in the long-run. A lack of established solutions and insecurity about the development of restrictions complicates long-term planning for carriers.

Besides replacing conventional vehicles, emissions in last-mile delivery can be reduced by increasing delivery efficiency. Similar to long-distance transport, data analysis and new technologies enable carriers to enhance network and route planning in last-mile delivery. As in the case of UPS, improved route planning using big data technology resulted in savings of seven miles per driver day for the company when implemented in the US.⁵⁰⁷ An important approach to decrease the number of delivery trips is improving the success of first delivery attempts. Research shows that additional CO₂ from the second delivery attempt can increase emissions per drop by between 9%-75%, depending on the first-time delivery failure rate.⁵⁰⁸ Carriers implement various solutions: Avoiding misloads, e. g. by scanning technologies, improves vehicle load. Precise tracking solutions allow customers to better foresee delivery times. Enabling customers to redirect parcels to different addresses, such as a neighbour or a close located pick-up point, or allowing them to change the delivery date according to their needs is supposed to increase delivery success. Consolidated delivery to an alternative drop-off point, such as parcel lockers and

⁵⁰⁷ Interview Peter Harris, UPS, Director of Sustainability UPS Europe, 15 November 2018.

⁵⁰⁸ Logistics Research Centre (2009): The impact of failed home deliveries on carbon emissions: Are collection/delivery points environmentally-friendly alternatives? Conference paper Logistics Research Network Annual Conference, September 2009.

shops, almost guarantees success in first delivery attempt and shortens delivery trips drastically. However, in this case last-mile delivery is transferred to customers. Although reducing traffic and emissions caused by carriers, the overall environmental effect depends on the behavior of customers and the distance of the delivery point to the customer's homes.⁵⁰⁹

In order to increase fuel efficiency carriers implement a variety of measures, as shown in the case of bpost (Case study 29). Driver trainings, usually including theoretical and practical sessions, teach postmen eco-friendly driving-skills. Hellenic Post S. A. offers practical training to their drivers by using a virtual 3D-platform.⁵¹⁰ Eco-driving trainings resulted in 7% reduction in fuel consumption at Hrvatska Posta.⁵¹¹

Case study 29: Eco-Driving (bpost)



Bpost engages in different measures in order to increase fuel efficiency and to promote eco-friendly driving. Eco-driving courses teach postmen fuel efficient and environmental friendly driving skills. The company started to install dataloggers in delivery vehicles, allowing drivers to better watch their fuel consumption and alerting them when they are not driving ecologically. Most eco-friendly driving is awarded in regular eco-driving competitions. Bpost also participates in IPC's biannual international Driver's Challenge, gaining 2nd place in 2018.

With supporting and promoting eco-driving bpost aims at improving road safety and reducing fuel consumption. The company set itself the goal to reduce their carbon emissions by 45% in 2020 compared to 2007. While alternative delivery vehicles enter slowly but steady the market, eco-driving is an effective way to save costs and to lower the carbon footprint of delivery in a short-term. "Eco-driving has a reduction potential of ten to fifteen percent", says Thibault d'Ursel, Global Head of Sustainability at bpost.

Sources: Bpost (2018) Annual report 2017 ; www.youtube.com/watch?v=cbjcmIrXvvo; and Interview Thibault d'Ursel, bpost, Global Head of Sustainability, 13 November 2018.

Finally, pollution, climate change, and increasing regulation to protect the environment affect all sectors, including (but not limited to) the parcel delivery sector. Parcel delivery services clearly are major contributors to emissions of greenhouse gas and particulate matter. But a more difficult question is whether increasing e-commerce (that replaces traditional retail sales) causes more or less pollution than traditional brick-and-mortar retail. In the e-commerce case, additional pollution results from higher transport volumes for parcel carriers and additional packaging. On the other hand, consumers that use e-commerce have less individual transport, and there are fewer transports to retailers, thus reducing pollution. The balance is not obvious, and there is no clear opinion on this matter in the research literature.

⁵⁰⁹ See Julia Edwards et al. (2009), The CO₂ benefits of using collection-delivery points for failed home delivery.

⁵¹⁰ IPC (2018), Postal Sector Sustainability Report 2018.

⁵¹¹ PostEurop (2017), The Postal Sector, leading the way in Corporate Social Responsibility.

8.3 Carbon offsetting

The emission of CO₂ and other GHG from parcel delivery can be balanced out by contributing to a scheme that aims to remove GHG from the atmosphere or to reduce GHG emission on the part of other organisations or individuals. Offsetting activities can include reforestation projects, energy efficiency projects and renewable energy projects such as wind or solar power. Once an activity is offset, it doesn't influence the global net GHG concentration. The use of international acknowledged reporting standards provides reliable information on the scope and origin of emissions in order to offset the correct amount. GHG Protocol is a widely acknowledged standard for carbon emission accounting. The Global Logistics Emissions Council GLEC Framework, a method for logistics emission accounting, is made in conformance with GHG Protocol. Offsets are being offered by project developers or intermediaries. DPDHL acts as a project developer in one of its offsetting projects. Third-party standards ensure that activities undertaken to generate offsets meet certain environmental and social criteria.⁵¹² The Gold Standard, founded by WWF and other organisations, is being recognised as high quality standard. Other recognised standards are Verified Carbon Standards VCS and the Clean Development Mechanism CDM.⁵¹³

Carbon offsetting projects enable carriers to lower their carbon footprint in a very fast and convenient way. It also offers the opportunity to provide so called "carbon-neutral shipping" for clients. In the case of DPD this is included for all parcels. Other carriers, such as DPDHL, UPS and GLS offer different carbon-neutral shipping options for clients for an additional charge. DPDHL, for example, includes offsetting for all German-wide shipments and offers climate-neutral shipments to other countries for a surcharge of EUR 0.20-0.70 per item for private customers.⁵¹⁴ Demand is being reported as mostly low as pointed out in interviews. According to a survey, 54% of retailers state that CO₂-neutral delivery is irrelevant for their choice of a shipping provider.⁵¹⁵ However, GLS reports increasing interest from business customers for sustainable delivery options. In 2016/17, 7.39 million national and international parcels were sent with the carbon-neutral shipping option in Germany – a 20% increase compared to 2014/15.⁵¹⁶ CTT's initiative exemplifies another successful implementation of carbon-offsetting as part of their green strategy (see Case study 30). By outsourcing offsetting operations to carbon offset providers and charging a fee to customers, offsetting can be implemented easy and at no additional costs. Offset activities have no additional effect on the global GHG concentration. However, local and regional effects of air pollutants as well as noise emission cannot

⁵¹² In 2016, 99% of offsets in the voluntary carbon markets were certified by a third-party standard. See Ecosystem Marketplace (2017), *Unlocking Potential: State of the Voluntary Carbon Markets 2017*, p. 15.

⁵¹³ Ibid., p 15-16.

⁵¹⁴ See <https://www.dhl.de/en/privatkunden/kampagnenseiten/dhl-nachhaltigkeit.html>.

⁵¹⁵ Händlerbund (2018), *Logistik-Studie 2018*.

