Universal service auctions in liberalized postal markets

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Introduction

In a liberalized market, corporations will only provide unprofitable services in exchange for some kind of compensation. Universal service obligations (USO) impose several restrictions on universal service providers (USP) such as on product definitions, network size, quality levels and pricing flexibility. A USP being forced to provide uneconomic quality or suboptimal pricing structures will require fair compensation for fulfilling its public mission. Such “subsidies” should compensate the firm for its loss in profit due to the USO (cf. Panzar 2000).

Universal service auctions are an allocation mechanism with the purpose to find the most efficient USO provider at the minimum level of compensation. First, the government defines the services that must be offered, afterwards firms bid for the concessions, and finally the USO is awarded to the firm that asks for the lowest compensation to deliver a specific set of universal services. Alternatively, firms might receive a fixed subsidy and bid for other aspects, such as the price or the coverage level. Hence, auctions aim to introduce competition for the market. Potential operators are given incentives to reveal their true costs and enable the government to select the best offer.

The use of auctions for allocating the right to provide public services is not new. Demsetz (1968) introduced the idea that franchising may be a good substitute for regulation in network industries. In the 1990s, USO auctions have been used recurrently in Latin America and African countries to extend the coverage of basic services such as public telephony, electricity, water, urban transport, air transport and garbage and waste collection. Wellenius (2002) shows that compared to other mechanisms for providing public services in rural areas, the countries that have used auctions have offered lower subsidies, attracted more private investment and generated more transparency in the regulatory process. This may explain why USO auctions have expanded from attractive services in low and medium income countries (telecommunications, electricity) to high income countries and less attractive services for investors (water, sewerage, urban transport).

From early on, several authors such as Williamson (1976) have noted that franchising contracts can be even more problematic than regulation, especially if the initial award criteria are not clear and include a set of quality dimensions, and when there is uncertainty about the evolution of key aspects affecting the sector that make the contracts incomplete. Further obstacles to USO auctions relate to the possibility of collusion. Similarly, the size and specific cost and demand structure in concentrated industries raises a variety of issues. Further regulatory challenges arise in USO auctions in liberalized industries where USO operators do not receive substantial exclusive rights. This distinction is of special importance in postal markets in the EC where USO auctions are discussed in the context of fully liberalized markets.

The objective of this chapter is to analyze the main features of USO auctions in liberalized markets and to discuss possible applications in the postal sector. We argue that although subsidy auctions could be used to expand the coverage of postal services in rural areas, especially in developing countries, its general application to determine the USO provider of an entire country may entail important disadvantages.

The chapter proceeds as follows. Section 1 provides an overview on the basic options available to governments in public procurement. Section 2 shows the main regulatory aspects that should be considered when designing a USO auction. Section 3 raises some potential
problems arising from USO auctions. Section 4 assesses recent applications of USO auctions in several countries and sectors. Section 5 discusses the use of reverse auctions in the postal sector. Finally, Section 6 presents our conclusions.

1. The role of tendering in public procurement

In a procurement process, public authorities choose the best way to ensure the provision of a service. The decision process of the authority can be decomposed in several steps (Figure 1). In a first step, a package of duties and rights for the operators has to be specified. The definition of the package determines the market structure and the financial burden imposed on the operators. A key decision is whether exclusive rights are included or not.

In a second step, the public administration must decide whether it supplies the service itself or if it delegates the production to a private operator. The public provision of a service can be undertaken through two mechanisms: (1) Public production. This option is often chosen for strategic goods such as police or utilities such as water, power, or postal services; and (2) Contracting for the services. The public administration can select the provider of the service through direct negotiations with selected parties, a beauty contest based on various criteria, or public tendering.

**Figure 1: Decision-Tree for public procurement**

The decision of the authorities over self-production or contracting/outsourcing can be made taking into account the following criteria.

**Efficiency.** Who can provide a certain service more efficiently, a public or a private company? For example, public firms might face higher wages due to public-servant regulations. Private
companies usually incur higher capital costs and profit margins but can be expected to be more innovative and cost aware.

Risk of the activity. Private firms try to avoid large and risky investments over a long time horizon. Compared to public enterprises, they have a lower risk capacity and expect a higher risk premium.

Public authorities’ bargaining power. Outsourcing is usually easier than in-sourcing. Among others, hold up risks should be considered. If the threat of renegotiation of the contract is high, authorities might prefer self-provision of services.

