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## Reduction of switching costs: Some solutions for access to vital elements of the postal network

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**ABSTRACT**

This article examines the costs of switching that may exist in the European postal sector, where it is carried out an ambitious process of opening to competition since 1997. Inadequate regulation of the access to some elements of postal infrastructure or services within the scope of the universal postal service, such as postcode system, address database, post office boxes, delivery boxes, re-direction and retour to sender service, can generate switching costs and thus limiting competition. The authors propose adaptations in line with the sectorial directives aimed at strengthening competition in the long term in the postal market.

**Key words:** Liberalization, universal postal service, switching costs, postal network.

**JEL Classification:** L87; M31; L32; L51.

**REDUCCIÓN DE COSTOS DE CAMBIO: ALGUNAS SOLUCIONES  
PARA EL ACCESO A ELEMENTOS VITALES DE LA RED POSTAL**

**RESUMEN**

Este artículo examina los costos de cambio que pueden existir en el sector postal europeo, donde se lleva a cabo un ambicioso proceso de apertura a la competencia desde 1997. Una regulación inadecuada del acceso a algunos elementos de la infraestructura, o los servicios postales en el ámbito del servicio postal universal, como el sistema de código postal, la base de datos de direcciones, las cajas de correos, las cajas de entrega, la redirección y el retorno al servicio del remitente, pueden generar costos de cambio y, por tanto, limitar la competencia. Los autores proponemos adaptaciones en línea con las directrices sectoriales destinadas a reforzar la competencia a largo plazo en el mercado postal.

**Palabras clave:** liberalización; servicio postal universal; costos de cambio; red postal.

**Clasificación JEL:** L32; L51; L87; M31.

**1. INTRODUCTION**

**T**his work is part of the field of regulation on the liberalization of services of general economic interest (SGEI) that are taking place in the European Union (EU) since the last decade of the twentieth century. Although the article focuses on the postal sector, shares some aspects with other SGEI that are provided on a network infrastructure.

Prior to its liberalization, the European postal sector was characterized by typical monopolistic characteristics: 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 (the reserved area) that [Directive 97/67/EC](#) had exclusively ascribed to USPs<sup>1</sup> 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 order to improve social welfare ([Crew and Kleindorfer, 2006](#)).

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 USPs economic equilibrium in danger, and hence, [Directive 97/67/EC](#) and, more particularly, [Directive 2008/6/EC](#), designs mechanisms in order to finance the additional costs of such USOs: 1) a mechanism to compensate the undertaking concerned from public funds or 2) a mechanism for the sharing of the net costs of the universal service obligations 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 USPs must assume the USOs. 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 UPS or due to inefficiencies in the access regulations of the postal network.

Fifteen 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 pro-

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**1** An operator such as this will be a designated USP or an incumbent; this term has become widespread in regulatory literature.

cess has still retained a high market share, approximately 90%, in terms of main postal products. Furthermore, as pointed out by [Jonsson and Selander \(2006\)](#), [Pateiro Rodríguez, García Iglesias, and Barreiro Viñan \(2013\)](#) and [Pateiro Rodríguez, Barreiro Viñan, and García Iglesias \(2013\)](#), 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 ([Fève, Florens, and Lécou, 2010](#)) and the current economic crisis ([Martin, Pateron, and Wang, 2012](#); [Trinkner and Grossmann, 2006](#)). In this context, 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, the authors 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](#); [White and Yanamandram, 2007](#)). 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).<sup>2</sup> Insofar as consumers are able

2 See [Prado Domínguez and Pateiro Rodríguez \(2010\)](#) for the application of policies to the postal sector as recommended by [Armstrong and Sappington \(2006\)](#).

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 USPs can adopt a maintenance strategy regarding their market share by means of the renegotiation of contracts<sup>3</sup> 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.<sup>4</sup> The costs derived from such strategies can be considered as customer retention costs. Thus, the USPs will support retention costs in the same way that the customer or the entrant support the switching costs. In the second section the authors analyse typical provider switching costs.