⁵¹⁶ GLS (2017), 3rd Sustainability Report 2016/2017, p. 63.

become compensated. The effectiveness of carbon offsetting as an instrument to tackle climate change is nevertheless controversial.⁵¹⁷

Case study 30: Correio Verde (CTT)



As part of their carbon reduction strategy, CTT offers a range of carbon-neutral shipping options and engages in offsetting projects. Starting in 2010 the company introduced various environmental friendly products, like “Correio Verde”. The packets are produced with environmental friendly materials and are carbon neutral. In order to select offsetting projects, the

company regularly launches a public voting on their Facebook page. In 2018 CTT launched the third edition of public voting, offering customers to choose between two national and two international offsetting projects. Before putting them to vote, CTT narrowed the four finalists down from a variety of 21 projects, by considering criteria like social and environmental benefits, certification credentials and costs. Winning projects of this year’s voting are a reforestation project in Portugal and the promotion of renewable biomass in Brazil. It is expected that the latter will offset 55.030 t CO₂e over ten years. The project is verified under VCS and Social Carbon standards. By opening the decision-making project CTT enhances visibility of their initiatives. Revenues of green mail options have grown since its launch and CTT’s environmentally sustainable portfolio now accounts for close to 12% of the company’s revenue.

Sources: CTT (2018), Sustainability Report 2017 ; IPC (2018), Postal Sector Sustainability Report 2018 ; www.ctt.pt/ctt-e-investidores/sustentabilidade/projetos-e-iniciativas/compensacao-carbonica-correio-verde/index.html?com.dotmarketing.htmlpage.language=1; and Interview Maria Rebelo, CTT, Sustainability and Environment, 9 November 2018.

8.4 Conclusions

The transport sector is one of the largest contributors to greenhouse gas emissions, accounting for one quarter of total European greenhouse gas emissions in 2017. Notwithstanding, the postal industry reported decreasing emissions per parcel in the past five years. However, rising parcel volumes pose a challenge for carriers regarding the carbon footprint of deliveries. The mode of transport is a key determinant for the environmental impact of parcel deliveries. Road transport accounts for the biggest share of GHG emissions in the transport sector.

Air transport causes the highest emissions per item

The types and amount of air pollutants depend on the distance, transport mode and fuel used. In light of this, air transport causes the highest emissions per item: compared to road freight, air transport causes up to ten times more CO₂ per tonne-kilometre. Furthermore, low terminal dues for import (air) parcels reinforce the demand for air transportation. UPU figures show that the global number of e-commerce items transported by air has been growing continuously, reaching over 400 million items in 2015.

⁵¹⁷ See e.g. Parliamentary Office of Science and Technology (2007), Voluntary Carbon Offsets, Postnote number 290; Centre for Air Transport and the Environment (2012), Final OMEGA Project Report: An Assessment of the Potential of Carbon Offset Schemes to Mitigate the Climate Change Implications of Future Growth of UK Aviation; and Keith Hyams and Tina Fawcett (2013), The ethics of carbon offsetting.

Carriers are increasingly aware of the negative environmental impact of their business

Sustainability reports by carriers demonstrate the environmental awareness of the industry. Carriers are increasingly addressing environmental challenges by implementing alternative fuels and vehicles as well as improving fuel and network efficiency. The main drivers for the evolution towards an environmentally friendly parcel delivery service include cost savings, (local) government regulations, and consumer environmental concerns. Due to growing parcel volumes and increasing expectations of online shoppers, managing negative environmental impacts will become more important in the next five to ten years.

To date, most carriers have launched single initiatives in the last mile delivery, but not yet full solutions

Urban areas are affected by high traffic volumes, noise and rising pollution. Addressing the environmental challenges of last-mile deliveries, carriers are increasingly testing and introducing innovative vehicles and delivery solutions. Initiatives include electric delivery vehicles, cargo-bikes and urban micro-hubs. Furthermore, measures that contribute to raising efficiency form important drivers of environmental improvements due to their cost saving potentials. However, the implementation of alternative delivery vehicles requires long development and testing phases before they can be integrated in day-to-day business. Currently, the share of conventionally fuelled delivery vehicles in carriers' fleets remains large. However, in the meantime, concepts like urban micro hubs are being tested and implemented in selected cities.

Local regulations are driving environmentally-friendly city logistics

Last-mile delivery services are not only driven by growing e-commerce deliveries in combination with increasing expectations of online shoppers, but also by increasing traffic regulations in urban and metropolitan areas. A growing share of the population (particularly young people) is living in cities. This upward trend in urbanisation is causing more problems regarding traffic (more congestions, less parking space), air quality and noise. Some metropolitan areas, like London and Paris, have already reacted to this and launched more stringent traffic regulations including the introduction of peak and off-peak time windows for deliveries, vehicle weight and size restrictions, low emission and traffic zones, restrictions on vehicle types, and so on. It is safe to assume that the level of public regulation will increase and this will further affect last-mile logistics within cities. These factors encourage process and service innovations of last-mile deliveries, especially in urban areas. Alternatively, making more use of local warehouses will further promote more sustainable last-mile delivery solutions.

Local restrictions play an important role in motivating the implementation of green delivery concepts. Replacing a fleet with green vehicles that meet the regulation criteria is a cumbersome process that requires long-term planning. In order to implement a clear

strategy, carriers request consistent long-term regulation and transparency. Furthermore, improved cooperation between carriers and local governments could encourage innovative and satisfactory solutions and successful lighthouse projects.

Carriers are on course towards green last-mile delivery

In general, there is positive momentum towards the transformation of more green last-mile delivery practices. The solutions that are currently being tested , like electric vehicles or micro hubs, will most likely be incorporated in a growing number of deliveries in the near future. Universal concepts or solutions will not be suitable in every city as these concepts and solutions will depend on the unique local circumstances. In support of these developments, barriers such as insufficient charging infrastructure for electric vehicles or a lack of urban logistic spaces have to be addressed by local or national authorities.

The market for alternative delivery vehicles is developing rapidly. This development could be boosted by increasing demand from carriers, for example, the case of StreetScooter. Furthermore, research programs play an important role in encouraging the deployment of innovations, stimulating further research, and bringing relevant stakeholders and decision makers together.

9 Overall conclusions and recommendations

This study analyses the performance of delivery markets in the Member States of the European Union and of the European Economic Area and their ability to meet the needs of e-retailers and online buyers regarding B2C cross-border e-commerce deliveries. It describes the state-of-play as well as major developments and future trends in the B2C e-commerce delivery markets. The study deals with different aspects of the topic including past developments of national and European e-commerce and delivery markets, consumers' and e-retailers' needs, the supply of B2C e-commerce delivery services in Europe and the corresponding regulatory framework, e-commerce with non-EU countries (mostly China), employment and environmental topics, and future trends in B2C e-commerce delivery services. This comprehensive stocktaking exercise and the assessment of major developments show that the e-commerce industry, as well as the delivery industry, has significantly improved its performance in many respects including size, variety, and service levels and innovation both at national, European and international level. In this chapter, we put the emphasis on those areas where we still see room for improvement and, where appropriate, a need for regulatory action.

9.1 E-commerce, delivery services and the Single Market: A Success Story

B2C e-commerce has grown at significant rates in all EU Member States. Between 2013 and 2017, online sales for goods and services have increased annually by 14% on average, and stakeholders expect further significant growth in the foreseeable future. The main drivers for this development include an increasing share of consumers purchasing online, more frequent online purchases, and the expansion of online purchases to new product categories, like groceries and furniture.