Minimization of transaction costs. Organizing and monitoring a tender is costly. If proper monitoring is not possible and if it is difficult to create incentives, contracting might not be appropriate.

Political considerations and national security. Public authorities will take into account what is, or what should be, the role of government in the production of services and concerns related with national security.

In case of market delegation, in a third stage public administrators can use various options to select the provider of the service: (1) Direct negotiation. Contracts are negotiated between the authorities and third parties; (2) Public tendering. Authorities tender a package of rights and duties, and virtually any candidate can apply for the contract; (3) Intermediate options. In competitive dialogue (or beauty contest), a number of operators is invited to participate in the tender.

The relevant criteria for selecting the provision of the service are:

Asymmetric information between the procuring agency and the firms. The use of auctions might help to overcome information asymmetries. However, it does not solve the problem of moral hazard associated with providing services once the auction is won.

Industry structure. Only a sufficiently large number of participants ensures a competitive tender that forces potential providers to uncover their true costs. Other important aspects are the degree of integration of operators, the regulation of access charges and market entry barriers (among others the presence sunk costs).

Auction Design. The design of auctions requires decisions over several trade-offs that entail – among others – allocative effects. A specific issue in the postal sector is high transaction costs associated with the integration of sub-regional networks with a large national network.

Finally, in most circumstances, a fourth stage is possible. State owned firms as well as private operators may subcontract parts of their mandate to third parties (Figure 1). Thereby, most of the criteria mentioned above can be applied to decide the degree of outsourcing of particular activities by operators. A practical example is New Zealand Post’s outsourcing policy to ensure postal delivery in rural areas.

2. General features of Universal Service Auctions

In USO auctions public administrations must decide over several social, economic and financial aspects that affect the behavior of firms and influence the result of auctions.

2.1 Definition of the projects and selection of the areas auctioned

What is the general objective of the universal service policy? Who will benefit from this policy? What is the package of services offered and the funding mechanism used?

The selection of the municipalities protected by the USO policy can be made along with the needs of the population and the resources available. This implies collecting information about the local willingness to pay for the services in order to determine the interest of the program. In
the presence of demand externalities between various regions such estimation may be done on national scale.

An important aspect to be considered is the size of the regions auctioned. One must decide if the USO should be auctioned globally or divided up into various pieces and procured in smaller tenders. If the size of the regions auctioned is small, consumers are more homogeneous and firms can better estimate the profitability of supplying the service. In addition, dividing the USO into several regions enables yardstick competition. However, larger regions reduce the administrative costs of auctions and allow exploiting optimally economies of scale and scope. Large areas also facilitate aggregating several services in the same concession. For example, the postman in charge of a geographic area might simultaneously deliver correspondence and offer financial services or insurance to the population. In order to take advantage of scale economies firms may be allowed to bid for several regions.

Contracts typically range between three and ten years. The longer the contract period is, the larger are the investment incentives for the winning operator (cf. Oxera, 2007). However, the longer the contract the fewer are the possibilities to adapt the USO over time to the customers’ needs. Therefore, although long time horizons might be needed for dynamic efficiency considerations (investments and innovation), they might result in higher compensation needs as the bidders may require considerable risk premia. In order to moderate this problem, Engel et al. (2001) suggest using an auction design where the regulator fixes the prices of the service and firms bid for the minimum present expected value of the revenues. In this context, the duration of the concessions is adjusted according to the realization of the revenues by the operator.

Tenders may increase information asymmetries between governments and contractors compared to public provision. Hence, USO provisions must be detailed, precise and measurable. Detailed definitions on quality levels, accessibility criteria etc. increase both the operators’ and regulator’s legal certainty and provide a clear basis for any USO cost calculations. However, detailed contracts might unnecessarily hamper the commercial flexibility of the USO operator.

2.2 Design of auctions

USO auctions can take various forms. Regulators must take into account the economic effects of each of these design aspects, as well as the possibility of collusion and the ability of firms to exploit scale economies.

**Simultaneous and sequential auctions.** In sequential auctions, firms initially do not know if they will be able to win adjacent regions in subsequent auctions. As they are uncertain about the possibility of exploiting scale economies they will ask for higher subsidies. This problem can be solved by auctioning all regions simultaneously. In the 1990s, Chile, Peru, Mexico, Colombia and Guatemala used simultaneous USO auctions for rural telephony, which allowed firms to acquire national conglomerates (Dymond and Oestmann, 2002).

