


PUBLIC POLICIES TO REDUCE SWITCHING COSTS LINKED TO MANDATORY ACCESS TO CERTAIN ELEMENTS OF THE POSTAL NETWORK IN THE EU AND THE EFFECTS OF THE RETENTION COSTS

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ARTICLE INFO	ABSTRACT
<p>Article history: Received: December, 02nd 2023 Accepted: February, 27th 2024</p>	<p>Purpose: Our objective is to examine the switching costs that exist in the European postal service, where an ambitious process of opening up to competition has been carried out since 1997, as well as the different types of retention costs.</p>
<p>Keywords: Liberalization; Universal Postal Service; Postal Infrastructure Elements; Switching and Retention Costs.</p>	<p>Theoretical Framework: The theoretical framework is determined by the sectoral regulatory framework regarding the liberalization of services of general economic interest in the EU, the experience of postal operators in recent decades and the changes experienced in the demand for postal services in the current context of profound technological change in the field of communication.</p>
	<p>Design/Methodology/Approach: This research work is carried out through a systematic review of the relevant specialized literature, the study of the policy decisions adopted in the EU, the changes in the strategies of postal operators and the rigorous analysis of the evolution of the demand of the postal services in a context of rapid and profound change.</p>
	<p>Finding: Inadequate regulation of the access to some elements of postal infrastructure or services within the scope of the universal postal service, such as the postcode system, address database, post office boxes, delivery boxes, re-direction and return to sender service, can generate switching costs and thus limiting competition, with negative effects on the consumer surplus and social welfare. Standardization and access to these elements may be regulated separately</p>
	<p>Research, Practical & Social Implications: This article proposes solutions to the technical functions of coordination between operators. Our proposals are in line with sectoral directives aimed at strengthening competition in the long term in the postal market.</p>
	<p>Originality/Value: A correct classification of the change costs applied to the liberalized postal service is made. Likewise, a classification of retention costs. We must underline the progress that our proposals represent to reduce the costs of switching to elements of the postal network whose access is mandatory.</p>
	<p>Doi: https://doi.org/10.26668/businessreview/2024.v9i3.4394</p>

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POLÍTICAS PÚBLICAS PARA REDUZIR OS CUSTOS DE MUDANÇA ASSOCIADOS AO ACESSO OBRIGATÓRIO A DETERMINADOS ELEMENTOS DA REDE POSTAL NA UE E OS EFEITOS DOS CUSTOS DE RETENÇÃO

RESUMO

Objetivo: Nosso objetivo é examinar os custos de mudança existentes no serviço postal europeu, onde um ambicioso processo de abertura à concorrência foi realizado desde 1997, bem como os diferentes tipos de custos de retenção.

Estrutura Teórica: A estrutura teórica é determinada pela estrutura regulatória setorial referente à liberalização dos serviços de interesse econômico geral na UE, pela experiência dos operadores postais nas últimas décadas e pelas mudanças ocorridas na demanda por serviços postais no contexto atual de profundas mudanças tecnológicas no campo da comunicação.

Projeto/Metodologia/Abordagem: Este trabalho de pesquisa é realizado por meio de uma revisão sistemática da literatura especializada relevante, do estudo das decisões políticas adotadas na UE, das mudanças nas estratégias dos operadores postais e da análise rigorosa da evolução da demanda dos serviços postais em um contexto de mudanças rápidas e profundas.

Conclusões: A regulamentação inadequada do acesso a alguns elementos da infraestrutura postal ou serviços no âmbito do serviço postal universal, como o sistema de código postal, banco de dados de endereços, caixas postais, caixas de entrega, serviço de redirecionamento e retorno ao remetente, pode gerar custos de mudança e, portanto, limitar a concorrência, com efeitos negativos sobre o excedente do consumidor e o bem-estar social. A padronização e o acesso a esses elementos podem ser regulamentados separadamente.

Pesquisa, Implicações Práticas e Sociais: Este artigo propõe soluções para as funções técnicas de coordenação entre as operadoras. Nossas propostas estão de acordo com as diretrizes setoriais que visam fortalecer a concorrência a longo prazo no mercado postal.

Originalidade/Valor: É feita uma classificação correta dos custos de mudança aplicados ao serviço postal liberalizado. Da mesma forma, uma classificação dos custos de retenção. Devemos destacar o progresso que nossas propostas representam para reduzir os custos de mudança para elementos da rede postal cujo acesso é obrigatório.

Palavras-chave: Liberalização, Serviço Postal Universal, Elementos de Infraestrutura Postal, Custos de Mudança e Retenção.

POLÍTICAS PÚBLICAS PARA REDUCIR LOS COSTES DE CAMBIO DE OPERADOR ASOCIADOS AL ACCESO OBLIGATORIO A DETERMINADOS ELEMENTOS DE LA RED POSTAL EN LA UE Y EFECTOS DE LOS COSTES DE RETENCIÓN

RESUMEN

Objetivo: Nuestro objetivo es examinar los costes de cambio de operador existentes en el servicio postal europeo, donde se ha llevado a cabo un ambicioso proceso de apertura a la competencia desde 1997, así como los distintos tipos de costes de retención.

Marco Teórico: El marco teórico viene determinado por la estructura regulatoria sectorial relativa a la liberalización de los servicios de interés económico general en la UE, la experiencia de los operadores postales en las últimas décadas y los cambios que se han producido en la demanda de servicios postales en el actual contexto de profundos cambios tecnológicos en el ámbito de la comunicación.

