Three Essays on the Economics of the Postal Sector

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This dissertation contributes to the literature and current discussions on universal service obligations (USO) in Europe. It consists of three independent chapters.

In chapter one, we investigate the consumers’ preferences for various kinds of postal services. As such, we begin by reviewing the market and regulatory conditions for Europe and for our case study, Belgium. Then using data provided by the incumbent provider, the Belgian post (Bpost), we estimate demand price elasticities. The data comprises customer transactional information on letter mail, direct mail, parcels & express services, press delivery and value added services for the 2008-2009 period. These categories constitute not only the important lines of services that Bpost offers to its clients but also the main segments that constitute the whole Belgian postal market. As such, and using standard methods, we estimate for each service an equation that explains demand by prices, product varieties (i.e., mixes or combinations of volume, weight, priority and destination, *inter alia*), income, regulation proxies and other socioeconomic variables. The estimated price elasticities for regulated and partially regulated services are around -1.1, whereas for unregulated segments they fluctuate between -2.1 and -2.8. The lowest price elasticity is obtained for direct mail services (-1.0); the highest ones are associated with value added services (-2.1) and registered mail (-3.3). Price elasticities may be influenced by the cyclical effects during the period of analysis. Therefore, elasticities are higher when compared with the empirical evidence obtained for other countries and through the various methodologies applied over the last decades. The fact that technological substitutes, such as expenditures on telephony and internet access for daily and administrative mail services and, radio and television advertising for direct mail services, could not be accounted for (because there were no data available) may however be considered as a major limitation for the scope of our results.

In the second chapter, we explore theoretically the effects of the USO on unregulated markets. In particular, we are interested in investigating its welfare effects when the provision of services cannot be technologically separated. We present a model in which there is an incumbent who provides two services: a universal service and a non-USO service, the latter opened to competition. This is the case of letter mail and direct (or bulk) mail, services which have quite different purposes and regulatory frameworks (i.e., the former is fully regulated whereas the latter is liberalized under the current European Internal Market framework), but are jointly produce at some stages of the postal value chain. The USO is simplified to two dimensions, affordability and quality, implemented as a price cap and a minimum quality standard (MQS) for the provision of letter mail services. The latter involves the technological aspects that we are interested in. We find that the definition of the USO plays an important role in organizing markets that are open to competition. When it imposes few quality requirements (low MQS), the incumbent is not cost efficient enough to provide the high-quality variant of bulk mail, allowing its competitors to cream-skim the segment. However, because there are cost economies, the firm’s participation in the segment yields a higher average quality of mail services at lower prices. When the USO is too comprehensive (high MQS), the incumbent exhibits large cost economies that ensure a dominant position in the provision of bulk mail services. Consumers are worse off as competition induces too much service differentiation in order to make profitable the provision. Relaxing the definition of the USO mitigates the competitive advantage of the USP and so, yields improvements in welfare. In the absence of access costs, firms will
find profitable to participate in the bulk mail segment. However, foreclosure happens if the USO induces the incumbent to exhibit significant fixed costs. Therefore, the USP may end up as the sole supplier of bulk mail services if the definition of the USO imposes too many quality requirements (high MQS). In that case, the authority must balance the welfare gains of defining USO with the welfare losses of the consumers of the contested service.

Finally, in the third chapter we consider the ownership aspect of the provision of universal services as an incentive to introduce competition. One can further segment the provision between services for customers located in high-cost areas and services for customers located in low-cost areas. Additionally, under the current EU legislation, the supply is divided between upstream activities (e.g., collection and sorting) and downstream activities (i.e., delivery). The provision of upstream activities in high-cost areas remains in the hands of the incumbent firm or the owner of the downstream (delivery) network. The upstream provision in low-cost areas is open to competition, but a retailer may be vertically integrated/separated or legally unbundled with the downstream firm. Legal unbundling means, in our model, that the downstream firm and one upstream firm located in the low-cost area belong legally to the same entity entitled to all profits, whom does not have full control rights over the firms' decisions. That is to say, upstream activities and the downstream services will be managed separately under the same ownership. In this framework we analyze the firm's boundaries in terms of competition development and welfare. We implement two criteria to answer questions like, does vertical separation promotes competition (entry of firms) while covers a larger demand than vertical integration? Does vertical integration demand less public funds to cover demand? Does legal unbundling is worse than ownership separation to promote competition? The first criterion is the probability of entry (of the potential upstream firm), which we determine for each modes of ownership. The second criterion is the cost of public funds. It is implemented by defining a loss function as the difference between the expected consumer surplus when the downstream firm chooses an access fee that maximizes its profits and the consumer surplus when access is priced at marginal cost. The use of both criteria let us conclude that efficient entry occurs when the downstream firm is vertically separated or legally unbundled of the retailer providing services in the low-cost area. However, it is under legal unbundling that the access charge takes its lowest value. The highest cost of public transfers is obtained when firms are vertically separated, but the lowest one is attained when firms are legally unbundled. Therefore legal unbundling constitutes the preferred organizational form to induce competition and to reduce the cost of public funds.

These three chapters constitute the beginning of a research agenda in the regulation of universal services. Like most liberalized industries, the European postal services are facing strong dynamic changes that prompt the rapid adaptation. The recognized benefits of the universal services are indeed a reason to preserve them as a special regulatory regime. However, a fine-tuning of the definition is critical if welfare and competition development is to be enhanced. Many aspects remained outside of this dissertation, which are continuously analyzed (e.g., funding, work-sharing, labor relations). Nevertheless, we considered these three topics as relevant and hope they be a contribution to the current discussions and advances in the understanding of the incentives given by the universal service obligations.