The work is structured as follows: after this introduction, section 2 addresses the interesting question of switching costs. Reducing switching costs constitute a policy that favors vigorous competition in the long term (Armstrong and Sappington, 2006). In section 3, the authors analyze the access to some elements of the postal network. This work is done in this order: access to postal office boxes (PO boxes), access to post-codes, redirection of mail service, change of address, return to sender service, and access to letterboxes. The paper analyzes the situation of each of these elements, and proposes innovative solutions. In sections 4 and 5, the information costs and the termination of a long-term relationship with the incumbent, respectively, are studied. Finally, section 6 contains the main conclusions.

## 2. 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.

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**3** The Sweden's USP Posten AB and other European USPs followed this strategy at the beginning of the 1990s. Many of these contracts were annulled or modified by competition courts.

**4** Cream skimming practices in the postal sector are common in profitable urban areas.

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: 1) financial costs derived from the switching process; 2) information and search costs on available alternatives, and 3) 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, p. 108). Switching costs constitute any factor that makes it difficult to or increases the price of a customer switching providers (Valenzuela, Pearson, and Epworth, 2005, p. 243). When the customer leaves their usual provider, they incur two types of loss: 1) 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 2) 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, Pearson, and Epworth, 2005). Table 1 summarizes the switching cost classifications of Burnham, Frels, and Mahajan (2003) and Jones, Mothersbaugh, and Beatty (2002). The authors have adapted this table assuming that the customer may change the postal service provider.

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<sup>5</sup> 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 favour the 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, Chiang, and Rhee (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.

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5 Portability is the guarantee that the customer will keep the same telephone number when they switch service provider.

**TABLE 1**  
**CLASSIFICATION OF SWITCHING COSTS**

Burnham, Frels, and 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, and 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 (+), 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 (-).

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

Source: Burnham, Frels, and Mahajan (2003) and Jones, Mothersbaugh, and Beatty (2002); modify and adapted by authors.

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 organization 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.

In the postal service 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.

### 3. NETWORK AND DATABASES ACCESS

In this subheading, the authors analyze access to some elements of the postal network. This work is done in this order: access to PO boxes, access to postcodes, redirection of mail service, change of address, return to sender service, and access to letterboxes.

#### 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.

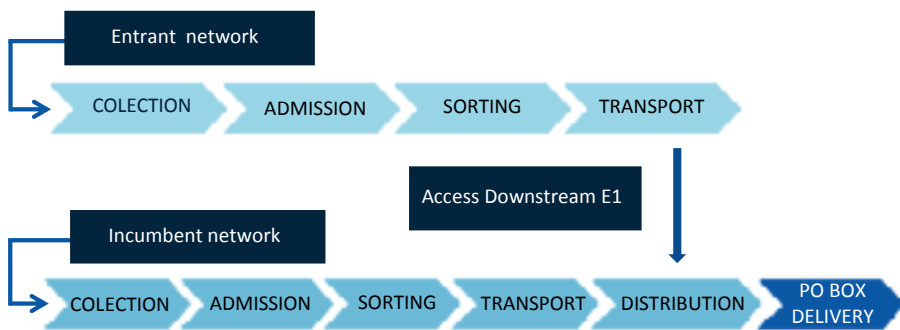
If the consignor changes the provider, the new operator needs to enter the incumbent's premises in order to leave the deliveries into the box appointed for the addressee. The competitor cannot inject its mail anywhere in the entrance of the delivery unit: this would imply problems with regard to contracting and transferring responsibility.

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**  
**ENTRANT ACCESS TO PO BOX OF THE INCUMBENT**



Source: The authors.

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.

### 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 general postal services 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, Roy, and Vantomme, 2010).

However, the 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 pre-sorted 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.