Diseño/Metodología/Enfoque: Este trabajo de investigación se realiza mediante una revisión sistemática de la literatura especializada relevante, el estudio de las decisiones políticas adoptadas en la UE, los cambios en las estrategias de los operadores postales y el análisis riguroso de la evolución de la demanda de servicios postales en un contexto de rápidos y profundos cambios.

Conclusiones: Una regulación inadecuada del acceso a algunos elementos de la infraestructura postal o servicios del servicio postal universal, como el sistema de códigos postales, la base de datos de direcciones, los buzones, los buzones de entrega, el servicio de redirección y la devolución al remitente, puede generar costes de cambio y, por tanto, limitar la competencia, con efectos negativos sobre el excedente del consumidor y el bienestar social. La normalización y el acceso a estos elementos pueden regularse por separado.

Investigación, Implicaciones Prácticas y Sociales: Este artículo propone soluciones para las funciones técnicas de coordinación entre operadores. Nuestras propuestas se ajustan a las orientaciones sectoriales destinadas a reforzar la competencia a largo plazo en el mercado postal.

Originalidad/Valor: Se realiza una correcta clasificación de los costes de cambio de operador aplicados al servicio postal liberalizado. Igualmente, una clasificación de los costes de retención. Hay que destacar el avance que suponen nuestras propuestas en la reducción de los costes de cambio de operador para los elementos de la red postal cuyo acceso es obligatorio.

Palabras clave: Liberalización, Servicio Postal Universal, Elementos de la Infraestructura Postal, Costes de Conmutación y Retención.

1 INTRODUCTION

Prior to its liberalization, the European postal sector was characterized by typical monopoly behavior: it was a market where a dominant provider (usually publically owned) controlled close to 100% of the market share. In response to this situation, postal directives 97/67 EC, 2002/39 EC and 2008/6 EC were introduced for the gradual liberalization of the postal market in the EU. In this regard, Directive 97/67 EC stated that measures to ensure the gradual and controlled liberalization of the market and to secure a proper balance in doing so were necessary to guarantee the obligations and rights of universal service providers (USPs), and the free provision of services in the postal sector. However, Directive 2008/6 EC then stated that a full market opening (FMO) would occur by 2009 (this actually occurred in 2011). It also removed the market share (reserved area) that Directive 97/67 EC had exclusively ascribed to USPs and stated that the progressive and gradual opening of postal markets to competition had provided USPs with sufficient time to implement the necessary modernization and restructuring measures required to ensure their long-term viability under new market conditions. The directive also required Member States to adapt their regulatory systems to a more open environment.

In the last three decades, the volume of traditional mail has been significantly reduced due to the evolution of telecommunications and successive economic crises. The strategies adopted by the different USPs were oriented, on the one hand, to the parcel sector linked to electronic commerce and, on the other, to the provision of services outside the scope of traditional postal mail (banking, insurance, digital services, etc.). Other strategies adopted focused on improving cost efficiency in response to reduced revenues.

The free entry of operators into the market may be conditioned by the costs of changing suppliers. Reducing switching costs is one of the public policies that reinforce long-term competition and improve consumer surplus and social well-being. In turn, current operators, in their attempt to retain their customers, may incur retention costs. Switching costs and retention costs can modify market equilibrium conditions.

In this work we analyse the switching and retention costs that can occur in the provision of the postal service. In this context, access to certain elements of the postal network whose

mandatory access is established by Directive 97/67 EC in its article 11a is studied. At the same time, innovative alternatives to promote access to them are proposed.

The structure of the work is as follows: Section 2 contains the review of the relevant literature. In the section 3 we analyse typical provider switching costs in postal services. Section 4, divided into six subsections, is dedicated to the analysis of access to each of the elements referenced on the Directive 2008/6 CE (Article 11^a). In section 5 and 6, information costs and the search for available choices and the termination of a long term relationship with the incumbent, respectively, are studied. Retention costs are studied in section 7. Finally, section 8 is dedicated to the conclusions.

2 METHODOLOGY AND LITERATURE REVIEW

This research work is carried out through a systematic review of the relevant specialized literature, the study of the policy decisions adopted in the EU, the changes in the strategies of postal operators and the rigorous analysis of the evolution of the demand of the postal services in a context of rapid and profound change.

The three postal Directives maintain the universal postal service (UPS), from which the universal service obligations (USOs) are derived, beyond the FMO. Keeping the USOs may well put the USP's economic equilibrium in danger, and hence, Directive 97/67 and, more particularly, Directive 2008/6, designs mechanisms in order to finance the additional costs of such USOs: (i) a mechanism to compensate the undertaking concerned from public funds or (ii) a mechanism for the sharing of the net costs of the USOs between providers of services and/or users. The UPS extends to a set of high-quality postal services with which all users are permanently provided at an affordable price throughout the territory. The USP must assume the provision of the universal postal service under the established conditions of quality, ubiquity, permanence and affordable price. These can work as a retention mechanism on the part of providers, and can strengthen switching costs because many of the customers wishing to switch providers need to return to their incumbent provider for some aspect of their mail services (Jonsson and Selander 2006). This is due to the potentially incomplete territorial network coverage of an entrant who has not offered the UPS or due to inefficiencies in the access regulations of the postal network.

Twenty-six years after the first directive, the opening of the postal market in the main EU states has not reached the levels expected in the ambitious liberalization process. The USPs

that existed before the liberalization process have still retained a high market share, approximately 90%, in terms of main postal products. Furthermore, as pointed out by Jonsson and Selander (2006), Pateiro et al. (2013), Jaag (2014), some entry attempts have only reached very low market shares or even failed.