The growth rates in e-commerce show that consumers in all Member States have become more familiar with online shopping, both domestically and increasingly across borders. Since 2013, the share of online shoppers purchasing across borders has gone up by ten percentage points to 42% in 2017. A third of online shoppers purchased from e-retailers of other EU Member States (up from a quarter in 2013). In particular, online shoppers living in small Member States, like Malta, Luxembourg, and Cyprus, or in Member States with relatively small retail markets, like Finland, Ireland, and Portugal, heavily rely on cross-border shopping with shares around 60% and higher. In addition, there is a high share of consumers buying abroad in Member States that share a language with a larger neighbouring country (e.g. Austria and Belgium).

Technological developments, harmonisation efforts within the EU (e.g. harmonised consumer rights), emerging e-commerce intermediaries like international platforms, shopping software in different languages, international online payment services, and fulfilment service providers and carriers have all created the foundation for dynamic growth in cross-border e-commerce. Consumers, particularly the increasing share of the "digital natives", are more open to new digital solutions and e-commerce than enterprises.

Today, consumers have much easier access to international e-retailers and platforms and thus the opportunity to access a wider range of goods and services than ever before. The borderless opportunities for online shoppers push the demand for cross-border e-commerce. They are increasingly willing to order from foreign web shops and online marketplaces if the domestic e-commerce market does not provide what they want. Analogously, more enterprises have recognised the opportunities of cross-border e-commerce leading to 44% of enterprises with web sales and at least 10 employees also selling items across borders, a share that is steadily increasing. While many enterprises sell across borders only occasionally, some have launched customised web shops and use international online marketplaces. This will allow them to grow in cross-border online sales by reaching more potential customers and to reduce the dependency on domestic (e-)retail markets.

9.2 There is much variation in the state of e-commerce and delivery markets among Member States

The share of online shoppers in a country's total population varies considerably among Member States: Shares are significantly higher in the Northern and Western EU Member States compared to most Eastern and Southern EU Member States. Lower shares are the result of technical barriers (broadband access) and lower levels of internet usage. The higher the fraction of internet users, the higher is the share of e-shoppers. Additionally, local preferences, language and cultural factors as well as security concerns influence the share of consumers purchasing online.

National e-commerce markets have developed at different paces. Northern and Western EU Member States have often more advanced and more mature e-commerce markets than most Southern and Eastern EU Member States (except Poland and the Czech Republic where e-commerce markets are highly developed), for different reasons. First, Member States with more advanced e-commerce markets often have a long tradition in distance selling (by phone or mail). Second, in these countries large e-retailers as well as national and international online marketplaces have been successfully established as key drivers for the national e-commerce ecosystem. Third, relatively wealthy Member States with high income per capita present attractive target markets for e-retailers. Fourth, the digital and the logistical readiness in these countries are usually high.

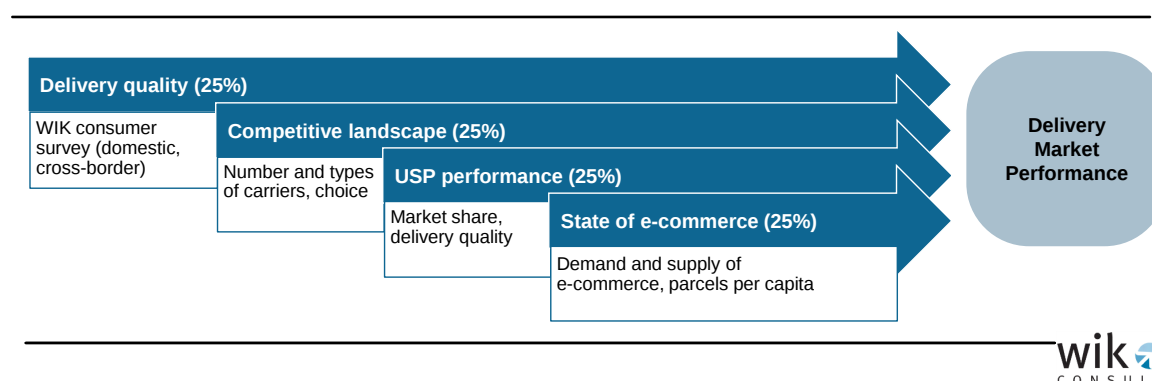
Competition in cross-border B2C delivery services has increased since the start of discussions regarding an integrated delivery market to boost e-commerce in Europe, following the launch of the Green Paper consultation on the cross-border delivery of parcels in late 2012.

- Intra-EU cross-border B2C delivery services have become manifold. International integrators like UPS and DHL Express successfully target e-retailers to facilitate cross-border deliveries for time-critical, high-value e-commerce purchases within Europe, but also between Europe and Asia as well as the United States.

- Road-based B2B parcel networks like DPD and GLS have been expanding into domestic and cross-border B2C e-commerce deliveries. These networks have own operations in most European countries or cooperate with high-quality carriers in some countries, typically with USPs.
- Dedicated European B2C parcel networks have emerged. Deutsche Post DHL launched a separate network, DHL Parcel, that focusses on cross-border B2C e-commerce delivery services. Hermes Europe, a subsidiary of one of the largest e-retailers in Europe, traditionally delivers to many EU Member States.
- Their offer is complemented by the industry initiative IPC Interconnect that launched a technical platform as an opportunity for participating USPs to offer more convenient and well-traceable e-retailer and consumer-oriented cross-border parcel delivery and return services.
- At regional level, local operators have been expanding their activities to neighbouring countries to better serve the needs of local e-retailers and businesses that increasingly sell abroad. With growth in cross-border e-commerce, these regional delivery clusters will contribute to a single market for delivery services.
- Finally, new players have entered the European delivery market, notably e-commerce platforms like Amazon that offer their sellers warehousing, logistics and delivery services (e.g. Amazon EFN) to facilitate cross-border e-commerce of SME e-retailers.

However, the performance of cross-border delivery services for e-commerce items is closely linked to the performance of the national delivery markets. To shed more light on this important aspect WIK developed a Delivery Market Performance Index that provides a ranking of the national delivery markets in 30 countries (EU-28 Member States, Iceland and Norway). This ranking informs stakeholders on the performance of a national delivery market of one country in relation to the performance of delivery markets of the other countries. The index scores reflect WIK's assessment on the status quo of national delivery markets with an emphasis on B2C deliveries based on quantitative and qualitative indicators from the WIK consumer survey, in-depth desk research on national and cross-border delivery services and e-commerce markets, and is complemented by expert interviews and stakeholder workshops.

Figure 99 WIK Delivery Performance Index – Criteria and indicators



Source: WIK-Consult.

The WIK Delivery Market Performance Index consists of four equally weighted criteria (see Figure 99):

- The first criterion ‘Delivery quality’ considers how online shoppers experience the delivery quality of domestic and cross-border purchases and is based on the results of the WIK consumer survey.⁵¹⁸
- The second criterion ‘Competitive landscape’ rates the development of delivery markets with respect to the number and types of operators active in B2C deliveries. In particular, this criterion captures the choices that SME e-retailers have to manage their domestic and cross-border deliveries.
- The third criterion ‘USP performance’ deals with the capability of the USPs to meet the requirements of B2C e-commerce deliveries in their respective countries. Universal services providers play an important role for the overall performance of the national delivery market in light of growing B2C e-commerce both domestically and abroad. In some countries, they are the only carrier that provides nationwide collection and delivery of parcels (including in very rural areas that are sometimes not served by parcel and express carriers). Moreover, USPs play a key role in the delivery of international small packages (as part of the letter post stream). The assessment of this criterion is mainly fuelled by the results from the WIK consumer survey (USPs’ delivery quality). It is complemented by other quantitative indicators, like the estimated market share of USPs in B2C deliveries.
- The fourth criterion ‘State of e-commerce’ captures the state of development of the national e-commerce market in each country in terms of demand and supply. The assessment is based on consumers’ usage of online shopping, companies’ engagement in e-commerce, and the size of the e-commerce market in relation to the whole economy of a country. Finally, the parcel volume per capita gives an indication on the state of e-commerce in relation to online sales of physical goods.