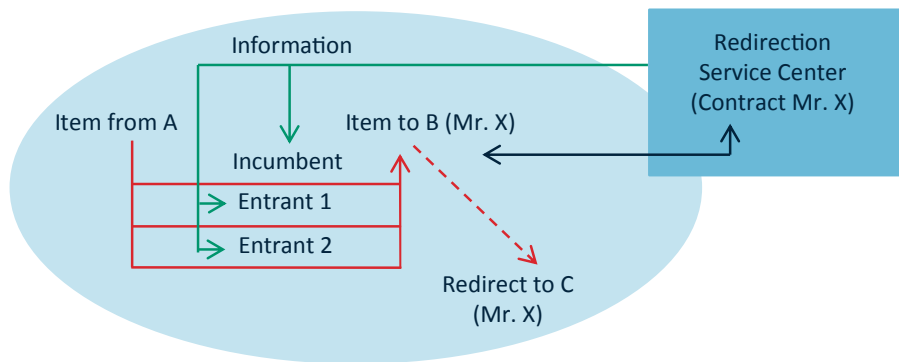
In Sweden, postcode changes are handled by a Postcode Council with representatives of Posten AB, City Mail, the confederation of private postal operators and government agencies. The Regulator can put system changes on hold. In the United Kingdom (UK), Royal Mail is committed to a policy of no change 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.

### **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.<sup>6</sup> 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 forwarding's 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**  
**CENTRALIZED REDIRECTION SERVICE**



Note: Green = information redirection; red = postal delivery route; dashed line = redirection route.

Source: The authors.

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 redirec-

<sup>6</sup> Spain: contrats: 1, 2 y 6 months: national: 33.28€, 49.90€, 66.09€. International: 50,19€, 75,65€, 99,86€. France: contrats 6, 12 months: national 24.5€, 44€. International: 69€, 124€. UK: 3, 6, 12 months, from £24.99 for each last name (in all cases prices in 2015).

tion 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, 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.

### Change of address

Access to the change of address is a more important issue than access to the postcode database for delivering mail (Fratini, Roy, and Vantomme, 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 a Commission Nationale de l'Information et des Libertés (CNIL)<sup>7</sup> 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.

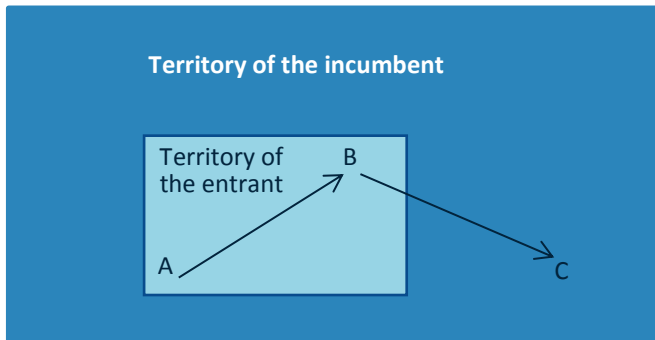
### Return to sender service

Consider a postal mailing deposited in *A* and destined to *B*, both within the territory of the entrant (See 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

<sup>7</sup> The Commission Nationale de l'Information et des Libertés protects citizens' personal information, to prevent any general cross-filing of the population.

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.

**FIGURE 3**  
**RETURN SERVICE OUTSIDE AREA OF THE ENTRANT**



Source: The authors.

The [Directive 2008/6/EC](#) 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.

Cases like those in Figure 3 are not very frequent, but a decision must be adopted. According to [ECORYS \(2008\)](#) 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 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.

We propose as solution in this area, in line with that adopted in Sweden, that the NRA estimates the cost of return to sender service of postal items that are to be returned to locations outside the territory of first operator, when he is working in a limited geographical area. This cost will be shared by each of the postal operators in proportion to their volume of mail. Although the total costs of return to sender service are small, an equal distribution, to our knowledge, it may be unfair. This solution reduces the three common types of switching costs: procedural, financial and relational costs.