The reasons for this outcome may stem from the impact of new communication technologies on traditional postal communication and, on the other hand, the economic crisis of 2008 and the COVID19 pandemic. Direct competition between postal operators offering traditional mail, and indirect competition of mail with electronic means of communication impact strongly on the USPs (Fève et al., 2010; Bruno et al., 2021; Martin et al., 2012; Trinker and Grossmann, 2006; Tochkov (2015)). In this context, the so called phenomenon of e-substitution (the replacement of traditional letter mail by electronic forms of communication), led to a drastic fall in postal volumes and revenues for USP. A declining traditional postal market will not attract a large number of new entrants. In view of the introduction of substitute electronic communication and the opening of the market, Directive 2008/6 EC recommended diversifying the activities of UPS providers by providing electronic business services or other information services. Many European UPS providers, undisputed leaders in the declining traditional post, have directed their strategies toward the parcel sector and e-commerce, where its market share was relatively low. Such providers are moving towards a wider range of not strictly postal products to make ensure the profitability of postal network and their human and technical resources.

In addition to the above factors, which have made entering the postal sector less attractive, we can also include provider switching costs as an entry barrier. It is difficult for customers to switch providers due to increasing switching costs and a lack of information on existing alternatives (Patterson and Smith, 2003; Sharma and Patterson, 2000). Furthermore, an established relationship, which is inherent in a historically monopolized postal model, may generate shared values, a stronger identification between the parties, and added profits. These factors act as an entry barrier to competitors (Reinartz and Kumar, 2003; Deligonul et al., 2006). Finally, the benefit of UPS demands conditions of permanence, ubiquity and frequency, which accentuate the consumer attraction, as opposed to the potential weakness of an entrant who offers incomplete services in the market. This particular characteristic of the regulated postal market, with universal service obligations, encourages customers to stay with their present provider.

Reduce customer switching and search costs is one of the most important liberalization policies that “can stimulate vibrant, enduring competition that may ultimately substitute for regulatory oversight” (Armstrong and Sappington, 2006, p.350). See Pateiro and Prado (2010) for the application of policies to the postal sector as recommended by Armstrong and Sappington (2006). Insofar as consumers are able to identify and secure postal service provision by another provider, the USP or incumbent will be compelled to offer the lowest price and/or the highest quality, and competition will be reinforced.

In response to the entry of competitors in this sector, the USP can adopt a maintenance strategy regarding their market share by means of the renegotiation of contracts with its customers, prizes for loyalty through rebates at the end of a certain period, advantages bound to exclusive provider contracts, and a pricing policy in profitable areas to better combat cream skimming practices. The costs derived from such strategies can be considered as customer retention costs. Thus, the USP will support retention costs in the same way that the customer or the entrant support the switching costs.

Another strategy used by USPs is to improve efficiency by cutting service provision costs, although there are restrictions on cost savings imposed by universal service obligations. The topic was addressed, among others, by Bruno et al. (2021), Matúšková and Madleňáková (2017). Integrated approach to measuring the cost efficiency of the were applied. Tochkov (2015) and Blagojević et al. (2020), among others, adopted the non-parametric method Data Envelopment Analysis (DEA). The first attributed efficiency gains in the postal sector to increased competition and institutional reforms aimed at commercialization of USP; the second concludes that observed postal network is cost-inefficient.

Other operators are focused on attracting new clients through improving the quality of the service. Recent works in this field addresses the measurement of the quality. Šarac et al. (2017) combine the method Delphi for analyzing the demand for access to the postal network in Serbia and a customized service quality (SERVQUAL) method in terms of access to postal network. The authors suggest that the gap between the expected and experienced service quality provided by the Public Postal Operator is relatively small.

Directive 2008/6 CE, in this article 11a establishes that “Whenever necessary to protect the interest of users and/or to promote effective competition, and in the light of national conditions and national legislation, Member States shall ensure that transparent, non-discriminatory access conditions are available to elements of postal infrastructure or services provided within the scope of the universal service, such as postcode system, address database,

post office boxes, delivery boxes, information on change of address, re-direction service and return to sender service. This provision shall be without prejudice to the right of Member States to adopt measures to ensure access to the postal network under transparent, proportional and non-discriminatory conditions”.

3 PROVIDER SWITCHING COSTS

Customer dissatisfaction diminishes a postal service provider’s customer base, forces the operator to rely on a more volatile customer mix, and erodes the firm’s reputation (Levesque and McDougall, 1996). This is particularly true in network industries, as the postal service. While some customers take no action at all when dissatisfied, others may take action such complaining directly to the provider about the service or switch suppliers.

As Armstrong and Sappington (2006, 351) point out, liberalization policies that provide objective information to consumers about the options available to them, reduce customer switching costs, and limit any differential costs that consumers must incur to obtain service from their preferred supplier can foster vibrant, long-term industry competition.

Klemperer (1988) discovers that the existence of customer switching costs modifies equilibrium conditions and affects consumer surplus and social welfare. Prado et al. (2014), Pateiro et al. (2015) jointly consider switching costs and retention costs and analyse the effects on the Cournot-Nash equilibrium (consumer surplus, social welfare, quantities and profits in equilibrium) in a scenario of transformation of a monopolistic market into a supply duopoly.

Customers can feel compelled to continue their relationship with a service provider due to the user’s perceptions of high switching costs (Porter, 1980) even if the relationship is not a satisfactory one. They may incur three types of costs if they switch: i) financial costs derived from the switching process; ii) information and search costs on available alternatives, and iii) the termination cost of ending a long relationship with a regular provider.