⁵¹⁸ See Section 4.3.5 for more detail on ‘Carriers’ delivery quality’.

The overall score, as well as the rating for each single criterion, reflect the performance of one Member State relative to the other Member States on a scale from one (lowest performance) to five (highest performance).⁵¹⁹

Figure 100 WIK Delivery Performance Index: Total index score by country

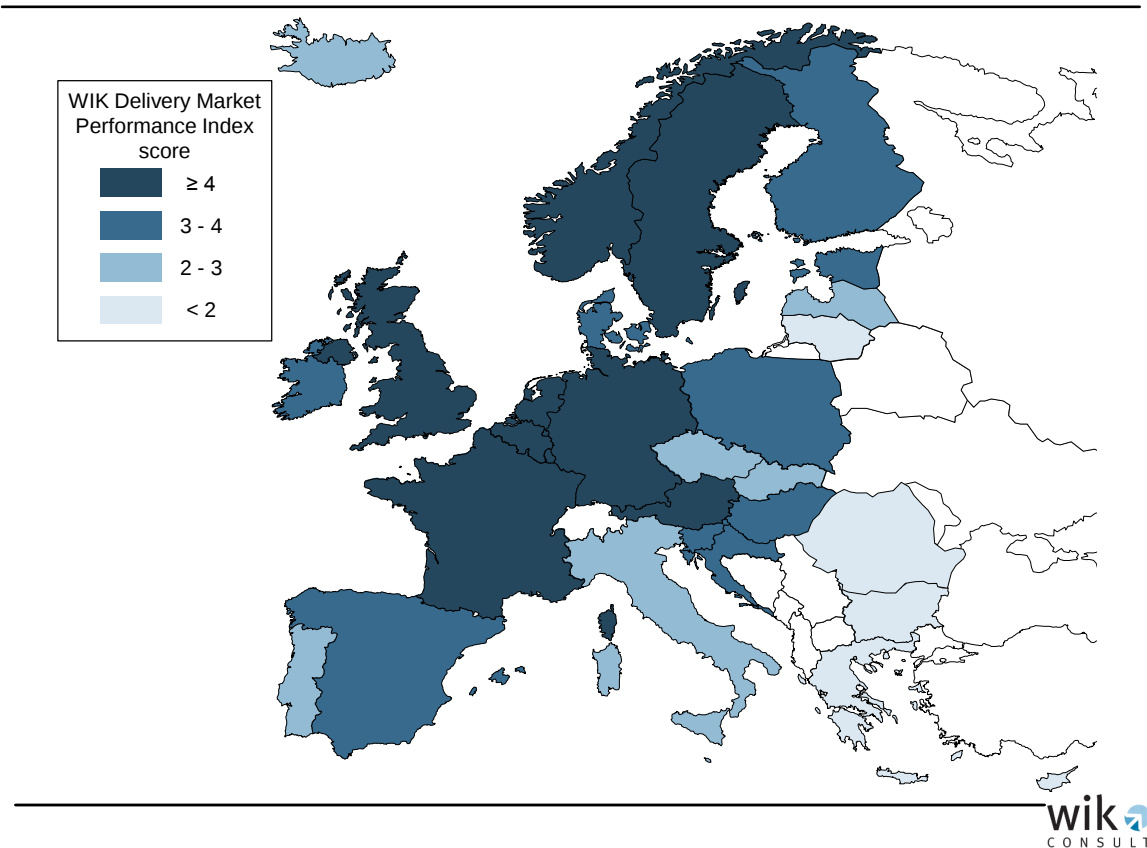
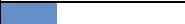


Figure 100 illustrates the total index score for each country. Overall, the delivery markets in the Western and the Northern EU Member States perform relatively better than the delivery markets in the Southern and Eastern EU Member States. Generally, delivery markets in peripheral regions, particularly in the South East, show a lower level of performance compared to more centrally located countries.

⁵¹⁹ The ratings reflect the relative performance in a country compared to the performance in other Member States (EU-28, Iceland and Norway). To ensure this the assessment is based on a comparative analysis. The ranking of quantitative indicators, for example, is based on the value of one country's indicator in relation to the values achieved by other countries, i.e. the value is set into relation either to the maximum value achieved or to different quantiles. The score for the indicators and each criterion was carefully reviewed regarding the relative performance. For this purpose, the rating of each country was compared to the rating of countries with the same rating as well as with the rating of countries which are considered on similar states of development regarding the relevant aspect.

Table 27 WIK Delivery Performance Index: Detailed results by country

Rank	Country	Total score	Delivery quality	Competitive landscape	USP performance	State of e-commerce
1	Netherlands					
2	Belgium					
2	Germany					
2	United Kingdom					
5	Austria					
6	Luxembourg					
6	Sweden					
8	France					
8	Norway					
10	Finland					
11	Denmark					
11	Ireland					
11	Poland					
11	Slovenia					
15	Estonia					
15	Hungary					
17	Spain					
17	Croatia					
19	Czech Republic					
19	Iceland					
19	Italy					
19	Portugal					
19	Slovakia					
24	Latvia					
24	Malta					
26	Lithuania					
27	Bulgaria					
27	Cyprus					
27	Greece					
30	Romania					

○ = 1, ◐ = 2, ◑ = 3, ◒ = 4, ◓ = 5

Source: WIK-Consult.

The Netherlands, Germany, the United Kingdom, Austria and Belgium are the best performing delivery markets compared to the other Member States (see Table 27). They are followed by France, Luxembourg, and the Nordic Member States, i.e. Sweden, Norway and Finland. In Bulgaria, Cyprus, Greece, and Romania, the delivery markets show relatively low levels of performance compared to the other Member States resulting from a combination of less advanced e-commerce markets, low-performing USPs, and fewer alternatives for consumers and small e-retailers.

Basically, B2C e-commerce drives the supply in national delivery markets, i.e. the more advanced the national e-commerce market, the better the performance of the national B2C delivery markets. The Northern and Western EU Member States have a long tradition in distance selling (mail ordering), alongside low-cost domestic B2C delivery services by USPs, and delivery companies that have been successfully established by distance sellers in the past, notably in France, Germany and the UK. Additionally, USPs in some of these countries had successfully entered the B2B parcel delivery markets in the 1990s and 2000s either by acquisitions or by investing in domestic and cross-border parcel operations. The tradition of distance selling combined with experience in the B2B parcel delivery operations have facilitated the development of more customised B2C delivery

services and prepared the field for the more demanding B2C e-commerce deliveries (in terms of consumer centricity).

