

# Are European Cross-Border Parcel Delivery Services Affordable?



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## 1 Introduction

The European Commission (EC) believes tariffs for parcel delivery services paid by low-volume senders (small and medium enterprises (SMEs) and individuals) are “too high” and are impeding e-commerce market development between EU Member States. In May, 2016, the EC released a proposal aimed at solving this problem (European Commission 2016). They notably proposed that national regulatory authorities assess the affordability of parcel delivery tariffs offered by national postal operators (NPOs) within their jurisdictions (article 5). This proposal goes further the Postal Directive that requires that NPOs offer at least one affordable cross-border delivery service across the EU for parcels weighing up to 10 kg (up to 20 kg in some Member States).<sup>1</sup> Fifteen domestic and cross-border postal items listed in the

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<sup>1</sup>Article 3(1) of the Directive 97/67/EC requires Member States to “ensure that users enjoy the right to a universal service involving the permanent provision of a postal service of specified quality at all points in their territory at affordable prices for all users” and Article 12 requires Member States to take steps to ensure that the tariffs for each of the services forming part of the universal service comply with a number of principles, including that “prices shall be affordable”. The Directive does not specify how affordability is to be measured; this is left to the discretion of Member States.

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appendix to the proposal would be affected by the proposed measures. These items do not necessarily belong to the NPO's catalog of universal service products.

The objective of this paper is to analyze the extent to which parcel delivery price affordability stimulates online exchanges between EU Member States. The novelty of this analysis is to view parcel delivery within a broader supply chain. It is interesting to note that a revised EC proposal released by the Council in June 2017 replaces the word "affordability" by the phrase "unreasonably high" when characterizing certain tariffs.

After reviewing the economic literature on the meaning of affordability in Sect. 2, this concept will be applied to parcel delivery services in Sect. 3. In particular, the term "vital" used to justify affordable prices for goods such as water, energy, housing, and medical care will be considered for access to (cross-border) parcel delivery services. An implicit question is, "vital" for whom: for final consumers or for intermediate e-tailers? Afterwards, the European Commission's approach to affordability will be examined. Sect. 4, the conclusion, summarizes the analysis.

## 2 The General Concept of Tariff Affordability

### 2.1 Definition

Among others, Whitehead (1991), Milne (2006) and Komives et al. (2005) have said the concept of affordability has no theoretical basis in economics. A household consumes a basket of goods and services that maximizes its utility or surplus (i.e. the benefit derived per euro spent) taking into account its preferences and income (budget constraint). Various preferences lead to different choices of consumption. In these circumstances, what constitutes an "affordable" price varies for each household.

However, beyond its microeconomic dimension, affordability has a "societal" or "public policy" dimension when dealing with access to goods or services that satisfy vital needs such as water, housing, medical care or energy. Access to these goods is considered a fundamental right in some countries and, therefore, should not be constrained by prices considered unaffordable. This is why, for example, the right to an affordable water tariff was enshrined in the Lisbon Treaty (Protocol No. 9/26) despite the absence of consensus on its meaning, as the European Economic and Social Committee's opinion on the affordability of SGEIs (2014) emphasized.

This lack of consensus is largely explained by the fact that meaning of affordability is subjective. Affordability depends on the interplay among many private factors, including bill size, which is affected by the price of the service and the level of consumption,<sup>2</sup> the proportion of household income spent, and alternatives available to satisfy a need. The perception of the affordable character of a good

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<sup>2</sup>The quantity that is consumed is notably an important factor in judging whether a good is affordable or not. For example, in the case of water, the water bill would remain affordable if it does not involve an abnormally (or abusively) high volume. Given that the "standard" or "normal" quantity consumed varies with the household composition, it is important to take into account this parameter into the affordability analysis.

or a service also depends on a consumer's perceived quality. Quantity, quality, preferences and income (which together determine the willingness to pay) are all important factors when considering the affordability issue.

