

A Note on “Postal Users’ Needs” and Their Role in Postal Regulation



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1 Introduction and Literature Review

In recent discussions on the reform of postal universal service obligations (USOs), frequent references are made to “postal users’ needs” (sometimes also: “postal consumers’ needs”). The notion has become an important ingredient in the postal policy debate, yet the notion itself and its implications have remained remarkably fuzzy. This article analyzes the notion, by classifying its use in the literature into two distinct concepts, and discusses them with respect to their strengths and weaknesses. We claim the two concepts serve different purposes and need to be distinguished thoroughly. However, in discussions, they are often mixed-up, resulting in a lack of clarity about the role of user needs in postal regulation.

The importance of the notion of “postal users’ needs” is apparent in the large number of surveys claiming to empirically measure user needs in different countries. These studies are surveyed by the European Regulators Group for Postal Services (ERGP 2016). Results of the survey show great heterogeneity with respect to methods and focus. Currently, a new study on users’ needs, commissioned by the European Commission, is in the making (WIK Consult 2019), again a sign of the relevance of the issue. Several authors have recently stressed more generally that postal USOs should reflect “users’ needs” (see Confraria et al. 2017 and 2018). Other recent studies suggest that the current level of postal USOs exceeds the needs of consumers and suggested deregulation of the postal sector (see Cape and Groves 2017). Hearn (2018) makes the point for deregulation, arguing that postal services

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no longer can be regarded as “a good of basic economic interest,” because users’ needs could be fulfilled by new technological alternatives.

To the best of our knowledge, this article is the first to discuss the notion of users’ needs and its role in postal regulation in its own right and to categorize different uses of the notion in the literature. In its newest report, ERGP states: “Considering the trends and developments described in the previous chapters of this report, a rethinking of the basic definitions and concepts is needed” (ERGP 2018). The contribution of this article may be interpreted in this vein.

The concept of “user needs” was already used in the Postal Services Directive of the European Union from 1997,¹ which states that the universal service shall remain “adaptable to the needs of users” (preamble) and “shall evolve in response to the technical, economic and social environment and to the needs of users” (article 5). Article 5 has often been interpreted in a way that universal service should evolve responding to *changing* consumer needs. However, in the strict sense of its formulation, the article also allows to see user needs as unchanging, but interacts with an evolving “technical, economic, and social environment” to necessitate changes in the universal service. These two poles also form the basis of the two concepts, which are identified and discussed in this article.

In the first meaning attached to the notion (concept 1), “user needs” is interpreted as a synonym for “consumer preferences” for satisfying these needs. This interpretation is used to inform the winding-down process of postal regulation about which reductions in USO scope are most consumer-friendly. In a variant of this concept, the notion is used to outline the services needed to guarantee societal participation of particular consumer groups (“vulnerable consumers”) and thereby comprises normative considerations about social policy. Reflections on postal reform using either variant of this meaning are immanently status quo dependent and what is considered as user needs develops directly with changes in consumer behavior and in the regulatory status quo. In the second meaning attached to the notion (concept 2), consumer needs are understood as fundamental communication needs, which are technology-neutral and stable over time. Besides, they can clearly be distinguished from consumer preferences, which determine consumer choices. Based on this second concept, changes in demand for postal services in the last two decades do not necessarily have to be understood as being initiated by changing user needs, but rather by expanding possibilities for consumers, which result from new technologies. Concept 1 may be used to inform processes of gradual postal reform, whereas concept 2 is required when one wants to assess regulatory reform from a more comprehensive perspective without necessary reference to the status quo (“greenfield approach”). A good example of how both concepts appear in the debate without explicit distinction is provided through the discussions in ERGP (2016).

After this introduction, Sect. 2 will discuss some specific aspects of the notion of “user needs” and its use in the literature. This lays the base for the main part of the

¹Directive 97/67/EC of the European Parliament and of the Council of 15 December 1997.

article, Sect. 3, where we present a categorization of the different usage of the term “user needs” in the literature into two distinct concepts and discuss both of them. Section 4 concludes.