Switching costs are defined as the customer’s perceptions of the additional costs of terminating the present relationship and finding another provider (Patterson and Smith 2003, 108). Switching costs constitute any factor that makes it difficult to or increases the price of a customer switching providers (Valenzuela et al., 2005, 243). When the customer leaves their usual provider, they incur two types of loss: i) the loss of the advantages the company had created with its marketing strategy of relationships producing social and economic benefits and empathy, and customization costs and ii) the assumption of direct financial, time and effort

costs. These are the two types of positive and negative barriers to switching as stated in the literature on switching costs (Jones et al., 2007; Valenzuela et al., 2005). Table 1 summarizes the switching cost classifications of Burnham et al. (2003) and Jones et al. (2002). We adapted this table assuming that the customer may change the postal service provider.

Table 1

Classification of switching costs

Burnham, Frel, Mahajan (2003)	Examples
Financial costs	Loss of volume or length of relationship discounts (+), payments for breaking the contract with the present operator (-), cost of new contracts and guarantees (-), mail redirection costs (-), retour to sender costs (-).
Process costs	Time cost to find a new postal operator (-), and learning effort to adapt to a new system of identification, containerization, deposit, collection and invoicing of the postal deliveries (-). Costs to learn new routines reconfigure hardware and software to be compatible (-).
Relationship costs	Breakdown of the affective bonds created between the customer management and employees and the postal operator employees or loss of the brand relationship (+). Loss of the positive effects on our brand generated by a job well done by the incumbent (+). Costs to reestablish communication networks with other users (-)
Jones, Mothersbaugh, Beatty (2002)	Examples
Continuity Costs	Loss of the profits guaranteed by the length of the relationship with the present postal provider: discounts in volume and/or the composition of deliveries destination (+), permanence and availability (+), perception of a probable worsening of the postal service provided by the entrant operator (-), perception of the damage which a deficient postal service can cause to our postal communications with our own customers (-). Risk of loss of customers, both current and potential (-).
Learning costs	Loss of searching time of other attractive operators (-), adaptation costs to new preparing, packing and deposit systems of postal deliveries (-), adaptation costs to new computing supports for the identification of the postal deliveries and management costs of the new operator virtual office (-). Adaptation costs to the opening hours (-). Adaptation costs in our resources to transport logistics of the new postal operator (-).
Sunk costs	Previous costs generated to establish the relationship with our present provider: acquisition of containerization, load and unload and delivery storage elements, computer programs for invoicing, documents adapted to the operator methodology (+). Adaptation costs in transport elements (-). Adaptation costs to loading and unloading systems of the new operator (-). Other costs (-).

(+) positive barrier to switching; (-) negative barrier to switching.

Prepared by authors and adapted to the postal services.

A clear example of a provider switching cost in telephone service is the cost of not being able to transfer your current telephone number where portability is not guaranteed. A number change would create a number of costs, for example, advising friends and colleagues of the new number, printing new documents, advertising, and updating files. These costs make the consumer more reluctant to switch providers and do not favor competition. “Absent such number

portability, a consumer might be reluctant to switch suppliers because the switch would require the consumer to inform all friends and associates of her new number or reprint business cards and stationery on which the number appears, for example” (Armstrong and Sappington, 2006, p.351). Shi et al. (2006) studied the effects of number portability in the cellular phone industry in a model with asymmetric markets shares, positive and heterogeneous consumer switching costs, and general demand functions. Viard (2007) studied the effect of portability on competition in the phone market. Directive 2002/22 EC states that Member States shall ensure that all subscribers of publicly available telephone services, including mobile services, who so request can retain their number(s) independently of the undertaking providing the service.

Similarly, in the postal service, switching costs could be charged if each new entrant adopted a different postcode system, or if the incumbent and the competitor did not have some form of cooperation (a reciprocal access) for the delivery of mail to recipients that have signed a PO box with any of the operators or for delivery in the same home delivery boxes, there is a series of matters which would probably cause important switching costs, both in terms of financial resources and time spent. In addition to access to postcode database or access to PO boxes, there are other issues that can generate switching such as information on change of address, redirection of mail service, return to sender service or access to letterboxes. In accordance with Directive 2008/6 EC (article 11a), these problems must be addressed by sectoral regulation.

4 NETWORK AND DATABASES ACCESS

4.1 ACCESS TO PO BOXES

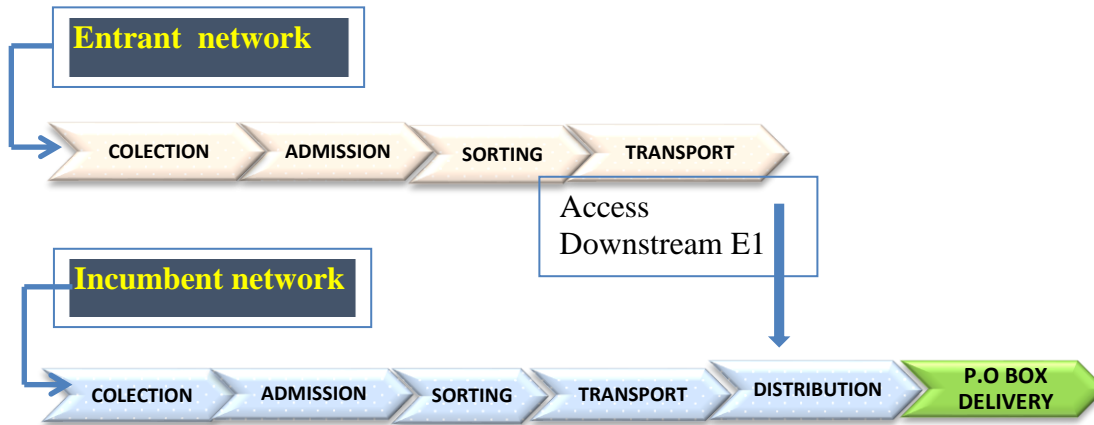
Delivery to PO boxes is an alternative to home delivery. Clients choose this delivery either because they want to have their mail delivered in the morning earlier than at the regular postman’s visit, or because they do not want it delivered at home for whatever reason. The rental of the box is charged to the client-recipient. The address on the envelope specifies the name of the addressee and the number of the box, as well as the postcode to identify the delivery unit of destination.