Despite the lack of consensus on affordability meaning, everyone agrees that some consumer groups may be more vulnerable than others regarding their capacity to afford some goods within "normal" spending patterns. This is why, for example, Hennessy et al. (2015) restricted the affordability assessment of postal products to consumers in the first decile of disposable income, for whom affordability could be an issue. Examining the whole population including individuals in higher income deciles could, according to Hennessy et al., cloud any conclusions on affordability for the more vulnerable segments of postal users.

## 2.2 *Measurement*

The most common approach in the economics literature for assessing affordability consists of looking at the share of income spent to purchase a given good or service. The good is then considered unaffordable when its purchase exceeds a given share of household's revenues. This approach is typically used to assess affordability of gas, electricity, water, medical care and housing in many countries (Deller and Waddams 2015). The difficulty is to define this threshold. In practice, medical bills are often considered by public authorities or experts unaffordable if they exceed 10% of global household expenditure or 40% of non-food expenditures (Niëns et al. 2012). In France, public authorities are considering the price of water affordable if water and sanitation spending do not exceed 3% of household consumption expenditure (Bel Franquesa et al. 2009). In the energy sector, the concept of energy precariousness or fuel poverty meets the notion of affordability. In the UK, fuel-poor households are defined as those who spend more than 10% of their income on all fuel use to heat their home to an adequate standard of warmth (Thomson and Snell 2014). In the housing sector, the affordability rule commonly used is that households should not spend more than 30–35% of their income on housing (Quigley and Raphael 2004).

Ofcom (2013), the British regulator of post and telecommunications, noted that this income method is useful in gauging affordability for an average consumer with an average income level, or for cases where spending on the item in question is high relative to income. But this method may be less useful for providing insight on affordability when spending is low relative to income, as is the case for postal services.<sup>3</sup> Ofcom argued that "some low income consumers spend relatively little

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<sup>3</sup> In the UK, postal spend accounted for less than 0.15% of average household expenditure and less than 0.25% of low income household expenditure in 2009. According to the latest data available on the Eurostat website (Eurostat data 2014), postal services represented on average 0.12% of consumption expenditure of European households, this percentage varying between 0.02% in Spain, Poland and Latvia and 0.49% in Bulgaria.

on sending post, but this does not necessarily mean that universal postal services are affordable for those consumers, since they may be suffering detriment either as a result of sending those items or not sending more items” (p. 11–12).

As the Ofcom low-income example suggests, affordability measures are further complicated because they do not identify cases where households do not consume a good or restrict their consumption because it is unaffordable for them. To overcome this drawback, a variant of the income method could be used (Hennessy et al. 2015). This variant links affordability to the overall set of resources a household may need and compares the necessary spending level for the service in question to other necessary household requirements. It consists in verifying if the acquisition of the necessary or socially desirable quantity of the good or service in question at the current price leaves consumers or households with sufficient remaining income or spending power to meet their other requirements (e.g. to buy food).<sup>4</sup>

To supplement these approaches based on income to identify those whose basic needs are unsatisfied, one could ask households directly about their opinion about affordability: “Do you find this good affordable?” “Do you buy as much of this good in quantities your household needs?” The drawback of this direct method is its subjectivity: different consumers may understand ‘affordability’ in different terms or conflate views about affordability and value for money.

Ofcom (2013) dealt with the issue of affordability of postal services by combining these various approaches. It considered a range of evidence<sup>5</sup> on the behavior and attitudes of different types of consumers, especially those who may be particularly reliant on postal services or have low income, to see if universal postal service prices create significant detriments or if expenditure on post is unduly constrained by income. Universal postal prices were considered unaffordable for a consumer if “he frequently suffers significant adverse consequences as a result of the cost of sending post (e.g., because this means foregoing spending on other items) or, as a result of not sending post and foregoing the value of the communication” (p. 11). Ofcom concluded that universal postal services were affordable for almost all residential consumers, including low income and other vulnerable consumers, and for all UK businesses, including small and medium enterprises (SMEs).