In contrast, the Southern and most Eastern EU Member States neither had such a tradition in distance selling nor did the USPs used to play a significant role in B2B parcel deliveries. The delivery markets in these countries therefore have a lot to catch up, by launching appropriate B2C delivery services (sometimes from the scratch). Given the scope for improvements in Eastern and Southern EU Member States, many of them have been developing well since local and international carriers have started to expand into domestic and cross-border B2C delivery services.

9.3 Emerging co-operation among carriers and e-retailers

The e-commerce supply chain consists of data-driven technology-based elements (e.g. operation of a web shop) and physical elements (production / procurement of goods, transport, warehousing and fulfilment delivery). Both groups of elements are closely linked. With an increasing size and number of e-retailers, the e-commerce supply chain becomes more complex and e-retailers have to decide how to organise the supply chain to optimally manage growth in demand. In principle, they have to decide whether they want to keep all elements in-house or outsource some elements to third parties. In more developed e-commerce markets, a broad supply of e-commerce intermediaries, notably fulfilment service providers for warehousing (order preparation and delivery), have emerged. Along with this development towards more modular e-commerce supply chains, cooperation and partnerships among e-retailers, e-commerce intermediaries and carriers have emerged, mainly based on commercial agreements.

The growing cross-border e-commerce streams within the EU (and internationally) also resulted in more cooperation between several carriers as well as between e-retailers (or fulfilment services providers) and carriers. Cross-border B2C delivery services have successfully emerged at regional level and at European level, as outlined in Chapter 3 of this study. Regional delivery networks offer delivery of parcels to adjacent Member States. Examples for such delivery regions include the German-speaking 'DACH' region (Germany, Austria and Switzerland), Benelux (Belgium, Netherlands, Luxembourg), the Nordic countries (Denmark, Norway, Sweden and Finland), the Iberian Peninsula (Portugal and Spain), the Czech and Slovak Republic, and the Baltic countries (Estonia, Latvia and Lithuania).

European delivery networks offer delivery services for cross-border B2C parcels. Major players include UPS, DHL Express, DPD, DHL Parcel Europe, GLS and, at a smaller scale, Hermes Europe. Additionally, international fulfilment service providers and platforms, e.g. Amazon Marketplace, support online sellers in cross-border deliveries by offering local warehouse space in selected Member States from where the online orders are then delivered. Finally, USPs in many Member States are working together more closely to improve the cross-border delivery of e-commerce items.

Overall, competition in cross-border delivery services has become manifold resulting in various commercially driven cooperation among carriers, e-commerce intermediaries and e-retailers with the aim of ensuring high quality domestic and cross-border delivery services. At present, we see no need for imposing new access obligations at EU level. Large e-retailers and e-commerce intermediaries, as well as European and local carriers, have managed to negotiate agreements with carriers in destination countries either based on commercial agreements or tighter relationships (e.g. by ownership). Moreover, negotiated agreements between carriers and parcel brokers, delivery management platforms, return platforms, e-fulfilment service provider etc. all suggest that carriers are willing to cooperate with e-commerce intermediaries and thereby extend their reach and support of all e-retailers, especially regarding micro and SME e-retailers.

Within the European delivery networks, common standards play an important role because they help to facilitate interoperability and data exchange between the carriers involved. In this competitive and dynamically developing environment, several carrier-specific standards have emerged to facilitate and improve cross-border deliveries. Integrators like UPS and DHL Express, use their own technical standards to ensure a frictionless data exchange and smooth interaction between country organisations. European parcel carriers like DPD, GLS and DHL Parcel Europe have developed their own solutions and standards to organise cross-border parcel flows and ensure that online shoppers get their parcels in the most convenient way. Participating USPs have the opportunity to join the IPC Interconnect platform to facilitate physical and data exchange of cross-border small packets and parcels.

Harmonised parcel labels have been developed to facilitate cross-border delivery services. USPs can apply the IPC harmonised label developed as part of the IPC Interconnect programme. Moreover, mandated by the European Commission, the CEN Technical Committee 'Postal Services' (TC 331) has successfully developed a standard for a 'harmonised parcel label' open to all carriers using the IPC Harmonised Label as a blueprint. In addition to the carrier-specific barcode, this label includes a unique identifier (GS1 SSCC) that has to be added by the e-retailer to each shipment. It will improve e-retailers' ability to track single shipments of any carrier or other intermediary used in the supply chain independently, and may play a central role in facilitating customs and tax processing for intra-EU e-commerce imports in the future.

Significant progress in the development of technical standards has improved the visibility of cross-border delivery services and facilitated the handling of cross-border parcels. A CEN standard has been successfully developed that is open to all carriers and e-retailers to increase the visibility of e-commerce parcels in the e-commerce supply chain (including delivery). These developments indicate that market solutions are emerging so that there is no need for mandatory standards in relation to cross-border parcel delivery services at present.

9.4 Service improvements and more transparency in cross-border delivery markets

One of the reasons for the discussions in late 2012 regarding the need for an integrated delivery market to boost e-commerce in Europe, was a significant lack of appropriate cross-border B2C delivery services for e-retailers and online shoppers. At the time, carriers had just started to adapt their international operations to better meet the needs of the e-commerce industry and of online shoppers. Additional pressure came from the political side, notably a threat to regulate cross-border parcel delivery services more closely. Nevertheless, the delivery industry has made significant progress since then. Satisfactory customer experiences play a key role for e-retailers to attract and retain online shoppers.

Most carriers have recognised that the physical delivery of online orders forms a significant part of this customer experience. Therefore, they are working hard to ensure that domestic and cross-border deliveries contribute to this experience in a positive way.

Carriers' efforts consist mainly of three drivers: (1) growing demand in B2C deliveries in combination with increasing requirements of e-retailers (particularly large ones) and consumers (2) increasing competitive pressure by emerging delivery service providers (including large e-retailers and platforms that invest in own sorting and delivery logistics) and (3) pressure on costs because B2C deliveries are more expensive than B2B deliveries (Saturday delivery, high risk of failure to the parcel at the first attempt, and the need for alternative delivery locations like parcel shops).

Growing B2C e-commerce with an increasing customer-centric has forced postal parcel and express carriers to develop more recipient-friendly delivery services, appropriate IT solutions (allowing for a smoother integration of their services in e-commerce applications of e-retailers), and more convenient collection services for SME e-retailers with late cut-off times.

- Many carriers have developed more recipient-centric parcel delivery services by offering more delivery options in terms of time, location, speed, and visibility (light, standard and live tracking of items).
- Carriers have additionally launched web and mobile applications to allow for interactive communication with recipients, i.e. to inform about the status of delivery and to allow for redirections.
- They have heavily invested in more sorting, transport and delivery capacities; increasing the number of pick-up and drop-off points (mostly parcel shops but also parcel lockers, either under their own brand or by using carrier-agnostic solutions).

Many parcel carriers have developed dedicated domestic and cross-border delivery services for e-retailers with different products, depending on specific needs related to the size and weight, urgency, visibility, and value of e-commerce items. Carriers increasingly

target micro and small e-retailers with more standardised delivery products and customised web pages that inform e-retailers on existing offers. Carriers provide information to e-retailers on country-specific consumer preferences regarding delivery-related aspects such as preferred delivery locations, payment channels (notably cash on delivery), returns etc. Furthermore, USPs play a significant role in many domestic parcel markets, but even more in the cross-border delivery of small packets (within the mail stream) that e-retailers mostly use for small-sized, light-weight, low-value e-commerce items.