2 Background

2.1 *The Connection of Postal USOs and User Needs*

In today’s discussion on the development of postal USO regulation, user needs play a crucial role. Yet traditionally, postal USOs have been justified without direct reference to user needs. As analyzed notably by Cremer et al. (2001), the main justifications for USOs are the internalization of positive externalities and redistributive goals (e.g., regional balance). First, positive externalities occur when the societal value of providing specific (postal) services is greater than the sum of the attached private values. In the postal world, such externalities occur via network effects or the public value of the post office network. Generally, what is often referred to as the “social value” of the postal networks – on both the accessibility and the delivery side – can be represented as positive externalities. Second, USOs also serve redistributive goals by including measures like uniform tariffs, which redistribute wealth from urban to rural areas, from business to private consumers, from young to older users, etc.

Importantly, user needs do not seem to play an explicit direct role in these considerations. Needs are only relevant indirectly, when they have an impact on externalities or on redistributive goals. It will be argued in the remainder of this article that the two main concepts of user needs used in the literature have different connections to the justification of USO regulation. Concept 1 mainly connects through redistributive motives in the form of the protection of specific user groups, and concept 2 mainly connects through the positive externality of network effects, which occurs when mutual communication, which itself develops with the development of technology, is a vital ingredient to societal prosperity.

2.2 *User Needs and Regulatory Needs*

An implicit distinction is often made between primary user needs and regulatory user needs (regulation “needed” to fulfill user needs), while both are named “user needs.” Regulatory needs are, when used in this sense, a consequence of primary user needs and are therefore not directly the kind of user needs discussed in this article. To make this clear, we suggest the following hypothetical example: “Postal users need access points (primary need), which are only provided when they are mandated by regulation. Users hence require (not: need) this kind of regulation.” We also suggest an analogue usage of the term to future writers.

3 Two Concepts Behind the Notion of Users' Needs

This article categorizes the usage of the notion of “postal users’ needs” into two groups, “concept 1” and “concept 2.” The aim of this categorization is to bring clarity into the multifaceted use of the notion in the literature. Certainly, it simplifies and may correspond to some examples from the literature better than to others. The two concepts both have strengths, weaknesses, purposes, and areas of application; it is the purpose of this categorization to make readers aware of the importance of a coherent and appropriate application of the two concepts behind the notion of “postal user’s needs.”

Table 1 summarizes the two concepts briefly. Concept 1 puts the status quo of postal markets and postal regulation at the center of its considerations about user needs. Its purpose is to inform policy makers about how short-term postal reform can be designed as consumer-friendly as possible. Concept 2 has a broader viewpoint and analyzes user needs from the perspective of fundamental communication needs and may best be used to discuss bold or long-term reforms. This concept explicitly takes into account technological developments outside the postal sector.

In the following, we will discuss the two concepts in detail.

3.1 *Concept 1: User Needs as Preferences and Dependencies*

3.1.1 Description

The notion of users’ needs founded on concept 1 typically appears in one of two ways: as a preference or as a social concern. Many of the studies surveyed by ERGP (2016) fall into the first category and usually rank USO attributes with respect to their importance to inform policy makers about how gradual USO-scope reductions in “the protracted winding-down process of postal regulation” (Hearn 2018) can be designed most efficiently, i.e., how a certain saving can be reached with the lowest loss in consumer utility. These studies claim to analyze user needs and the attributes ranking highest are typically named “core user needs” or similar. In fact, these rankings express preferences in the closest sense of the definition, which states that