The Commission’s method to assess affordability of NPOs’ services described in its proposal for a regulation on cross-border delivery services differ greatly from these usual approaches (European Commission 2016). According to article 5(1) of the draft proposal, NRAs should use common criteria such as the domestic tariffs of the universal service providers of origin and destination, the level of terminal rates,

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<sup>4</sup> In this approach, a good could be considered as unaffordable if its purchase would pull down the household, initially above the poverty line, below it. But again, no consensus exists on what the necessary level of residual income should be.

<sup>5</sup> Data on consumers’ postal send and spend patterns, broken down by consumer type and over time; data that compares expenditure on postal services against expenditure on other ‘comparator’ items and household total expenditure, broken down by consumer type and over time; and qualitative consumer research to explore whether low income and vulnerable consumers face constraints on their ability to send postal items and, if so, whether they suffer detriment as a result.

specific transportation, handling costs, or bilateral volumes between delivery service providers to assess affordability. In the absence of any reference to consumers' purchasing power or analysis of the impact of the acquisition of such a service on their capacity to satisfy essential needs like to buy food, to warm up and so on, this approach is closer to a price regulation based on a cost-plus principle than an affordability assessment. This is even clearer in the last version of the draft proposal which deals with "unreasonably high tariffs" instead of affordable ones.

### **3 The Concept of Tariff Affordability Applied to Parcel Delivery Services**

#### ***3.1 The Households' Perspective***

In the case of (cross-border) parcel delivery services associated with online purchases of physical goods, one may question their "vital" character for final consumers. Is access to goods sold on (foreign) e-commerce websites an essential need for European consumers, justifying the implementation of a price regulation via an affordable tariff?

Some may say yes: access to goods sold on foreign markets is "vital" or at least necessary for private consumers when a specific commodity is unavailable on a domestic market.<sup>6</sup>

What about countries where domestic (online or offline—in traditional shops) alternatives to imports exist? Is the promotion of cross-border e-commerce at any price economically justified? If less costly domestic alternatives exist for the consumer, what would be the interest to regulate the prices of cross-border delivery services for goods purchased in other Member States (by capping them)?

Such an intervention could be rather counterproductive. In competitive markets, the free play of supply and demand maximizes social welfare. If the consumer is willing to pay the fair price of the goods sold by a foreign e-merchant (reflecting the total costs of production including delivery), the exchange is socially desirable. If the total price of the transaction exceeds the buyer's willingness to pay, it is not socially desirable because the buyer is unwilling to cover the cost of production. Artificially lowering the cost of cross-border delivery in order to promote the development of intra-EU e-commerce through price regulation would destabilize markets and the competitive level playing field in the postal and retail sectors by distorting relative prices (they would no longer reflect marginal costs which in turn

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<sup>6</sup> Notice that cross-border B2C e-commerce is particularly well developed in "small" EU countries (such as Luxembourg, Malta, Cyprus, etc.), where domestic supply may be limited due to the reduced size of the domestic market. More data on the characteristics of e-consumers in these countries would be needed to see if vulnerable consumers are not excluded from cross-border transactions and if access to foreign goods is affordable to them.

would yield an inefficient allocation of resources—see Sect. 3.3). It also may increase negative externalities on the environment notably (due to excessive and inefficient carbon emissions from cross-border transportation), reducing the social welfare.

This leads to the conclusion that the only case where parcel delivery services may eventually be considered as “vital” for final e-consumers and where affordability of these services could be an issue is when the domestic market fails to provide goods deemed “vital”. In all other cases, regulating competitive cross-border parcel delivery services under the excuse of affordability would reduce global social welfare.

### 3.2 *The E-tailers’ Perspective*

From the e-tailers’ point of view, delivery could be considered as an “essential” input. Delivery to a convenient place (at home, at work, or in any other place) is part of the commercial promise of e-tailers. Delivery is the distinctive feature of e-commerce compared to traditional retail (where consumers themselves collect their purchase by their own means). In other words, parcel delivery services are a critical input to the e-tailers’ commercial proposition.

Despite this, as argued below, affordability of parcel delivery services provided by postal operators is not really an issue. According to Ofcom (2013), intermediate goods may be defined as “unaffordable” for producers if input prices jeopardized their commercial viability. This is manifestly not the case for e-tailers and parcel delivery services, for at least three reasons.