While carriers put a lot of effort in improving their supply and facilitating access to their delivery products, micro and SME e-retailers, even in more mature e-commerce markets, still complain about a lack of transparency of available cross-border delivery services. While e-retailers look for simple and cost-efficient delivery solutions, carriers have to take into account the variety of individual needs of both sides: e-retailers and e-shoppers. Moreover, research of national e-commerce associations suggests that the vast majority of e-retailers is rather small in terms of total online sales (and thus volume) while there is a small number of large and very large e-retailers. The mass of small e-retailers is considerably more difficult to target with suitable offers than a small group of large senders.

In more developed, larger e-commerce markets, intermediaries have emerged that support SME e-retailers to access appropriate delivery solutions. These are, for example, delivery management platforms that facilitate the integration of available delivery services in online shops, or online marketplaces that provide support in e-commerce fulfilment and delivery. In less developed e-commerce markets, such services are often not available to small e-retailers and local carriers have just begun to develop dedicated delivery services for e-retailers in these countries.

Overall, emerging e-commerce intermediaries have enhanced transparency for e-retailers with respect to products and service levels, but not in all Member States and not necessarily for SME e-retailers (particularly in less developed e-commerce markets). With the development of e-commerce ecosystems, USPs and other parcel carriers are continuously pushed to cooperate with intermediaries which will further enhance the transparency, clarity and accessibility of information on e-commerce delivery services and prices for SME e-retailers.

With growing cross-border B2C e-commerce, dedicated delivery services have emerged in Member States with high-volume export and import relations. The main cross-border parcel and package streams (intra-EU/EEA) are either from the large Member States (Germany, the UK and France) to other Member States or between adjacent countries with close economic and cultural/language relations (e.g. Czech and Slovak Republic). The major European e-commerce export countries are therefore the UK and Germany, followed by France, while most other Member States are net importers of cross-border e-commerce items. This affects the price level and choice of available cross-border delivery services for e-retailers in every Member State: E-retailers usually have more choice and

easier access to EU-wide cross-border delivery services in large export countries compared to e-retailers in Member States with small e-commerce exports.

The Regulation (EU) 2018/644 on cross-border parcel delivery services will be implemented by the Commission and the national regulatory authorities in 2019. The Regulation aims foster better cross-border parcel delivery services. As this study documents, growth in domestic and cross-border e-commerce in combination with political pressure have already resulted in improved supply and quality of dedicated cross-border delivery services for e-retailers. After the implementation of the Regulation, national regulatory authorities will be engaged in monitoring cross-border delivery markets more effectively and offer more transparency about market data, products and prices to e-retailers and consumers.

Recommendation

Given the progress made towards higher quality parcel delivery, further EU and Member State level action on prices, transparency and quality of service would not be appropriate at this stage. Instead, the European Commission should ensure the correct implementation of Regulation (EU) 2018/644 on cross-border parcel delivery services, and closely monitor the developments in the European e-commerce and delivery markets in order to assess the impact of this regulation.

9.5 Effective management of returns remains a common challenge for e-retailers and carriers in the EU

Return management and handling, as well as cost of returns, are major concerns for online shoppers. These concerns inhibit the growth of e-commerce in general and cross-border e-commerce in particular.

- The WIK consumer survey revealed that online shoppers mostly expect free returns (more than free delivery), appropriate information on the e-retailers' return policy before purchase, and more convenient return handling. These expectations are often disappointed by online shoppers' experiences regarding both domestic and cross-border online purchases.
- In particular, uncertainty regarding handling of returns and related costs is one of the major reasons why online shoppers do not purchase online.
- While returns are an inherent feature of e-commerce, it appears that many e-retailers do not pay enough attention to this important element. Online shoppers often find it difficult return unwanted or damaged goods because e-retailers do not provide enough information and support in handling returns.

While the supply of cross-border B2C delivery services has significantly improved, appropriate cross-border return solutions are developing more slowly. Comprehensive

solutions have emerged mainly for large e-retailers and/or for specific product categories with significant return rates (like fashion). Parcel and express carriers offer cross-border return services either by collecting the item at the premises of the online shopper or via parcel shops and lockers. Alternatively, USPs increasingly use the common return platform under the umbrella of the IPC Interconnect programme. This opportunity is quite important as USPs are the most used carriers for cross-border returns.

Fulfilment service providers, delivery management platforms, and other intermediaries increasingly provide support services to large, but also to SME e-retailers, for handling of returns. Online marketplaces like Amazon claim transparent return policies and specific ways of returns handling. An emerging practice is to provide local return addresses to online shoppers and to consolidate returns in the country of destination. This helps to limit the cost of the online shopper (if the return is not free of charge) and helps e-retailers to reduce the cost of returns. However, e-retailers in less developed e-commerce markets with small e-commerce exports often have less alternatives at their disposal to manage cross-border returns than e-retailers in more developed e-commerce markets.

Recommendations

Cross-border return solutions are developing but at a slow pace. USPs, parcel and express carriers, and e-commerce intermediaries should continue to develop appropriate return services for e-retailers, particularly for SME e-retailers.

SME e-retailers need more information on available cross-border return solutions to better support their customers in dealing with returns. For this reason, carriers, e-commerce intermediaries and e-commerce associations should intensify their efforts to provide e-retailers with easily accessible and comprehensive information on available return options and associated costs, including guidelines for return management and handling both domestically and across borders. Furthermore, e-commerce associations could provide more guidance to e-retailers to more effectively and transparently inform domestic and foreign consumers on the return policy of their web shop.

E-retailers, e-commerce associations, e-commerce intermediaries and carriers should consider promoting the option to use local return addresses for cross-border returns.

9.6 Parcel operators face different postal regulatory frameworks in different Member States

The Postal Services Directive leaves significant leeway for Member States to define the scope of universal postal services, and scrutiny as regards the extent to which parcel and express carriers are regulated. Generally though, national regulatory authorities regulate parcel delivery services less intensively than letter services.

Among Member States, there is still little harmonisation and limited transparency regarding the classification of delivery services as universal services (parcel, express and

emerging new delivery services). Some Member States use the terms ‘within scope of universal service’ or ‘services interchangeable with universal service’ to refer to universal services that are provided by other carriers than the USP.

There are some differences in the regulatory framework faced by parcel carriers in the Member States. Differences relate to authorisations required for carriers, financial contributions to the cost of NRAs and/or USO net cost, simplifications for transport rules (such as special parking rights, or exemptions from the obligation to wear safety belts) etc. In this regard, classification matters for all operators in postal markets because it determines the scope of regulation they are faced with. Regulatory measures faced by parcel operators in some (but not all) Member States include the authorisation procedures, requirements to report data, provisions regarding complaints handling, financial contributions to net costs of the universal service obligation (in very few Member States) and to the funding of the national regulatory authority (in around two third of the Member States).

Differences in regulatory frameworks and definitions of universal service particularly present a complication and administrative burden for cross-border parcel operators that have delivery operations in several Member States, or plan to expand their delivery operations to other Member States. Despite harmonisation of universal standards by the Postal Services Directive, operators are facing substantially different regulatory frameworks in different Member States.

The scope of USO is very different in the Member States, e.g. regarding weight limits and quality requirements. However, while universal service products are rarely used by e-retailers (if they have a business account) they may play a more significant role for consumers in case of returns.