### 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 (United States, 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, Roy, and Vantomme, 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, according to Plaut Economics (2007, p. 16) (cited by [Fratini, Roy, and Vantomme, 2010](#), p. 24).

To avoid switching costs such as those described above and to promote competition in the postal sector, [Directive 2008/6/EC](#) states 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 UPS, such as postcode system, address database, post office boxes, delivery boxes, information on change of address, re-direction service and return to sender service.

[ECORYS \(2008\)](#) 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, labeling 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 harmonization of technical standards shall be continued, taking into account in particular the interest of users. This work shall take into account the harmonization measures adopted at international level and in particular those decided upon within the UPU.

#### **4. INFORMATION COSTS AND THE SEARCH FOR AVAILABLE CHOICES**

[Varela Neira, Vázquez Casielles, and Iglesias Argüelles \(2009\)](#) found that a lack of attractive choices in the market or perceiving the present pro-

vider 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 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: 1) fast access to information on the existence of competitors, including accessibility, schedules, prices and other supply conditions; 2) cost reductions for the consumer when he switches provider (*i.e.*, to retain the same PO box number and postal code), and 3) 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/EC 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 in-



cluding 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.

## 5. 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 Woisetschläger, Lentz, and Evanschitzky (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, Ainslie, and Chintagunta, 1999). The role of the informational advantage is studied by Villas-Boas (2004 and 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 [Stigler \(1968\)](#), [Dijl, Van Damme, and Larouche \(2006\)](#) and [McAfee, Mialon, and Williams \(2004\)](#) 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 one can 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 estimator's best judgment. While this is an important factor, it must not be over-emphasized.

## 6. CONCLUSIONS

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/EC](#) 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. The examples in the postal sector show that ex ante soft regulation, where the NRA intervenes only in the case of disputes, seems to be the emerging model.

In the postal sector, as in other network services, reducing the switching cost can contribute to the promotion of competition in the long term. Access to network elements studied in this work contributes undoubtedly to competitive entry and, through it, increased consumer surplus and social welfare.

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.

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.

## REFERENCES

- Abramson, C., Andrews, R.L., Currim, I.S., and Jones, J.M. (2000). Parameter bias from unobserved effects in the multinomial logit model of consumer choice. *Journal of Marketing Research*, 37(4), pp. 410-426.
- Armstrong, M.S., and Sappington, D.E. (2006). Regulation, competition and liberalization. *Journal of Economic Literature*, 44, pp. 325-366.
- Burnham, T.A., Frels, J.K., and Mahajan, V. (2003). Consumer switching costs: A typology, antecedents, and consequences. *Journal of the Academy of Marketing Science*, 31, pp. 109-126.
- Crew, M.A., and Kleindorfer, P.R. (2006). The welfare effects of entry and strategies for maintaining the USO in the postal sector. In: M.A. Crew and P.R. Kleindorfer (eds.). *Progress Toward Liberalization of the Postal and Delivery Sector* (pp. 3-22). New York: Springer.
- Deligonul, S., Kim, D., Roath, A.S., and Cavusgil, E. (2006). The Achilles' heel of an enduring relationship: Appropriation of rents between a manufacturer and its foreign distributor. *Journal of Business Research*, 59(7), pp. 802-810.
- Dijl, P., Van Damme, E., and Larouche, P. (2006). Regulating access to stimulate competition in postal markets? In: M.A. Crew and P.R. Kleindorfer (eds.). *Progress Toward Liberalization of the Postal and Delivery Sector* (pp. 153-162). New York: Springer.
- Directive 97/67/EC of the European Parliament and of the Council of 15 December 1997 on common rules for the development of the internal market of Community postal services and the improvement of quality of service. *Official Journal of the European Communities*, L 15, volume 41, 21 January 1998, pp. 14-25.
- Directive 2002/22/EC of the European Parliament and of the Council of 7 March 2002 on universal service and users' rights relating to electronic communications networks and services (Universal Service Directive). *Official Journal of the European Communities*, L 108, volume 45, 24 April 2002, pp. 51-77.
- Directive 2002/39/EC of the European Parliament and of the Council of 10 June 2002 amending Directive 97/67/EC with regard to the further