Firstly, as noted by Hennessy et al. (2015), “if the consumer can merely substitute away from a good, then affordability must not be an issue” (p. 121).<sup>7</sup> This argument is valid for intermediate goods as well. If e-tailers have access to alternatives to delivery services offered by NPOs which are under the Commission’s regulatory scope, then affordability of these inputs is not an issue. This is clearly the case. As underlined by the Commission themselves in the last Report to the European Parliament and the Council on the application of the Postal Services Directive (European Commission 2015), several operators are active on the domestic and the cross-border B2C delivery markets of the EU countries (see Table 1).

Moreover, almost every day, new service providers are entering in this growing market. An increasing number of start-ups, some belonging to the sharing economy

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<sup>7</sup> Dealing with final goods, these authors consider that “price rise would be affordable if there is a high cross-price elasticity, indicating strong availability of substitutes. Low budget share and significant cross-price elasticity between substitutes and other goods would indicate that prices are affordable, while a high own-price elasticity and a low cross-price elasticity with substitutes would indicate that prices are unaffordable. Similarly, a low own-price elasticity, a low cross-price elasticity with substitutes, and a high price elasticity with other necessities would indicate that prices are unaffordable.”

**Table 1** Main alternative operators active in domestic and cross-border B2C delivery

	Number of operators	Main operators active in domestic B2C delivery except USP and integrators	Number of operators	Main operators active in cross-border B2C delivery except USP and integrators
AT	4	DPD, GLS, Hermes, Asendia	3	DPD, GLS, Hermes
BE	5	DPD, GLS, PostNL, Kiala, Mondial Relay	6	PostNL, GLS, G3 Worldwide, Swiss Post, Hermes, DPD
BG	6	DPD, Econt Express OOD, Tip Top Courier AD, M&BM Express OOD, GLS	2	GLS, DPD
CY	1	ASC Courier	1	ASC Courier
CZ	2	DPD, GLS	2	GLS, DPD
DK	3	DPD, GLS, Bring	4	DPD, GLS, Bring, DB Schenker
EE	2	DPD, Itella	2	DPD, Itella
FI	3	DB Schenker, Matkahuolto Oy AB, Posten Åland	3	DPD, DB Schenker, GLS
FR	6	Colis Privé, Kiala, Mondial Relay, Relais Colis, Exapaq, Hermes	3	Kiala, Exapaq, Hermes
DE	5	DPD, GLS, GO! General Overnight Service, Hermes, Pin Mail AG	5	DPD, GLS, GO! General Overnight Service, Hermes
EL	5	ACS S.A., TACHYMETAFORES ELTA S.A., GENIKI TACHYDROMIKI, Speedex, ACS Courier	3	World Courier, Speed Air, ACS Courier
HU	3	DPD, SPRINTER Kft., GLS	4	DPD, GLS, SPRINTER Kft., GTR
IE	5	DPD, Nightline, GLS, Citypost, DB Schenker	5	DPD, Nightline, GLS, Citypost, DB Schenker
IT	3	GLS, Hermes, BRT Corriere Espresso	3	GLS, BRT Corriere Espresso, Hermes
LV	3	DPD, Itella, GreenCarrier	2	DPD, Itella
LT	2	DPD, Itella	2	DPD, Itella
LU	4	DPD, Kiala, Hermes, Mondial Relay	3	GLS, DPD, Hermes
MT	3	GLS, Arrow Express, Miles Express	1	GLS
NL	4	DPD, Kiala, GLS, Hermes	3	DPD, GLS, Hermes
PL	3	GLS, Siódemka, InPost, DPD	4	DPD, GLS, Siódemka, Hermes
PT	4	GLS, Nacex, Enviália, MRW, Torrestir	6	Enviália, MRW, Nacex, Chronopost International, Torrestir
RO	7	DPD, Cargus International, GLS, Fan Courier Express, Sprint Curier Express, Urgent Curier	7	DPD, Cargus International, GLS, Fan Courier Express, Sprint Curier Express, Urgent Curier S.R.L.