**One or multiple rounds auctions.** Auctions of one round only allow one bid per region. By contrast, auctions with multiple rounds finish only when no bidder offers a lower subsidy anymore. This allows firms to learn what the valuation of their rivals about the region is. With this information, bidders can modify their own valuation of each region. The possibility of over- or underestimating the profitability of one region is one of the main justifications for using multistage USO auctions. Firms observe their rivals and understand that their own valuation for the region might be (too) high if many other bidders have already left the auction. As a result, open multiple-rounds auctions can reduce the firm’s risk of being victims of the winner’s curse. This is especially important when there is uncertainty about the cost and the demand (cf. Section 3). On the other hand, firms have more opportunities to collude.

**Open and sealed bid auctions.** Open auctions do not reveal the participants’ willingness to pay. The winner observes the bids of its rivals and stops bidding when the last rival leaves the auction. As a result, the winner receives more or less the second lowest subsidy, and nobody knows if it would have accepted a lower subsidy. However, an advantage of open auctions is...
that they generate more information about how other firms valuate the region auctioned, and reduce the risk of a winner’s-curse-situation.⁶

Maximum subsidies: Often, regulators define a maximum subsidy (reserve price) that they will be willing to grant for each region. This measure allows firms to estimate the minimum profitability they can achieve. The effect of a maximum subsidy depends on the design of the auction and might reduce the subsidy need.

2.3 Participants in the auctions

Many national and international participants in the auction may increase the efficiency of the process and reduce the amount of the subsidy conceded. Hence, it is important to increase the attractiveness of the auctioned services. For example, Argentina’s program of rural electrification (PAEPRRA) initially failed to auction separate concessions for urban and rural areas in two provinces. Bundling rural and urban regions in the same concession then attracted several participants.

Often, firms that participate in USO auctions are not the traditional operators, but firms that have developed specific technologies adapted to the rural areas (e.g. VSATS and wireless telephony in the telecommunications auctions). Dymond and Oestmann (2002) explain that these firms use auctions to promote their technology. In fact, many firms have even renounced the subsidies to enter the market.

2.4 Winner of the auction

When considering public tendering as a means of delegating the provision of the universal service, a key issue is whether the operators will have exclusive rights in the respective market or not. In past USO auctions, often only one firm received the right to provide the service. However, competition in the market might lead firms to offer better services, instead of putting all their effort in winning the auction (Pirsch, 1997).

Although from a technical viewpoint it is possible to implement auctions with several firms entering the market, firms can gain less scale economies and as a consequence they might ask for higher subsidies. In spite of this, some technologies can sustain better than others the presence of more than one operator, e.g. mobile telephony. Another example is the electricity sector, where the use of photovoltaic panels favors the presence of many competitors in the same neighborhood.⁷

2.5 Regulation of the market

The regulation of the sector is a key element to increase the firm’s interest to provide universal services. Indeed, firms favor a clear and stable regulatory regime that allows them to estimate the costs and revenues of each project and that reduce their risks.

In some Latin American (Chile, Peru, Colombia) and African (Uganda) countries, the regulator has introduced asymmetric retail and/or wholesale prices in the fixed telephony to increase the attractiveness of concessions: prices in rural areas are higher than in urban regions (Dymond and Oestmann, 2002, and Wallsten, 2009).

The concession’s contract might also include several regulations that limit the profitability of operators. Concessions must contain the mechanism used to regulate the prices and the quality, the technology that can be used and the coverage that must be attained by operators. Contracts may also indicate who the owner of the infrastructure is and who supports all the commercial risk of their activity. For example, in Barcelona, the urban transport authority owns the vehicles and garages that are used by private operators.

3. General Concerns

In this section we analyze in more detail some of the concerns with auctions that have been identified in the previous section.

3.1 Allocative concern: Selection of the winner
The allocative objective of USO tendering is to choose the most efficient producer with the most efficient technology. However, when there is uncertainty about future market outcomes, operators may not have very precise knowledge of the net cost of the universal service. Bulow and Klemperer (2002) show that common value auctions are always won by the bidder with the highest (i.e. in reverse USO auctions with the lowest) signal. If net costs calculations are difficult and future industry prospects highly uncertain, it is likely that the auction is won by the most optimistic provider, which may not be the most efficient one.