Table 1 Two concepts of postal users’ needs and their respective purpose

User needs concept	Character of users’ needs	Main purpose of concept
Concept 1	User needs as preferences or dependencies; needs are revealed by consumer choices in the status quo of postal markets	Guarantee user-friendly design of gradual postal reform. Protect certain user groups from changes
Concept 2	Needs as fundamental communication needs	Guarantee that new technologies and alternatives to postal services are considered appropriately in long-term postal reform

a preference is “a greater liking for one alternative over another or others” (Oxford dictionary) or, in economics, “the ordering of alternatives based on their relative utility” (Wikipedia). Hence, what appears in the shape of “user needs” are essentially consumers’ preferences – and should hence be treated as such. Most importantly, preferences are relative, whereas needs, when translated into minimum standards of communication, have absolute character. Although preference analyses serve the important purpose to inform policy makers about how reform can be designed in a consumer-friendly fashion, they do not necessarily have much to do with needs, which are defined as “require (something) because it is essential or very important rather than just desirable” – and are hence an absolute concept. A thorough distinction of minimum standards of communication (needs) and choices based on available standards or technologies is indispensable in discussions on the future regulation of postal USOs, because the insight that some consumers still prefer postal services to alternative means of communication may have very different implications than the insight that consumers require a minimum standard of communication.

In a related vein, but with different emphasis, other contributions express social concerns by focusing on particular user groups, which are considered to truly depend on postal services and hence would suffer most from USO-scope reductions (see, for instance, the respective passages in Copenhagen Economics (2017, 2018)). This emphasis has the aim to make policy makers aware of how gradual USO reforms can be carried out without neglecting the basic needs, defined by a minimum standard, of “vulnerable” users. This point of view represents a paradigm shift in postal regulation, because it raises the question whether postal regulation should give up its principle of universality and instead focus on targeted measures for specific users.

In concept 1, the historical economic justification of USO regulation is reflected in the redistribution dimension. The protection of certain user groups from too fast changes can be interpreted as a redistributive, social policy in the form of establishing a minimum standard based on a social compact. The line to positive externalities is more vague here, but social policy could also increase societal welfare, for instance, when people who do not benefit directly from the protection may, nonetheless, positively value the protection of other consumers.

Variants of concept 1 could be considered expressed by studies from Portugal (ANACOM 2012) and Switzerland (BAKOM 2017), respectively, in which users are surveyed about their satisfaction with the current USO level. High levels of satisfaction are interpreted as a sign that the current USO fulfills users’ needs, but – when user needs become more heterogeneous – potentially masks that some groups still require assistance. It can be doubted that the approach taken in these studies is useful to analyze postal reform in light of consumer needs, because they already make the implicit assumption that users need the services mandated by the current USO. More generally, user satisfaction based on immediate available choices is not a concept which is connected to user needs as minimum standards of communication in an unambiguous way. Hence, these approaches are not further considered in this article.

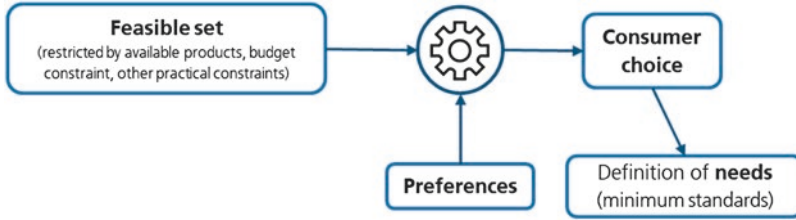


Fig. 1 The derivation of user needs in concept 1 in a consumer theory framework

3.1.2 Relation to Consumer Theory

In a simple representation inspired by microeconomic consumer theory (Fig. 1), users' needs are located at the end of the process that leads to consumer choice. Needs are identified on the basis of consumer choice. At the start of the decision process is the feasible set, a set of all possible realistic choices a consumer can make with respect to products and quantities to consume. The preferences of a consumer rank the options in the feasible set, leading among the possible choices to the most favored by the consumer. The task of policy in this understanding of needs is to guarantee that the consumer is able to repeat a former choice in a new period.

3.1.3 Discussion of Concept 1

We identify some considerable weaknesses of concept 1: status quo bias, the neglected endogeneity of new technologies, taking immediately available choices for needs, and expensive/inefficient regulation.