USPs play an important role in domestic and – even more so: in cross-border – e-commerce deliveries. However, the relation between the universal service obligation (USO) and the performance of e-commerce delivery is less clear. For intra-EU e-commerce, the role of universal service regulation is not significant. Markets with extensive legal requirements for universal service parcels do not offer better delivery services than markets with minimal legal requirements for universal service parcels. For intra-EU deliveries, carriers usually provide appropriate service levels in excess of the USO requirements.⁵²⁰ Indeed, USPs are enhancing service levels of universal service products, not as an impact of regulation but as a reaction to market demand. As a consequence, USPs and the products they offer are very relevant to e-commerce, but regulation of service levels by NRAs has not had noticeable positive effects.

For parcel imports to the EU, however, letters and small packets delivered by UPU designated operators, and delivery at UPU terminal dues rates play a significant role in

520 Those services of higher quality (compared to minimum USO standards) are considered as universal services in some Member States, but as services outside the scope of universal service in other Member States.

the delivery market: A large proportion of EU imports of e-commerce items are sent as small packets (often as registered items) that are usually delivered by USPs in their role as 'designated operators' at UPU terminal dues rates. The delivery of these items is generally considered as universal service, and the share of universal service in total market volume therefore is much higher for cross-border parcels/packages than for domestic parcels/packages. Particularly for imports from Asia, terminal dues rates are generally below cost to date. As these imports have quickly grown, losses from incoming small packets may add to USO net costs, and have led to increasing USO net costs in several Member States.

Very diverse authorisation procedures apply to parcel services in different Member States. While the procedures are all in line with the standards of the Postal Services Directive and do not present significant barriers to entry as such, they can create administrative burden, particularly for small operators. In some Member States, extensive evidence is required from parcel operators to prove that the operators comply with legal requirements relating to, for example, quality of services, labour regulation, data protection, environmental protection (e.g. in Cyprus), or technology used (e.g. in Hungary). Such extensive requirements to report to NRAs appear disproportionate given that NRAs in other Member States achieve good market performance with less administrative burden. Similarly, very high numbers of operators contribute to financing the NRAs in some Member States (e.g. more than 500 in Greece). This raises concerns over the proportion of administrative cost compared to fees collected by the system from small operators. In collecting contributions from authorised operators, many Member States apply de-minimis rules where the smallest operators carry lighter obligations.

Recommendations

For intra-EU parcels, we do not recommend that new quality standards for universal service parcels are necessary, or should be established to enhance performance of e-commerce delivery. In recent years, performance of delivery markets has greatly improved in response to market forces, and therefore we do not see a need to establish or increase the service levels required for universal service by national postal legislation.

National regulatory authorities should be clear about the criteria applied to determine whether a delivery service is considered as a universal service in the Member States. Given the different definitions for universal service in the Member States, and different regulation of providers offering universal services, NRAs should clarify whether or not alternative delivery models and new services are considered as universal services under current legislation, and thus offer planning and regulatory certainty for e-commerce and delivery companies.

In order to enhance choice and service quality for e-retailers and consumers, some Member States should review whether authorisation procedures could be simplified. For example, authorisation procedures and related administrative burden imposed on all parcel service providers, including the smallest providers, appears disproportionate in Cyprus, Hungary and Greece.

9.7 EU and Member States should ensure a level playing field for e-commerce imports

E-commerce imports into the EU from non-EU countries have increased massively, a substantial share of these items coming from China. Typically, e-commerce items from Asian e-retailers are sent as small packets in the mail stream, often as registered letters. About 40% of worldwide international mail flows are sent as small packets, mostly containing e-commerce items.

E-commerce imports from China and other Asian countries are often a loss-making service for USPs. Past reforms of the terminal dues system for e-commerce packets have not yet closed the gap between revenues and costs for most designated operators in Europe. Revenues from terminal dues are still significantly lower than the local delivery costs. Therefore, the current terminal dues regime still continues to challenge the financial viability of EU USPs, particularly in small European countries that face high import volumes (e.g. Ireland and the Nordic countries).

Despite continuing reform of the UPU terminal dues system for many years, terminal dues rates remain well below local delivery costs in many Member States. This undercharging for delivery of inbound letter post mail has negative effects on EU Member States. EU USPs lose revenue on inbound international mail, which they must offset by having higher charges for domestic mail, which harm domestic mailers generally. Domestic online merchants are negatively affected because the current UPU terminal dues system is giving foreign merchants a competitive advantage by granting them preferential delivery rates.

In autumn 2018, the USA has announced plans to leave the UPU, and apply “self-declared rates” instead of UPU terminal dues rates if the UPU cannot agree on substantial commitments to align terminal dues with delivery cost better. This move has the potential to start major disruptions at the UPU, and potentially lead to reform of the terminal dues systems (within or outside the UPU). EU Member States take part in this reform process, and have the opportunity to achieve progress with bringing terminal dues rates closer to the domestic cost of delivery in the EU Member States.

Aligning terminal dues with the domestic cost of delivery is equally important for intra-EU packets and for imports from other world regions. UPU terminal dues continue to serve as a starting point and fall-back option for negotiations between universal services providers over delivery charges, including for intra-EU traffic. Therefore, reform of the UPU terminal dues system, for intra-EU traffic, is expected to support achievement of the standards set out in Art. 13 of the Postal Services Directive for terminal dues (fixed in relation to the costs, related to quality of service, transparent and non-discriminatory).

The abolition of the VAT de-minimis rule in 2021 will mark a fundamental change in the treatment of postal imports containing e-commerce goods. In a non-digital past, the de-minimis thresholds for postal imports had been an efficient way to ensure smooth import

procedures. The downside of this system has led to undervaluation of imports and VAT fraud, i.e. fraudulent e-retailers that underdeclare their e-commerce goods to evade payment of import VAT. This problem has been aggravated by strong increases of e-commerce imports in the UPU mail stream, rendering effective customs checks at random impossible and inefficient. In 2015, losses due to VAT fraud are estimated at EUR 4 billion.

The current simplified procedures for postal items imported by USPs (forms CN 22/CN 23) are physical procedures stemming from a non-digital era. Freight forwarders and express operators (including subsidiaries of many EU USPs) are already applying digital solutions to ensure frictionless import and timely delivery. Nonetheless, USPs are still relying on physical procedures and are lagging behind in implementing electronic advance notifications as required under the Union Customs Code (UCC). The full application of import VAT on all postal imports containing goods will therefore raise major operational issues. As VAT duties will apply to all postal e-commerce shipments by 2021, including low-value shipments, the number of items subject to customs procedures will increase significantly. Since customs procedures are not yet fully digital in most Member States, massive stoppage at customs borders are a potential scenario. However, this should be diminished by the supplementary VAT rules applying also from 2021. These rules provide that electronic interfaces become liable for the VAT on one side and on the other side e-commerce traders and electronic interfaces can opt to collect EU VAT upon sale, and thus be eligible for a simplified VAT collection mechanism that also includes a simplified customs clearance system. Moreover, a specific simplification is designed for postal operators that offer a deferral of import VAT payment when the consignments do not come under the Import One Stop Shop. In addition to that, to avoid major problems at customs controls, USPs and Member States should work on putting efficient digital systems in place as quickly as possible. Further, USPs should collaborate with foreign postal operators, in particular China Post as a major exporter, to ensure full data is transmitted and therefore the customs declarations are complete. At the administrative side, Member States should upgrade staff at customs to avoid unnecessary delays. Member States should also consider whether competent (customs) authorities have sufficient capacity and subsequently provide extra staffing where necessary.