3.2 Distributional Concern: Winner’s curse and winner’s moral hazard

Tendering universal service obligations ideally guarantees that the winner is not able to earn an excessive rent at the expense of the consumers. Excessive rents may arise from the design of the auction or from the opportunistic behavior of the USP once it has won the auction.

**Winner’s curse.** Consider an auction where bidders have imprecise private information about the net cost of the universal service obligation being auctioned. To illustrate the idea, assume that the net cost of the USO is the same for all potential providers. Hence, from the point of view of productive efficiency it does not matter, who will win. However, operators can be uncertain about their costs. The auction will be won by the bidder that received the most optimistic estimate and hence requested the lowest subsidy. If the signal is symmetrically distributed around the net cost of the operators, the average winning estimate will be lower than the net costs. This is a well known result in auction theory that is called the “winner’s curse”. A rational bidder would adjust the own bid upwards to receive a higher compensation and avoid the winner’s curse. Among others, Bajari and Hortacsu (2003) present mixed empirical evidence on whether companies rationally respond to avoid a winner’s curse.8

**Winner’s moral hazard.** At a first glance, it may seem that participants in auctions behave irrational if they do not account for the possibility of a winner’s curse (cf. Cox and Isaac, 1984). However, if a tender leads to a systematically underfunded provision of universal services, this will likely result in renegotiations of terms in favor of the winner. Bearing in mind the possibility of renegotiation, asking initially for a low subsidy could not be so irrational after all. Once the auction is won, two scenarios are possible. If everything goes well, the winner gets a profit and keeps it. In case of underfunding, the government will be forced to renegotiate the contract. Clearly, the bargaining position of the government and the USP will depend on the government’s USO replacement costs and the USP’s equity at stake. Typically, the latter will be significantly lower in size and hence the USP’s liability is limited. Ultimately, the tax payer will pay for it.9

A second form of moral hazard relates to the winner’s incentives for short term profit maximization. The operator that wins the auction may offer poor service, reduce investments, or find other ways to maximize short-run profits.

3.3 “Cost of USO concern”: Real Options

The third concern is that tendering universal service obligations increases its net cost compare to direct designation and public service provision.

USO tendering raises the need for detailed ex ante regulations on all services provided during the contract period to limit moral hazard (see above). Similarly, companies can only predict their future costs of providing the USO if they know the contract details. For example, a contract period of seven years requires detailed regulations on pricing, quality, products and coverage at the time of the auction and companies must predict market developments over the same horizon to be able to compute the net costs of the USO (cf. Panzar, 2001).

For the winner of the USO auction, these extensive regulations come along with important limitations in business flexibility. Such flexibility might be of special importance in times of fast technological progress (e.g. “e-substitution” in the postal sector). Jaag and Trinkner (2008) suggest that this loss of corporate flexibility can be measured by use of real options analysis (ROA). Where USO regulations limit corporate flexibility, the winner’s real options lose value.
This loss will be included in any *ex ante* net cost computation of companies that plan to participate in a bid. These costs are higher in auction mechanisms as these require – compared to direct designation – a suboptimal high level of detailed *ex ante* USO regulations.

### 4. Some lessons of USO auctions in network industries

In the last decade, several countries have used auctions to select the USO provider in the telecommunications, transport, electricity and water sectors. Many of the first experiences ended up with poor results. In spite of this, the accumulated experience gained worldwide with the use of this instrument has allowed the creation of a second generation of auctions that corrects many of the past mistakes. For example, some countries have substituted first-price sealed bid auctions for combinatorial or simultaneous open auctions.

In 1994, Chile was the first country to create a universal service fund and to use an auction to extend the public telephony to rural and low income urban areas. During the period 1995-2000 several auctions were successful. The first auction only considered basic telephony, but most recent projects also include access to internet (telecenters). The success of the Chile rapidly influenced other Latin American countries such as Bolivia, Brazil, Colombia, Dominican Republic, El Salvador, Guatemala, Nicaragua and Peru. Later on, several African countries such as Ghana, Senegal, South Africa and Uganda also introduced universal service auctions. Some of these experiences in the rural telephony have offered very poor results. As anticipated in the previous section, a frequent problem in USO auctions is the winner’s curse. In Perú and South Africa, for example, some operators bid too aggressively and ended up with important financial problems.