If the consignor changes the provider, the new operator needs to enter the incumbent’s premises in order to leave the deliveries into the box appointed for the addressee. The

competitor cannot inject its mail anywhere in the entrance of the delivery unit: this would imply problems with regard to contracting and transferring responsibility.

Figure 1

Entrant access to P.O Box of the incumbent.



Prepared by authors.

Access for all competitors and the incumbent to the physical space of the PO boxes is a complex issue. In France, political advisors expressed the idea about building a private corridor behind the PO boxes locked with a key, which would be made available to all licensees as well as to the incumbent. This proposal was abandoned because of the great technical difficulty and prohibitive costs. Therefore, the most practical solution is handing over the mail to the incumbent for loading the PO boxes. In several countries, entrants choose to hand over mail as closely as possible to the location of PO Boxes in order to inject it during their delivery route. Figure 1 represents the case in which an entrant injects the postal items in the incumbent distribution center for delivery to PO Boxes. In this case the entrant does not install PO boxes in their local.

Competitors can place PO boxes in their offices in the same way as the incumbent, but there is no sense in addressees signing the PO Box service with each competitor. To avoid switching costs of that nature, the national regulatory authorities should regulate access to PO Boxes.

4.2 ACCESS TO POSTCODES

Access to postcodes is not identified by most national regulatory authority (NRAs) as a bottleneck issue calling for regulatory intervention. Thanks to new technological means, the

use of GPS coordinates coding each address is probably a smarter way to proceed, and large clients could sort according to the delivery areas of the entrants or incumbent, in a more efficient way than through the traditional postal means (Fratini et al., 2010).

However, a basic discount appears when the clients agree to have to present their mail sorted by postcode (work-sharing discounts in the upstream access), allowing the incumbent to avoid sorting, and to convey bundles of presorted mail directly to the right delivery office. If the client changes the service provider, he could obtain a similar work-sharing discount. But if the incumbent changes the postcode system, the client incurs switching costs because the adaptation of his sorting system by postcode is necessary.

To defend the interests of customers and to strengthen long-term competition, the mandatory access to postcodes could be imposed in order to allow competitors to rightly deliver. It is a question of avoiding the postcode operator in each Member State (i.e. Correos SA in Spain, Posten AB in Sweden, Capita in Ireland, etc.) can freely modify the postcode system.

In Sweden, postcode changes are handled by a Postcode Council with representatives of Posten AB, City Mail, the confederation of private postal operators and government agencies. The Regulator can put system changes on hold.

In the UK, Royal Mail is committed to a policy of no change wherever possible. Postcode changes are only made if it results in a major benefit to the service they provide and new postcodes work in tandem with the old ones for an overlapping 12-month period. The Royal Mail announces changes to Postcodes approximately every six months and these changes are notified to all customers in the affected areas via their Postcode Update publications.

In 2015 the Partnership on Transport and Logistics Companies working in Spain submits a report to the Ministry for Public Works in order to modify the Spanish postcode (from 5 digits to 8 digits). The companies argue the economic and environmental profits stemming from the new postcode. They hold that nowadays there are enough technological advances to make a change, which would be profitable to everybody. The switching costs in the postcode to users and operators must be weighed up against the expected profits. In any case, it is necessary that the postcode be unique. In that respect, the change of the code would be neutral in terms of switching costs.

4.3 REDIRECTION OF MAIL

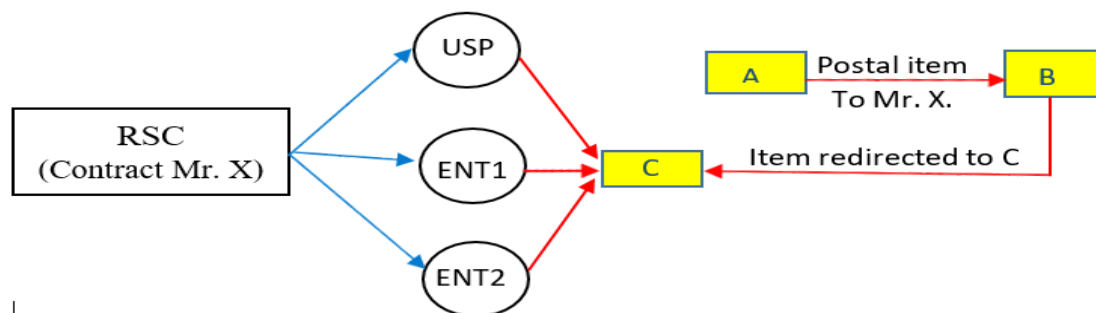
The information on redirection service is undoubtedly an important issue that can cause high switching costs if there is not a perfect coordination among operators.

Traditionally the fundamental deliveries in the basic postal communication (letters, postcards, direct mail) were redirected at the request of the addressee, without costs. This situation has changed in many states where postal operators have established redirection services that allow redirecting postal items to any new national or international address. So, in Spain, France and the UK, the forwarding is done at the request of the addressee for the time period stipulated after having paid the agreed price.