- opening to competition of Community postal services. *Official Journal of the European Communities*, L 176, volume 45, 5 July 2002, pp. 21-25.
- Directive 2008/6/EC of the European Parliament and of the Council of 20 February 2008 amending Directiva 97/67/EC with regard to the full accomplishment of the internal market of Community postal services. *Official Journal of the European Union*, L 52, volume 51, 27 February 2008, pp. 3-20.
- ECORYS (2008). *Main developments in the postal sector (2006-2008). Final report*. Rotterdam, The Netherlands: ECORYS Nederland BV.
- Fève, F., Florens, J.P., and Lécou, S. (2010). Forecasting mail volumes in an evolving market environment. In: M.A. Crew and P.R. Kleindorfer (eds.). *Heightening Competition in the Postal and Delivery Sector* (pp. 116-134). Northampton, MA: Edward Elgar Publishing Limited.
- Fratini, A., Roy, B., and Vantomme, J. (2010). Access to infrastructure and service elements in the postal sector. In: M.A. Crew and P.R. Kleindorfer (eds.). *Heightening Competition in the Postal and Delivery Sector* (pp. 22-37). Northampton, MA: Edward Elgar Publishing Limited.
- Ghosh, B., and Galbreth, M.R. (2013). The Impact of Consumer Attentiveness and Search Costs on Firm Quality Disclosure. A Competitive Analysis. *Management Science*, 69(11), pp. 2604-2621.
- Jones, M.A., Mothersbaugh, D.L., and Beatty, S.E. (2002). Why customers stay: Measuring the underlying dimensions of services switching costs and managing their differential strategic outcomes. *Journal of Business Research*, 55(6), pp. 441-450.
- Jones, M.A., Kristy E. Reynolds, K.E., Mothersbaugh, D.L., and Beatty, S.E. (2007). The positive and negative effects of switching costs on relational outcomes. *Journal of Service Research*, 9(4), pp. 335-355.
- Jonsson, P., and Selander, S. (2006). The real graveyard spiral. Experiences from the liberalized Swedish postal market. In: M.A. Crew and P.R. Kleindorfer (eds.). *Progress Toward Liberalization of the Postal and Delivery Sector* (PP. 359-366). New York: Springer.
- Levesque, T.J., and McDougall, G.H. (1996). Customer dissatisfaction: The relationship between types of problems and customer response. *Canadian Journal of Administrative Sciences*, 13(3), pp. 264-276.
- Martin, V.L., Paterson, C., and Wang, J.X. (2012). Forecasting letter volumes: Augmenting econometric baseline projections. In: M.A. Crew and P.R. Kleindorfer (eds.). *Multi-modal Competition and the Future of Mail* (pp. 60-76). Northampton, MA: Edward Elgar Publishing Limited.
- McAfee, R.P., Mialon, H.M., and Williams, M.A. (2004). What is a barrier to entry? *American Economic Review*, 94, pp. 461-465.