Another important problem is the absence of participants in the auctions, a situation that can increase the subsidies given to USO providers. In 2003, India launched an auction for installing public phones in 20 regions that cover 520,000 municipalities (Kalra and Borgohain, 2004). Only mobile and fixed line (BSNL) operators already operating in those regions were allowed to participate in the auction. As a consequence, BSNL won the concessions in 19 regions, obtaining the maximum subsidy offered by the regulator. A similar experience can be found in Australia. In 2001 the government organized an auction to increase the competition in two regions that cover 80 per cent of the remote areas of the country. No firm participated in these auctions to compete against the incumbent telecommunications operator.

These experiences show that the most successful auctions have been those of regions that previously were not covered by any operator, or where the installed capacity was very small. Indeed, this is usually the case in Latin American and African auctions. These are organized to attain the provision of telephony in unprofitable regions. Urban areas do not need these “access policies”, although the government might establish some universal service obligations on already existing operators to subsidize the use of basic services.

It is also important to obtain exclusive rights to commercialize the services and to reduce market risks. In a recent telecommunications auctions in Switzerland, the winner was not granted any exclusive rights. Among other things, this might explain why only the incumbent participated in the auction.

USO auctions have also been used in the electricity sector. New advances in the technology allow creating autonomous electric systems disconnected from the main grid. These systems are used to cover the needs of residents of rural areas (light, television, radio), businesses (pumping of water, refrigerators) and public services (schools, hospitals, police stations). Rural systems use different combinations of energies, including diesel generators, mini-hydroplans, photovoltaic, wind and biomass energy. Several countries in Latin America (Argentina, Bolivia, Chile, Colombia, and Peru) and in Africa (Cabo Verde, Benin and Togo) have used USO auctions to select the providers of these electric systems and to determine the compensation that they should receive.

Competitive tendering is also frequent in the urban bus industry of several countries such as Denmark, Norway, Sweden, Switzerland and UK. Interestingly, several papers find that
tendering reduces the average total cost per vehicle/km (Hershen and Wallis, 2005). However, the risk of using auctions is that in the long-term, takeovers and increasing ownership links among firms may reduce competition and lead to an unwanted concentration of the market (Mathisen and Solvoll, 2008).

5. USO auctions in the postal sector

In this section we discuss the application of subsidy auctions in the postal sector. Thereby we try to identify the main problems and advantages relative to other mechanisms.

5.1 USO auctions in the postal sector

In the postal sector, subsidy auctions are a means to allocate universal service obligations to one or more operators as well as to delegate the determination of the cost of the USO to the market. Note, however, that the cost of the USO itself still has to be funded by a funding mechanism if there is an actual net cost.

Table 1 shows the basic auction designs thinkable in the postal industry. The last row of the table (more than one winner) is a solution reserved to cases where there are no relevant economies of scale in the provision of the service. In the postal sector, this is certainly not the case and it will hardly ever be applied. Governments will not be prone to subsidize more than one rural delivery network or two rural post offices side by side.

Table 1. Basic Auction Designs and applications in the postal sector

<table>
<thead>
<tr>
<th>One winner</th>
<th>Exclusive rights</th>
<th>No exclusive rights</th>
</tr>
</thead>
<tbody>
<tr>
<td>Franchise bidding</td>
<td>USO subsidies in liberalized markets (Jaag and Trinkner, 2008)</td>
<td></td>
</tr>
<tr>
<td>Demsetz, 1968</td>
<td>Example: Lebanon</td>
<td>Example: Germany</td>
</tr>
<tr>
<td>Example: Lebanon</td>
<td></td>
<td></td>
</tr>
<tr>
<td>More than one winner</td>
<td>Franchise bidding and competition in the market,</td>
<td>Multiple USO subsidies in liberalized markets</td>
</tr>
</tbody>
</table>

The top left box (franchise bidding) is the standard setting for auctions and the solution that has often been applied for example for spectrum auctions. To our knowledge, the only government that has granted exclusive rights in the postal sector has been Lebanon. In 1998, the postal monopoly was transferred to a private company that had won a beauty contest. Since then, LebanPost has shown a remarkable transformation process. Note that postal administrations themselves quite often procure some exclusive rights to suppliers and third parties (Step 4 in Figure 1). E.g. New Zealand Post has for years successfully procured rural deliveries (see Oxera, 2007). The issue here is substantially simplified compared with auctioning the entire USO (and is essentially a standard and unproblematic outsourcing decision). In the European Union, exclusive rights will not be allowed under the third postal directive after 2013. Therefore, the most relevant field in these postal markets is the gray shaded area in Table 1.