First, the concept is status quo biased, because user needs are determined based on actual consumer choice. Hence, when the current regulatory framework influences consumer choice, what is considered a need depends on the current regulatory framework instead of the other way round (needs should determine the regulatory framework). Current consumer choices may also be driven by habit or other factors.

Second, by focusing on the status quo of consumer choice, the concept neglects the endogeneity of new technologies. For instance, advocates of the concept often argue that postal services remain essential (and hence represent a "need" of users), because consumers still use them. In this vein, it is argued that an Internet penetration of below 100% was a sign for the fact that postal services were still "needed." But in this point of view, products outside the postal sector are taken as exogenous; precisely, it is assumed that postal users consume them independently of postal services. These arguments neglect that consumers live in a multi-product world, where the postal technology and other technologies compete with each other. But when postal services are part of a competitive multi-product world, the question arises whether high-quality and affordable postal services are by themselves an obstacle to the adaption of new technologies (i.e., higher Internet penetration). Users may make insufficient use of alternatives to postal products, such as email, as

long as postal services are cheap and of high quality, i.e., but this may happen not because of “needs” but because they have a choice to use currently available postal services over technological alternatives. In other words, the current regulatory framework in the postal sector may influence the consumption choices of consumers with respect to other products. The disregard of this can be interpreted as a special form of status quo bias.

Third, when making use of concept 1, authors often fail to distinguish between preferences with respect to immediately available choices, which are mere rankings of alternatives, and needs. This has already been discussed above.

Fourth, concept 1 fails to consider the increasing costs of USOs in times of technological change, because of its implicit bias toward the status quo of postal markets. How expensive a status quo-fueled USO regulation can become with time, as technological alternatives to postal services progress and as net costs of USO provision are increasing, can be illustrated by the following example calculations. Although the postal USO may benefit many more users than those who are identified as vulnerable, it is clear that non-vulnerable consumers wouldn’t require the USO. Hence, when it is agreed that only vulnerable consumers ultimately require the postal USO, the net costs of USO provision can be viewed as being caused only by vulnerable consumers (a point of view, which is compatible with concept 2, but rather not with concept 1). Copenhagen Economics (2017) undertook such a calculation and came to the conclusion that the costs of the USO per vulnerable consumer per year in Norway amounted to EUR 1,260 to 2,170, depending on the effective net costs of the USO. Using the authors’ assumption on the share of vulnerable consumers, we calculated that the USO costs per vulnerable consumer in Switzerland amount to EUR 4,300 each.² The reason for these very high numbers is that the apparatus of the current USO concept serves all citizens and not only those who truly need it.³

3.2 *Concept 2: User Needs as Fundamental Communication Needs*

3.2.1 Description

Concept 2 considers users’ needs as fundamental, technology-independent, communication needs – for instance, the need of a business to send an invoice to a client or the need of a person to receive a message by a public authority. The concept

²We assumed that Switzerland has the same share of vulnerable consumers as Norway as analyzed by Copenhagen Economics (2017). This implies 56,500 vulnerable consumers among the Swiss population of 8.484 m (2017, Federal Statistical Office), compared to 35,000 vulnerable consumers among the Norwegian population of 5.258 m (2017, Statistics Norway). The net costs of the Swiss USO amounted to CHF 271 m in 2018 (PostCom, annual report 2018).

³At the conference, somebody commented: This is like purchasing a car if you only want to have a device that displays the outside temperature.

thereby abstracts from the legacy of postal services. This concept is closer to the dictionary definition of needs – “require (something) because it is essential or very important rather than just desirable” – than concept 1, although it should be noted that needs as minimum communication standards develop with technology and are therefore not as stable as in this definition. Yet, it may be argued that they are comparatively stable and fix in the short-run. Further, concept 2 incorporates a cross-sectoral, multi-product world view on user needs. With respect to postal services, the concept asks what fundamental communication needs are satisfied by the postal services, but at the same time asks what other technologies/products could serve well those same needs or should be part of larger minimum standard communication USO. Concept 2 is well-suited for root-and-branch reviews of postal regulation (“greenfield” approaches) and for the assessment of cross-sectoral policy questions. For instance, concept 2 underlies the work by Jaag and Trinkner (2011, 2012), who discuss the idea of technology-independent, sector-overarching USOs.