(continued)

**Table 1** (continued)

	Number of operators	Main operators active in domestic B2C delivery except USP and integrators	Number of operators	Main operators active in cross-border B2C delivery except USP and integrators
SK	3	DPD, GLS, ReMax	2	DPD, GLS
SI	3	DPD, GLS, Doortodoor	2	DPD, GLS, Doortodoor
ES	5	Kiala, GLS, Enviália, Tourline Express, Mondial Relay	4	GLS, Enviália, Chronopost International, Tourline Express
SE	3	DB Schenker, Bussgods, Bring	2	DB Schenker, Bring
UK	12	DPD, Hermes, HDNL/Yodel, City Link, UK Mail, Interlink, Nightfreight, APC, DX, City Sprint, XDP	9	DPD, HDNL/Yodel, City Link, UK Mail, Nightfreight, DX, City Sprint, XDP, Hermes (to Austria and Germany)

Source: Copenhagen Economics (2013), *E-commerce and delivery—Study on the state of play of EU parcel markets with particular emphasis on e-commerce*, p. 118

(like PimPamPost a new cross-border delivery service launched in April 2017 between Barcelona and Paris), is exploiting the resources provided by the digital economy to develop new last mile delivery business models. E-tailers themselves are entering the delivery segment of the e-commerce value chain, by developing their own delivery network or by concluding partnerships with logistics operators. Amazon, for instance, is actively and rapidly developing its own delivery network in many different EU countries (France, UK, Germany, Italy, Spain and Central Europe), becoming at the same time the major customer and the first competitor of many European NPOs.

Secondly, in competitive markets, e-tailers are expected to pass-through the shipping costs into the final price paid by consumers.<sup>8</sup> The amount paid by final consumers for the delivery services are set by the e-tailer who can make a more or less substantial mark-up on this additional service. The relevance of such a strategy will depend among other factors, on the price elasticity of final consumers for the good and the competitive intensity faced by the e-tailer. Even if “free shipping” is the market standard launched by big e-tailers like Amazon in order to attract consumers and induce them to buy online, in the majority of cases, delivery services are not really offered for free to e-shoppers. The words “free delivery” are actually misleading: when displaying an all-inclusive price on their website, e-tailers actually include both the item price and the fee for delivery services.

Last but not least, NPO’s parcel delivery prices are not excessive contrary to the European Commission’s opinion.<sup>9</sup> Indeed, as shown by Borsenberger (2015), parcel delivery market is not only contestable but it is effectively contested (see Table 1).

<sup>8</sup> At cost or with a positive or negative (“free delivery”) margin.

<sup>9</sup> Relying in particular on the study of Claes and Vergote (2015), the European Commission thinks that.



In this context, the probability of facing supra-competitive prices is low. As stated by Copenhagen Economics (2012), “the concern about unreasonable high profits is only relevant for non-contestable segments, as any unreasonably high profits would be competed away in contestable market segments” (p. 155). This conclusion is in line with the Group of European postal regulators’ (ERGP 2014) opinion on European cross-border e-commerce parcels delivery markets and the functioning of competition on these markets. The regulators affirmed that they would “not [be] aware of any factor that would make ex-ante regulation of the markets to which European cross-border e-commerce parcels delivery belongs uniformly necessary at this stage” (p. 32). Moreover, contrary to the findings of Claes and Vergote (2015) that some cross-border parcel delivery tariffs are disconnected to costs, allowing the Commission to claim that postal operators to set excessive margins on cross-border parcel delivery services and making prices unaffordable, Borsenberger and Chever (2016) showed that higher prices charged by a given operator are not necessarily synonymous with unjustified margins.

In summary, (i) e-tailers can easily substitute the delivery services offered by NPOs by the services offered by alternative operators; (ii) they are free to pass-through the shipping costs into the final price paid by consumers and (iii) there is no significant evidence of any affordability problem linked to excessive margins which could be settled, as Glaeser and Gyourko (2003) recommended, by asking providers to reduce their tariffs (through a price regulation) or stimulating competition.