As regards the volumes of individual packets that need to be cleared, in the medium term, we expect a reduction of e-commerce imports by postal service that are directly sent from Asia. Chinese e-retailers will increasingly switch from direct shipment out of China by China Post to warehouses located within the European Union. As a consequence, goods will be imported in containers under normal customs procedures, and not as individual, postal packets, and at higher service levels.

Recommendations

For e-commerce items imported as individual (postal) packets to the EU, the ambition must be to ensure that the cost of delivering import packets is covered by remuneration, to a similar extent as for delivery of packets that are posted domestically. In this respect, current discussions at the UPU present an important opportunity for EU Member States. We recommend that EU Member States, with support by the European Commission, should work with other UPU delegations and the USA to achieve tangible results in 2019, and achieve more cost-reflective terminal dues rates for import packets.

In parallel, the European Commission should seek to negotiate principles for remuneration and operations for import packets as part of a free trade agreement covering substantially all forms of trade (in line with WTO rules). At a minimum, principles should be agreed with the USA, as a contingency measure, to prepare for the event that the USA will leave the UPU.

Full application of import VAT on all postal imports in 2021 raises major operational issues. At present, USPs and customs authorities do not appear to be sufficiently prepared for electronic transmission of data and/or clearing big volumes of low-value imports. We recommend that Member States should carefully assess whether it will be necessary to upgrade their human resources at customs and, possibly, at tax authorities to prepare for this increase in workload in 2021.

In order to avoid disruption in international e-commerce sent by UPU designated operators, EU USPs should put in place electronic notification systems quickly and collaborate with their foreign counterparts (most importantly: China Post) to avoid massive stoppage at customs borders and mail centres in 2021.

9.8 Subcontracting is an issue in the delivery industry

The dynamic development of e-commerce and the steadily growing demand for parcel delivery has led to more demand for drivers, new wage policies, more flexibility in working conditions, subcontracting schemes and the development and implementation of new technological trends in the postal and courier sector. Growth in B2C e-commerce, emerging new delivery services and technologies have the potential to significantly transform working conditions in the delivery industry in the future. Section 7 of this report concludes that (1) only part of the delivery workforce is subject to collective labour agreements in many Member States, (2) payment of subcontractors' employees is often oriented to national minimum wages and (3) there are indications for precarious working conditions in instances, in some Member States.

Subcontracting has been widely used in (B2B) parcel delivery for decades. However, B2C e-commerce with its massive fluctuations in demand for delivery services, with peak

demand particularly around Christmas, need a much more flexible workforce in sorting and, particularly, in delivery. At the same time, cost pressure on carriers has increased.

Despite significant growth in parcel volume, cost savings due to economies of scale remained limited because B2C delivery is generally more costly than B2B delivery. There are more stops per delivery round with less parcels delivered per stop in combination with a high risk of not being able to deliver a parcel successfully at the first attempt. Consequently, carriers have been keen to limit the growth in delivery costs to the maximum extent and have passed this pressure on to their subcontractors. This increased the risk of exposure of 'subcontracting chains', and can have negative effects on working conditions at the lower end of this chain. However, the extent of subcontracting and subcontracting practices (including the phenomenon of subcontracting chains) at national level heavily depends on the national labour policy that varies among Member States and its effective enforcement.

The need for social dialogue in the postal sector is uncontested among the stakeholders. It is a useful platform for unions and employers to manage the transformation process in the working conditions and employment practices. Social dialogue at European level continues to play an important role in shaping the employment and social policy for postal and parcel delivery services.

Recommendations

In order to ensure effective protection of workers' rights, we recommend Member States should monitor subcontracting chains in the delivery industry, where necessary, through taking appropriate measures in accordance with national law and/or practice and in compliance with Union law, and after consulting the relevant social partners.

Member States should ensure that the existing national labour legislation and EU labour law are effectively enforced, particularly in low-wage sectors such as parcel delivery services. In particular, Member States should monitor subcontracting practices, and ensure national, labour legislation is respected at all levels of subcontracting chains, including the existing rules to prevent 'bogus self-employment' in many Member States.

9.9 Environmental regulation increasingly affects the provision of delivery services

The transportation sector is one of the largest contributors to greenhouse gas emissions, accounting for one quarter of total European greenhouse gas emissions in 2017. The mode of transport is a key determinant for the environmental impact of parcel delivery, with air transport having the highest emissions per item. Low terminal dues for import (air)

parcels further lead to increasing air transportation. Sustainability reports by parcel carriers demonstrate the awareness of the industry.

Last mile delivery services are not only driven by growing e-commerce deliveries and increasing expectations of online shoppers, but also by increasing traffic regulation in urban and metropolitan areas. A growing share of the population (particularly young people) is living in cities. The trend of urbanisation causes increasing problems for traffic (more congestion, less parking space), air quality and noise. Some metropolitan areas like London or Paris have already reacted and created more traffic regulations including measures like the introduction of time windows and off-peak deliveries, vehicle weight and size restrictions, low emission and traffic zones, restrictions on vehicle types and so on. It is foreseeable that the number of local regulations will increase and that these regulations additionally encourage more environmentally-friendly last mile logistics in cities.

Carriers are making visible efforts to reduce their environmental impact by implementing alternative fuels and vehicles as well as by improving fuel and network efficiency. However, most carriers have launched only single initiatives in the last mile delivery because this requires long development and testing phases before such solutions can be integrated in day-to-day business. Lack of urban spaces and infrastructure as well as high initial investments, e. g. for charging infrastructure, are challenging the implementation. Local restrictions and close cooperation with local governments play an important role in driving green delivery concepts and establishing successful lighthouse projects. However, carriers should not stop with lighthouse projects but evolve them into blueprints for the day-to-day business.

Recommendation

To support more sustainable delivery, local authorities could improve the transparency of local regulations and define clear responsibilities for carriers. Local authorities including city planners could encourage and support innovative organisational and technological solutions of carriers for the last mile, and carriers could cooperate more closely with public authorities in the development of concepts for sustainable city logistics. In particular, the introduction of many fuel-saving projects requires that carriers have access to appropriate charging infrastructure for electric vehicles, locations for micro-hubs and parking and driving rights for electric vehicles. In addition to setting rules for traffic regulation and emissions, therefore, local authorities should support sustainable innovations by providing access to infrastructure and real estate for city logistics.

HOW TO OBTAIN EU PUBLICATIONS

Free publications:

- one copy:
via EU Bookshop (<http://bookshop.europa.eu>);
- more than one copy or posters/maps:
from the European Union's representations (http://ec.europa.eu/represent_en.htm);
from the delegations in non-EU countries
(http://eeas.europa.eu/delegations/index_en.htm);
by contacting the Europe Direct service (http://europa.eu/europedirect/index_en.htm)
or calling 00 800 6 7 8 9 10 11 (freephone number from anywhere in the EU) (*).

(*) The information given is free, as are most calls (though some operators, phone boxes or hotels may charge you).

Priced publications:

- via EU Bookshop (<http://bookshop.europa.eu>).

Priced subscriptions:

- via one of the sales agents of the Publications Office of the European Union
(http://publications.europa.eu/others/agents/index_en.htm).