With respect to the historical justifications of postal USOs, concept 2 strictly relates to the positive externalities produced by network effects, which occur when the fulfillment of individual communication needs also increases societal welfare.

3.2.2 Relation to Consumer Theory

In a simple representation inspired by microeconomic consumer theory (Fig. 2), users’ needs are located at the start of the decision process. Needs are reflected in the feasible set as an additional constraint. A consumer excludes all options from the feasible set, which do not fulfill these needs. The task of policy is then to make sure that the feasible set includes all the possible options that fulfill the consumer’s needs, given other constraints on the feasible set like the consumer’s budget constraint. In contrast to concept 1, as needs in concept 2 enter the process “unfiltered,” they can clearly be separated from the preferences, which determine consumer choice.

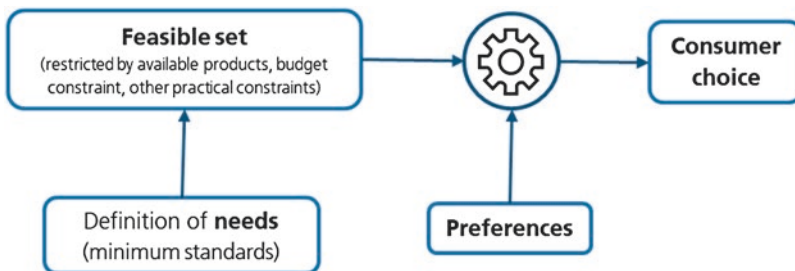


Fig. 2 The derivation of user needs in concept 2 in a consumer theory framework

3.2.3 Are User Needs Really Changing?

In countless contributions in the wide field of postal and delivery economics, it is referred to “changing user needs.” But when user needs are seen as fundamental communication needs as in concept 2, doubts arise, whether changing consumer choices in a multi-product world, in times of rapid technological change, can necessarily be interpreted as changing consumer needs. Here lies a considerable difference between concept 1 and concept 2. Because concept 1 defines needs based on actual consumer choice, changes in consumer choice are necessarily interpreted as changes in consumer needs. This is not the case with concept 2, where user needs, in the form of fundamental communication needs, may remain unchanged, even when consumers change their choices with regard to the product quantity basked they consume.

We can use a simple microeconomic framework to show this. The situation is depicted in Fig. 3 which illustrates consumer choice in a two-product world with physical and digital mail in times of technological progress, which happens from the left to the right picture. The pictures display a two-product world with the quantity of physical mail on the vertical axis, and the quantity of digital communication (email, etc.) on the horizontal axis. Two indifference curves, \bar{u}_1 and \bar{u}_2 , respectively, show combinations of quantities of both products (consumption bundles) that are equally valuable to the consumer. The quantities consumed are higher on curve \bar{u}_2 , such that the utility on any consumption point on that curve is larger than on any consumption point on curve \bar{u}_1 . The line AB in the left picture represents the budget line. The consumer can only afford consumption bundles within the area of the triangle ABO . The consumer chooses consumption bundle (Q_1^p, Q_1^d) , with quantity Q_1^p of digital mail consumed and quantity Q_1^d of physical mail, because it provides the highest possible utility given the budget constraint.