If a competitor has no access to information about customers of the incumbent redirections, the switching costs are evident: the addressees would have to enter into a redirection contract with each operator, adding the respective costs in time and money. And the senders of the forwardings would lose some communications, which would have a negative effect on their business and service quality. Just like in the case of the return to sender service, an additional problem arises when an entrant covering part of the territory may need to deliver mail outside its area (see Figure 2).

Figure 2

Centralised Redirection Service.



Prepared by authors. Blue line, Information. Red line, Postal Item

Figure 2 represents an ideal redirection service. Consider a postal item from A to B, addressee Mr. X. The sender entrusts the postal item to any of the operators: incumbent, entrant 1 or entrant 2. If Mr. X moves to the city C, with which of these operators would Mr. X hire the redirection service? It no longer really makes sense that a client temporarily changing his address should be obliged to give the information to all licensees. The addressee (in our case Mr. X) hires the redirection service with the Redirection Service Center (RSC) shared by all

operators, USP, ENT1, ENT2, and he pays a fee for administrative costs (the price does not usually cover the costs of handling the mail from the old address to the new one). The RSC transmits this information to all providers in real time. The financial costs and time costs are lower for the user. In summary, if there is a RSC, the switching costs are reduced when a customer changes the supplier and thus competition is promoted.

4.4 CHANGE OF ADDRESS

Access to the change of address is a more important issue than access to the postcode database for delivering mail (Fratini et al., 2010). When someone changes his address, the information is given to the incumbent, which has the most reliable database, when compared with banks, telecom operators or energy providers.

In France, the information is centralized in a database that traces the old and the new addresses. If the new provider has not immediate access to the change of address database, the client will incur switching costs since he needs to communicate his change of address to each operator. As in the case of redirection service, it does not really make sense that a client should be obliged to hire the change of address service to give this information to all competitors. That is why sharing information on address changes could be required by law. In France, new entrants have Commission Nationale de l'Information et des Libertés CNIL authorization, on the same terms as La Poste, to maintain a file containing both the old and new addresses. The following step is about stating the mandatory access to the change of address database.

4.5 RETURN TO SENDER

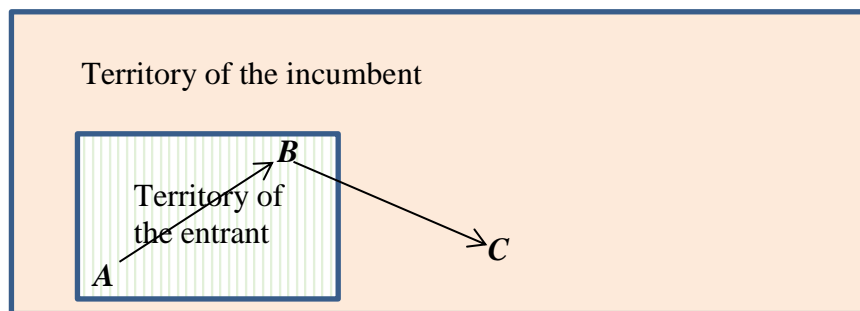
Consider a postal mailing deposited in *A* and destined to *B*, both within the territory of the entrant (Figure 3). The sender printed the address *C* on the envelope for return. The incumbent obligation to provide access to a return to sender service reflects the idea that an entrant covering part of the territory may need to deliver mail outside its area depending on where the sender is located (*C* in our case). Thus the entrant would need to use the incumbent's network to return undeliverable mail.

The Directive 2008/6 CE says that where several universal service providers with regional postal networks exist, Member States should also assess and, where necessary, ensure their interoperability in order to prevent impediments to the prompt transport of postal items.

As the legal and market situation of these elements or services is different among the Member States it is appropriate to only require Member States to adopt an informed decision on the need, extent and choice of the regulatory instrument, including where appropriate on cost sharing. This provision is without prejudice to the right of Member States to adopt measures to ensure access to the postal network under conditions of transparency and non-discrimination.

Figure 3

Return service outside area of the entrant.



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Cases like those in Figure 3 are not very frequent, but a decision must be adopted. According to Van der Lijn, N. et al. (2008), the main challenges for the NRAs include arranging interoperability in a multi-operator market. There are a number of issues that may create regulatory asymmetry and they have a negative impact on the internal market (in particular access and interoperability).

In France, La Poste transports the found items to its sorting centers, and informs its competitors that they can pick them up. In the UK, procedures are in place such that if a competitor's item of mail is found in a Royal Mail letterbox or elsewhere within its network, or within the network of another licensed operator, there are processes established to return the postal item to the operator with whom the item was posted. The more elegant solution has been adopted in Sweden: the total cost of the return to sender service has been estimated and shared by all operators. Thus, the interoperability of networks is secured for this service. This solution reduces the three common types of switching costs: procedural, financial and relational costs.

4.6 ACCESS TO LETTERBOXES

The matter about the access to letterboxes depends on issues such as its owners, location and access to them from the outside of the buildings. In the most of countries such as Spain,

France, Portugal, UK, etc., the residents are owners of the letterboxes. As regards its access, there is no problem when it is outside (this happens in Portugal and single-family homes in many countries). A problem arises when the access is from the inside of the buildings (letterboxes placed in the lobby of the buildings) or when the incumbent is their owner because it is necessary to authorize the access to the property. In some countries, the access is restricted to the incumbent by law (USA, Austria). In France, Poland, Hungary, Slovakia, Germany, inter alia, the access to the private mailbox has been subject to discussion, regulation and litigation. In most cases, the keys or codes of the entrance slots held by the incumbent are not shared with competitive operators for reasons of safety, privacy, exclusive property and liability. Here we have another reason why sharing information for letter boxes access could be required by law, provided that security rules are complied with.