The only “problem” some e-tailers, notably SMEs, may encounter is a competitiveness issue. Selling a good abroad automatically generates additional transport costs—depending on the distance between the origin and the destination country, the level of labor costs, other inputs, taxes, etc.—which increase the cost of exporting and may make the foreign supply uncompetitive compared to the domestic supply. In this context, small e-tailers selling standardized and homogenous goods with little added value are likely to be less competitive than big e-tailers who satisfy identical needs, since e-commerce and parcel delivery markets display increasing returns to scale (the unit cost of production decreases with volumes, up to the capacity constraint).

But this does not constitute a parcel delivery market failure requiring public intervention. This is a problem of cost differentials, of competitive advantages, more generally linked to the competitive structure of markets, labor costs, regulations, taxation and demand.

### ***3.3 Any Intervention Aiming to Regulate the Price of Cross-Border Parcel Delivery Services Used by E-tailers to Provide Their Services to Final Consumers Would Be Detrimental***

Imposing an affordability constraint on the tariffs offered to SMEs by NPOs would be equivalent to subsidizing parcel delivery services, which are an input entering

into the production function of e-tailers. In the absence of any significant known market failure on this intermediate, the drawbacks of a policy aiming to subsidize parcel delivery services tariffs will exceed its potential benefits, if any. As pointed out by Mueller (2003), subsidies are rents and thus attract rent seekers. The logic of rent seeking underlying any subsidization policy usually imposes welfare losses on society, which can be substantial depending on the type of rent-seeking behavior that takes place, as well as the political system it occurs in.

Diamond and Mirrlees (1971a, b) demonstrated that subsidizing an input distorts firms' decisions and undermines productive efficiency. Manipulating the prices of some inputs leads to distortions in the efficient allocation of resources, as prices no longer reflect actual marginal costs of production. Users of these inputs are discouraged from using alternative means of production and suppliers to develop new potentially less expensive production process. The same logic and economic distortions work on the terminal dues system: it distorts competition both between parcel delivery operators and between domestic/foreign, electronic/brick-and-mortar retailers (Copenhagen Economics 2014).

## 4 Conclusion

Affordability often motivates regulation of end-user tariffs by imposing a ceiling price for goods considered as essential or vital and for which some consumers have to spend a significant share of their budget. The vital aspect of parcel delivery services for final consumers or e-tailers is not clear and no market failure for the provision of this service has been observed. Current postal directive requires NPOs to offer affordable parcel delivery services that small e-tailers could use to send their products to e-consumers throughout Europe.

Nevertheless, the Commission seems to consider that there exists, at least in some EU countries, an affordability problem related to excessive margins made by NPOs preventing e-tailers from developing their cross-border activity. Again, this view is not clearly proved. The only potential "problems" seem rather to be a competitiveness gap between big and small e-tailers and a poverty issue or purchasing power gap between EU citizens. Even if shipping were free for smaller e-tailers, it is not clear their cost structure would allow them to compete with the giants of e-commerce. In this context, the parcel delivery operators are not the right target. Indeed, artificially reducing postal input price paid by small e-tailers will only distort competitive market functioning, altering NPOs and e-tailers profitability. Such a measure would have adverse effects on the quality of delivery services provided since NPOs' capacity to invest in delivery infrastructure will be reduced, and could even push weaker operators to exit the market, relaxing competitive pressure at the detriment to final consumers. In addition, there is no guarantee that e-tailers would pass-through their lower shipping costs into the final price paid by the e-consumers (this will depend among other factors on the competitive intensity on the market).

Last but not least, such a policy would be unmanageable. Due to the heterogeneity in EU consumers' purchasing power, production costs within Member States and maturity degree of e-commerce markets, establishing a common affordability threshold for the whole EU would make no sense. It would be necessary, at the very least, to differentiate the "affordable" rates regarding the destination country. Thus, for the same service, the affordable tariff would vary according to the recipient, which would undermine the non-discrimination principle.

In summary, regulating parcel delivery rates is not the right way to fix the competitive problem some SMEs could face when they export their goods.

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