A key decision is whether the USO should be auctioned on national or regional scale. In the postal sector, USO requirements are usually nationwide defined and include interdependencies between the three main dimensions price, quality, and services. Postal markets are two-sided and mail demand exhibits externalities among regions. That is, demand in a given region depends on the specific offerings in all other regions (and vice versa) on both sides of the market (sender side and recipient side). Production exhibits substantial economies of scale and scope, which makes entry more risky than in other sectors (e.g. tenders of bus lines).

Hence, in a national USO auction, one will find hardly ever more than two or three interested operators. In addition, one should expect the incumbent operator to be in an
advantageous situation (with incremental USO costs only) whereas other operators would need to start operations first. Hence, open procedures might yield too high subsidies (even in a world without collusion). The auction model implemented in Germany might resolve some of these issues (cf. Section 5.2).

Splitting up the USO into regional pieces might mitigate this problem. It reduces bidding asymmetries in favor of the incumbent and decreases the cost of market entry (WIK, 2008). This is indeed the solution that has been applied in other network industries (cf. Section 4). However, the application of the option to the postal sector entails several problems and conflicts: It has an impact on overall mail demand; it establishes the need of regulating access charges of regional firms; it creates problems for enforcing uniform pricing without enabling cherry picking; and finally it reduces scale and scope economies.

According to Oxera (2007) it is not possible to sustain uniform prices in such a system. Note that uniform prices are often part of the USO. Moreover, they are likely to foster overall mail development. A further issue relates to production externalities. Postal USO requirements include traditionally nationwide uniform products (collection days, points and times; quality; distribution days and times, price and stamps). If the USO was split up into various regions and served by various local USPs, these local USPs might be forced to adapt their processes in other (non-USO) regions too for logistical reasons (e.g. time windows). This might result in uniform processes between the various operators and thereby indirectly hamper innovation and foster collusion. More generally, from an operator’s point of view, winning an auction has cross effects on services offered in other areas both on the cost as well as on the demand side. Hence, postal markets are much more difficult to separate into regional pieces than bus lines or water and electricity distribution. Similarly, interconnection are harder to resolve compared to telecommunications networks where the problems are mainly technical.

Hence, in countries with integrated, well developed postal markets, subsidy auctions will involve serious challenges both on national as well on regional scale. A different question is the use USO actions in unattended regions of developing countries. As we have seen in Section 4, the experience in developing countries shows that subsidy auctions have succeeded in many regions where asymmetric regional retail and wholesale prices have been established.

5.2 Applications of subsidy auctions in the European Union

The third European postal directive (2008/6/EC) envisages full market opening by 2013 and allows for competitive USO tendering: Article 7(2) of the directive states that “… Member States may ensure the provision of universal services by procuring such services in accordance with applicable public procurement rules and regulations”. According to Article 4, the directive allows to divide the USO into various single obligations: “Member States may designate different undertakings to provide different elements of universal service and/or to cover different parts of the national territory.”

The meaning of Art. 7(3) in relation to the tendering option is somewhat unclear. The article states that compensation or sharing mechanisms might only be implemented if a “net cost” arises. This shall be verified by the national regulatory authority subject to detailed accounting requirements. As they stand, these provisions imply that the successful bid might not be accepted per se. The designated USP will receive a subsidy equal to its bid only if detailed computations of the regulator lead to the same result as the auction. As a consequence, operators participating at the bid are aware that winning the auction means opening the books to the regulator. This might not be an attractive prospect. The EC provisions can be interpreted as a presumption that reverse auctions will likely not result in efficient subsidy levels in the postal sector.