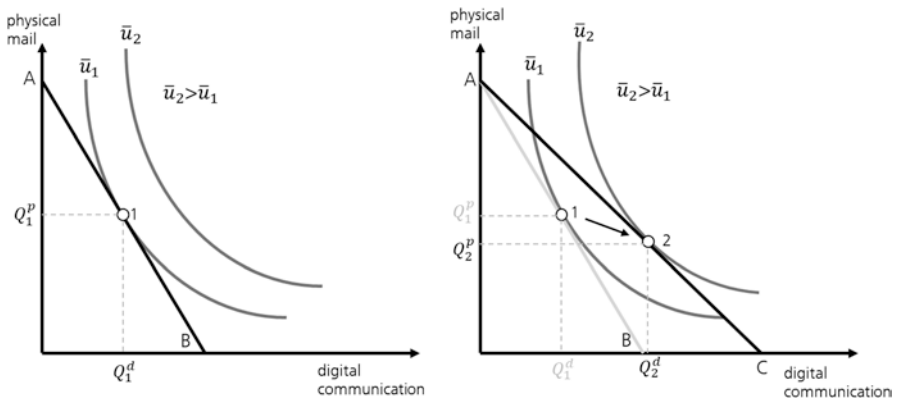


Fig. 3 Consumer choice in a two-product world with physical and digital mail in times of technological progress

We interpret technological progress as decreasing the costs of digital communication, where costs are not necessarily pecuniary but may also include improved usability that reduces the time and effort required for using digital communication.⁴ Such technological progress is reflected in the difference between the left and the right picture. In the right picture, the former budget line AB has become AC , i.e., a consumer can afford more digital communication with the same budget as before.⁵ The optimal consumption bundle is now bundle 2, (Q_2^p, Q_2^d) , which consists of less physical ($Q_2^p < Q_1^p$) and more digital ($Q_2^d > Q_1^d$) mail and lies on an indifference curve with higher utility than the curve on which bundle 1 was located. The important insight of this simple textbook exercise is that technological advances are not necessarily a result of changing consumer needs or preferences at all, but rather of a world of product innovation and development with changing relative prices.

Hence, in the progress of digitalization, consumer choices may change, even though consumer needs (and preferences) remain completely unchanged. For example, when consumers are not willing to pay for next day delivery anymore, the reason is not necessarily a change in users' needs to deliver or receive pieces of information, but only a change of "economic" choices given that e-mail is now available as a new alternative of rapid communication.

3.2.4 Discussion of Concept 2

Concept 2 of user needs seems to avoid the main weaknesses of concept 1, especially status quo bias. However, the concept may be more difficult to put into practice, because it implicitly requires to make assumptions about a hypothetical world without or with a different postal regulation and to include considerations about other technologies and sectors. Concept 2 also requires translating "needs" into minimum communication standards, which may be difficult to define and may change over time with changing available technology. Moreover, the concept is likely to justify bolder moves in postal regulation than concept 1, what will be likely challenged by advocates of the status quo. However, concept 2 will become more important with time as with continuing volume decline in tradi-

⁴One editor pointed out an additional rationale for the argument that choices may change when needs are stable: improvements in digital mail (adding voice and video to text) would also shift demand toward digital communication. This could be depicted in the diagram by changing the shape of the indifference curves such that a lower amount of digital communication is needed to stay on the same indifference curve as before.

⁵Additionally, it could be assumed that letter prices increase (between 2013 and 2018 alone, letter prices in Europe have increased by more than 50% – see Deutsche Post, Letter Prices in Europe, 18th edition, June 2019). With increasing letter prices, the relative price between physical and digital mail changes even faster than when only decreasing prices of digital mail are considered.

tional mail markets, postal USOs become more expensive and new technologies become ever better substitutes for postal services. In the eyes of regulators and industry representatives these technological developments may require more and more greenfield approaches to postal reform. Such a greenfield approach was recently proposed by the European Regulators Groups for Postal Services (ERGP 2018). It will be important that those who will be carrying the analysis will acknowledge that such an exercise requires concept 2 as the underlying concept of user needs.