- Palmatier, R.W., Dant, R.P., Grewal, D., and Evans, K.R. (2006). Factors influencing the effectiveness of relationship marketing: A meta-analysis. *Journal of Marketing*, 70(4), pp. 136-153.
- Pateiro Rodríguez, C., Barreiro Viñán, J.M., and García Iglesias, J.M. (2013). Efectos de los costes de cambio y de retención sobre el bienestar social en el proceso de apertura del servicio postal europeo. In: J.M. Moreno Jiménez (coord.). *Anales de Economía Aplicada 2013*. España: Delta Publicaciones y Asociación Internacional de Economía Aplicada (Asepelt).
- Pateiro Rodríguez, C., García Iglesias, J.M., and Barreiro Viñán, J.M. (2013). Las dimensiones territoriales urbana e interurbana de la liberalización del sector postal y cuestiones de ineficiencia del acceso a la red. *Urban Public Economics Review*, 17, pp. 78-105.
- Patterson, P.G., and Smith, T. (2003). A cross-cultural study of witching barriers and propensity to stay with service providers. *Journal of Retailing*, 79(2), pp. 107-120.
- Porter, M.E. (1980). *Competitive Strategy: Techniques for Analyzing Industries and Competitors*. New York: Free Press.
- Prado Domínguez, J., and Pateiro Rodríguez, C. (2010). Un análisis de la transformación del servicio universal y el ámbito reservado en las políticas para la competencia del sector postal en la Unión Europea. *Gestión y Política Pública*, 19(2), pp. 187-237.
- Reinartz, W.J., and Kumar, V. (2003). The impact of customer characteristics on profitable lifetime duration. *Journal of Marketing*, 67(1), pp. 77-99.
- Seetharaman, P.B. (2003). Probabilistic versus random-utility models of state dependence: An empirical comparison. *Journal of Research in Marketing*, 20(1), pp. 87-96.
- Seetharaman, P.B., Ainslie, A., and Chintagunta, P.K. (1999). Investigating Household State Dependence Effects across Categories. *Journal of Marketing Research*, 36(4), pp. 488-500.
- Sharma, N., and Patterson, P.G. (2000). Switching costs, alternative attractiveness and experience as moderators of relationship commitment in professional, consumer services. *International Journal of Service Industry Management*, 11(5), pp. 470-490.
- Shi, M., Chiang, J., and Rhee, B.D. (2006). Price competition with reduced consumer switching costs: The case of wireless number portability in the cellular phone industry. *Management Science*, 52(1), pp. 27-38.
- Stigler, G.J. (1968). Barriers to entry, economies of scale, and firm size. In: G.J. Stigler (ed.). *The organization of Industry* (pp. 67-70). Homewood, IL: Irwin.

- Trinkner, U., and Grossman, M. (2006). Forecasting Swiss mail demand. In: M.A. Crew and P.R. Kleindorfer (eds.). *Progress Toward Liberalization of the Postal and Delivery Sector* (pp. 267-280). New York: Springer.
- Valenzuela, F., Pearson, D., and Epworth, R. (2005). Influence of switching barriers on service recovery evaluation. *Journal of Service Research, Special Issue*, December, pp. 239-257.
- Varela Neira, C., Vázquez Casielles, R., and Iglesias Argüelles, V. (2009). Comportamiento de abandono de la relación de un cliente con la empresa en un contexto de fallo y recuperación del servicio. *Cuadernos de Economía y Dirección de la Empresa*, 40, pp. 143-170.
- Viard, V.B. (2007). Do switching costs make markets more or less competitive? The case of 800-number portability. *The RAND Journal of Economics*, 38(1), pp. 146-163.
- Villas-Boas, J.M. (2004). Consumer learning, brand loyalty, and competition. *Marketing Science*, 23(1), pp. 134-145.
- Villas-Boas, J.M. (2006). Dynamic competition with experience goods. *Journal of Economics and Management Strategy*, 15(1), pp. 34-66.
- White, L., and Yanamandram, V. (2006). Exploring the switching costs-behavioural loyalty relationship amongst dissatisfied customers in the B2B services sector [Papers no. 235]. [online] Faculty of Business, University of Wollongong. Available at: <<http://ro.uow.edu.au/commpapers/235/>>.
- White, L., and Yanamandram, V. (2007). A model of customer retention of dissatisfied business services customers. *Managing Service Quality*, 17(3), pp. 298-316.
- Woisetschläger, D.M., Lentz, P., and Evanschitzky, H. (2011). How habits, social ties, and economic switching barriers affect customer loyalty in contractual service setting. *Journal of Business Research*, 64, pp. 800-808.