Whether or not these elements or services are essential is open to discussion and various operational problems have arisen. Consequently, there have been many discussions regarding the ownership of postal codes, access to post office boxes located inside the delivery offices of the incumbent, collection and delivery boxes and re-direction services and return-to-sender services (Fratini et al., 2010). It can be argued that these infrastructure elements are not essential facilities or actual bottlenecks in the sense of stable entry barriers, but there may be common ground to assert that the competitive development of the market may be hindered if access to some of the mentioned elements is refused.

Van der Lijn, N. et al. (2008) says that the access to the postal infrastructure consists of access to the letterboxes of individual consumers and businesses, PO boxes, the address database (change in address notifications), the postal code system and the possibility to redirect the mail wrongly addressed or returned. This report considers that any practice that limits access to this network infrastructure is an important barrier to competition requiring attention at EC and/or national level.

As seen in Table 1, some switching costs are related to the characteristics of some elements used mainly by big customers in the productive process. Such elements are containers, load and unload elements, labelling and delivery preparation whose adaptation is closely related to size, volume and shape of the postal deliveries. Directive 97/67/EC states: the minimum and maximum dimensions for the postal items shall be those laid down in the Convention and the Agreement concerning Postal Parcels adopted by the Universal Postal Union (UPU). The harmonisation of technical standards shall be continued, taking into account in particular the

interest of *users*. This work shall take into account the harmonisation measures adopted at international level and in particular those decided upon within the UPU.

5 INFORMATION COSTS AND THE SEARCH FOR AVAILABLE CHOICES

Varela et al. (2009) found that a lack of attractive choices in the market or perceiving the present provider as more attractive than others can reduce the likelihood of customer abandonment. When a customer is exposed to negative experiences with his regular provider, he leaves his provider and seeks a more suitable alternative (Sharma and Patterson 2000). However, if alternatives do not exist or are not well known, the customer maintains his relationship with the provider even though it is unsatisfactory. The search costs and the quality information provided by the firms is analysed by Ghosh and Galbreth (2013). Competition can compel providers to deliver high-quality products to consumers at low prices if consumers are able to easily identify and secure service from the firms that offer the best products at the lowest prices (Armstrong and Sappington, 2006, p. 350).

In this sense, liberalization policies and national regulatory authorities (NRAs) will have to ensure truthful, transparent and objective low-cost information so that consumers are aware of the available alternatives and, where possible, can switch providers. Measures recommended on this point include i) fast access to information on the existence of competitors, including accessibility, schedules, prices and other supply conditions; ii) cost reductions for the consumer when he switches provider (i.e., to retain the same P.O. box number and postal code); and iii) a reduction in asymmetric costs that the consumer incurs when he chooses different providers.

Directive 2008/6/EC highlights the importance of information about universal postal service as well as about the characteristics of specific services and their access. Article 6 states that Member States will adopt the necessary measures to ensure that users and postal service providers regularly receive up-to-date information and with sufficient accuracy from UPS providers regarding their universal services. Furthermore, special reference must be made to the access conditions regarding these services as well as to prices and quality levels. The information must be published in an appropriate manner.

In the process of provider switching, the postal user makes a comparative analysis about the quality provided by the new supplier against the previous one. Taking into account this matter, Directive 97/67 CE states that the quality of service expected by users constitutes an

essential aspect of the services provided; the evaluation standards for this quality of service and the levels of quality achieved must be published in the interest of users.

Although the legislation enforces the duty to provide information about UPS by the USP, this measure would have to extend to every postal service provider, both within the scope of the universal service and including all other services. Thus, it would ensure that the consumer can analyse and compare the conditions of all alternative services, including deliveries, prices, packaging, quality, claims, indemnification, schedules, access conditions, bonuses, and territorial scope of application.

6 THE TERMINATION OF A LONG-TERM RELATIONSHIP WITH THE INCUMBENT

Some service providers have enjoyed their market power for many decades, operating as monopolies or with a high market share. The EU postal sector possessed monopolistic characteristics when the liberalization process began 15 years ago and even today most providers still operate above the market power threshold. The conventional workings of the postal sector have ensured relationships of extraordinary longevity. Long links with a service provider results in a relationship that is more complex and produces larger commercial deals (Reinartz and Kumar, 2003). Long-term relationships contribute to shared values, identification between the parts, mutual information and certainty regarding behavior (Palmatier et al., 2006). In so far as the provider offers a quality service and satisfactorily remedies any failures, the length of service in the relationship reinforces brand loyalty. Empirical studies, as Woitschläger *et al.* (2011), reveal that satisfaction, economic switching barriers, social ties, and habits are the drivers of customer loyalty. Empirical support for inter-temporal dependencies in brand choices, also known as state dependence effects, has been obtained in various contexts (Seetharaman, 2003; Abramson et al., 2000; Seetharaman et al., 1999). The role of the informational advantage is studied by Villas-Boas (2004, 2006). This advantage may work as a barrier to entry because consumers tend to be loyal to the pioneering brands. White and Yanamandram (2006) explore the mediating effects of dependence and commitment on the relationship between switching costs and behavioural loyalty.