So far, no subsidy auctions have been organized under the postal directive framework. In Germany, a tendering mechanism for universal postal services was implemented in 2008 when the market was completely liberalized. In the case that certain USO elements are not provided by the market, the law foresees to auction the lacking USO elements. In light of the challenges
of subsidy auctions in the postal sector, the main strength of the German model is that the USO is neither tendered as a whole nor divided up into several regions. Only those parts of the USO not provided by the market will be tendered, e.g. a post office, a specified quality level for basic letter service, or services in a number of remote islands. Such “incremental subsidy auctions” might result in more bidders - and eventually in a USO provision that is less costly. However, as the subsidy auction is defined relative to Deutsche Post’s service plans, it would be astonishing to find another operator with smaller incremental costs. Hence, one might start negotiations directly with Deutsche Post instead of organizing a costly auction.

6. Summary and Conclusion

Traditionally, universal services have been provided by state-owned operators with a public mission. Operators were compensated with extensive exclusive rights, which allowed them to use cross-subsidization between different regions, customers, and services. In liberalized markets, such a policy cannot be used to finance the USO. Therefore, alternative mechanisms should be envisioned to guarantee the efficient provision of basic (postal) services in rural regions and to small customers. One such option is the use of subsidy auctions, a solution that has been used in other network industries for more than two decades with mixed results.

In theory, under efficient market conditions, subsidy auctions allow for finding the most efficient provider for the required service at the minimum level of compensation. In practice, the design of auctions is complex and requires the solution of several concerns and trade-offs. The design of a tender has to consider sector-specific aspects, such as the industry structure and changing consumer needs. In order to ensure the frictionless functioning of universal services in liberalized markets, these issues would have to be thoroughly assessed and resolved before subsidy auctions or other procurement mechanisms are introduced.

Tendering postal universal services in a whole country would be fraught with large risks. Turning over the entire provision of the USO to an alternative operator other than the historic USP requires complex regulations and would cause significant social risks that render the utilization of this solution questionable. Moreover, a nationwide auction implies the participation of only a few bidders which reduces the attractiveness of this mechanism. The application of USO auctions in small regions might increase the number of participants, but this would reduce scale and scope economies and require even more complex regulatory arrangements such as regional access charges, retail prices, and quality levels combined with a harmonization of production processes and time windows of the various regional USP’s. Hence, postal USO tendering does not seem to be practical for individual regions due to interdependencies among them.

The experience in developing countries shows that USO auctions for regions not serviced otherwise may succeed. However, in countries with integrated, well developed postal markets, subsidy auctions involve serious challenges both on national as well as on regional scale. We conclude that tendering as an option for providing of universal services is likely to be difficult to implement and would not make much sense for the provision of postal services in developed countries.

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1 The views expressed are those of the authors and do not reflect the opinion of the institutions with which they are affiliated.

2 The first academic work about the use of auctions for the provision of public services is Chadwick (1859), who analysed several English markets. The author distinguished between the competition “for the market” and the competition “in the market”.

3 Harstad and Crew (1999) and Sorana (2000) analyze the efficiency of USO auctions, including the issue of franchise renewal and repeated auctions over time for the USO.

4 Borrmann (2004) discusses the use of postal USO auctions in rural regions.

5 Stegeman et al (2007) considers that sequential auctions generate higher bids when participants learn about the process. Peha (1999) explains that in the presence of scale economies simultaneous auctions generate higher subsidies than combinatorial auctions.

6 Klein (1998b) shows that open auctions reduce the risk of collusion when several firms participate in the market. However, if the number of participants is small, it is preferable to use first-price sealed bid auctions to avoid the possibility of collusion.

7 Milgrom and Weber (1982) were the first to suggest more than one operator in the same USO region. See also Pirsch (1997) or Lafont and Tirole (2000).

8 See Jaag and Trinkner (2008) for a more detailed discussion.

9 Guasch, Lafont and Strauss (2002) analyze firm-led renegotiations in Latin America using data of 307 concession projects in the sectors of transport and water in Argentina, Brazil, Colombia and Mexico between 1984 and 2000. They show that more than half of these projects were renegotiated on average 3.5 years after signing the contract.

10 Cantillon and Pesendorfer (2006) and Mathinsen and Solvoll (2008) analyze the use of auctions in the bus industry of London and Norway, respectively.

11 ITU (2006) shows that 85% of all Latin American countries use universal service funds.


13 In 2004, Uganda was the first African country to organize an auction (OECD, 2004).

14 Recent auctions carried out in India have solved some of these problems (Wallsten, 2008).