It is well established that – in order to completely understand the net costs of any universal service provision – it is necessary to consider a hypothetical scenario and compare it to the status quo (Panzar 2000). A related approach could be taken with respect to assessing changing regulatory needs and the most efficient regulatory regime from a greenfield perspective in the postal sector. The following list proposes a cascade that a greenfield approach to postal regulation would have to go through if it had the aim to fulfill user needs with the best suited policy. First, define the underlying, technology-independent, fundamental (communication) needs of users. Second, define hypothetical scenarios with different – potentially cross-sectoral – regulatory regimes (including the no-USO scenario). Third, analyze to what degree the needs collected in the first step would be served by postal and non-postal services in the scenarios defined in step two. Fourth, choose the preferred scenario among those analyzed in the third step.

4 Conclusion

This article provided an analysis of the frequently used notion of “postal users’ needs” and stresses the importance of a conscious use of the term by researchers and regulators. We claim that the usage of the term in the discussion on postal regulation can be categorized in two concepts. In concept 1, which is the dominant concept in the literature, user needs are in fact an immediate representation of user choices or social concerns. In concept 2, user needs are considered to be fundamental communication needs. Concept 1 can be used for a consumer-friendly design of gradual postal reform. The article pointed out several conceptual weaknesses of this concept, especially its intrinsic status quo bias. Concept 2 provides a broader, non-status quo-dependent approach and is better suited for greenfield assessments to postal reform. With continuing technological progress, greenfield assessments to postal reform will become more demanded. As the analysis in this article has revealed, in carrying out such assessments, regulators and researchers should adopt the viewpoint of user needs as fundamental communication needs (concept 2) and avoid to identify user needs as past choices or dependencies formed by the status quo (concept 1).

Bibliography

- ANACOM. (2012). *Survey on the use of postal services—residential population in December 2012*.
- BAKOM. (2017). *Postversorgung in der Schweiz. Erhebung im Auftrag des Bundesamtes für Kommunikation BAKOM*. Schlussbericht vom 9. November 2017.
- Cape, S., & Groves, P. (2017). Changes to the universal service: Influencing factors, impacts and regulatory implications. In *The changing postal and delivery sector* (pp. 257–269). Cham: Springer.
- Confraria, J., Ribeiro, V. M., Franco, A., & Pereira, F. (2017). A case study of density of retail outlets in Portugal: Regulation and politics in postal markets. In *The changing postal and delivery sector* (pp. 97–114). Cham: Springer.
- Confraria, J., Silva, F., Pereira, F., & Franco, A. (2018). Postal users' needs regarding accessibility to the postal network. In *The contribution of the postal and delivery sector* (pp. 187–205). Cham: Springer.
- Copenhagen Economics. (2017). *Effects of changing the USO in Norway*. Final report for Samferdselsdepartementet.
- Copenhagen Economics. (2018). *Main developments in the postal sector (2013–2016)*. Study for the European Commission.
- Cremer, H., Gasmı, F., Grimaud, A., & Laffont, J. J. (2001). Universal service: An economic perspective. *Annals of Public and Cooperative Economics*, 72(1), 5–43.
- ERGP. (2016). *ERGP report Universal Services in light of changing postal end users' needs*.
- ERGP. (2018). *ERGP (18) 49*. Report on developments in the postal sector and implications for regulation.
- Hearn, J. (2018). Regulation. Quo Vadis? In *The contribution of the postal and delivery sector* (pp. 75–88). Cham: Springer.
- Jaag, C., & Trinkner, U. (2011). *The future of the USO – Economic rationale for universal services and implications for a future-oriented USO*. Swiss Economics Working Paper.
- Jaag, C., & Trinkner, U. (2012). *Defining and financing an intermodal USO*. Swiss Economics Working Paper.
- Panzar, J. C. (2000). A methodology for measuring the costs of universal service obligations. *Information Economics and Policy*, 12(3), 211–220.
- WIK Consult. (2019). *User needs in the postal sector. A study for the European Commission*. Presentation held at the Public Stakeholder Workshop Brussels. 29 January 2019.