Loyalty brand is considered one of the factors behind consumer reluctance to abandon the USP (Jonsson and Selander, 2006). Brand loyalty reduces the vulnerability of the dominant operator against competition and acts as an entry barrier. If entrants into the market offer greater

quality services, loyalty delays customer decisions to separate from their present provider and, at the same time, the incumbent has time to introduce quality improvements oriented to maintain customer portfolios. Therefore, brand loyalty constitutes an essential element of entry barriers in the postal sector. Along the same lines as Dijl et al. (2006) and McAfee et al. (2004) maintained that economies of scale would constitute an entry barrier only if consumers were loyal to the incumbent. That is to say, only where economies of scale are accompanied by a strong inertia on the demand side can we speak of authentic entry barriers in the postal sector. Thus, scale economies alone do not constitute an entry barrier.

Discomfort experienced by customers of a new supplier when adapting to the change are an unquantifiable cost that requires the estimators's best judgment. While this is an important factor, it must not be overemphasized.

7 THE RETENTION COSTS

After 25 years of a staggered liberalization process, along with the suppression of the reserved USP market share and the survival of USO, the 2011 postal FMO now constitutes a threat to the financial viability of USPs, with the risk of a graveyard spiral (Crew and Kleindorfer, 2006a, 2006b; Prado et al. 2012). A regulation to asymmetrically restrict USPs in terms of prices and products would aggravate the situation because, although it may encourage a short-term entry, the costs of asymmetric regulations often surpass their benefits in a long-term entry (Armstrong y Sapintong, 2006, 349).

In this context, an alternative of USP is the adoption of a strategy of bearing retention costs. Retention costs are those costs that the incumbent incurs through alternatives measures such as rebates and loyalty awards, designed to prevent customer abandonment. On other hand, if the incumbent is not asymmetrically restricted in products, another possible alternative is the supply of new products with more attractive benefits and of better quality.

What is relevant to our work is that these strategies generally suppose a pricing reduction or a cost increase, measures that are deemed customer retention costs.

Customer retention in the postal sector through price discounts, equivalent to second-degree price discrimination, is a wide-spread practice, although constantly subject to regulatory scrutiny as seen in the recent cases of La Poste (France), bpost (Belgium) and the Postal Service of EE.UU. (USPS) (Crew and Kleindorfer, 2012, p.3). The defender model shows that the incumbent postal operator can better defend his market share by differentiating his services

with regard to one or more quality dimensions, and not just through pricing strategies (Jaag et al., 2012, p.2

Regarding Crew and Kleindorfer (2012), Eccles (2012), Wojtek and Zauner (2012) and Pateiro et al. (2013) we analyse the main rebate modalities carried out in the postal sector to retain customers (especially regarding key clients). Table 2 shows the main rebate modalities:

Table 2

The retention costs and their effects.

Rebate modalities	Positive effects	Negative effects
(a) Quantity rebates	Usually reflects the economies of scale that comes with large quantities. In network industries, two-part tariffs are common: a flat component (independent of volume) and a variable component (dependent of volume). A higher demand means a lower average price due to the distribution of fixed costs among a greater volume of service.	If applied in a discriminatory manner, it can have negative effects on competition
(b) Turnover-related rebates	This rebate is enjoyed by those customers who spend a certain amount within a certain period (i.e., one year). This type of discount can produce a pull effect on demand because when the customer is near the established threshold he will increase his purchases to obtain the discount.	Can lead to exclusive contracts and limit competition
(c) Total turnover-related rebates	This rebates take into account all the services offered by the provider. Is geared to restrain the customer from buying from other competitors. It can be attractive in the postal sector in which operators expand their activities beyond the postal service. Fidelity rewards are given to customers who meet all their needs with the services of one provider, irrespective of the amount purchased.	
(d) Price reduction based on a reduced product or service, or work-sharing	This type rebate has received a lot of interest recently in the postal service because the user, sender or recipient, can assist in the provision of services. The sender presents the fully addressed and labeled items. The addressee can collect the items from the postal office or some point in route, thus reducing the operator's domiciliary distribution costs (last mille costs)	The sender, recipient and postal operator must weigh the advantages and disadvantages of shared work

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8 CONCLUSIONS AND DISCUSION

A part of provider switching costs are related to the access to some incumbent infrastructures such as postcode system, address database, post office boxes, delivery boxes, information on change of address, re-direction service and return to sender service. This provision shall be without prejudice to the right of Member States to adopt measures to ensure access to the postal network under transparent, proportional and non-discriminatory conditions. Directive 2008/6 states that Member States shall ensure that transparent, non-discriminatory

access conditions are available to these elements of postal infrastructure or services. Parties can best define among themselves the most appropriate way to ensure interoperability.

Access to services, as such redirection service, change of address service, return to sender service should be centralized in an entity shared for all operators who, in turn, would share the costs of such entity through prices for those services and through other sources. The proposed system reduces the switching costs and enhances the long term competition in the postal sector. Regulation on upstream and downstream access to the postal network is not homogeneous across states and, moreover its development has not reached a sufficient level so far.

The theoretical and empirical investigation maintains that it is more expensive to recover a customer than to retain him. Although the proportion differs among studies, acquiring a new customer can cost five times more than satisfying and retaining a current customer. Every year companies lose an important proportion of customers, this loss has negative multiplying effects on profits. Thus, there is a positive correlation between the rate of return of a customer and the length of the relationship with the provider. Consequently, customer retention strategies are very important in a liberalized postal market, just like the policies to reduce switching costs for greater competition.

Finally, competition in the postal sector has experienced a limited progress compared to the initial proposals. The incumbents still retain a high market share. The causes of limited competition in the postal market lie in the insufficient and too slow access regulation, the evolution of communication technologies to the detriment of classical postal communications, the economic crisis, as well as switching costs to a lesser extent.

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