



ERGP Report on Exploration of challenges to overcome when implementing a net cost calculation methodology based on a reference scenario
- Benchmark of experiences

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implementing a net cost calculation methodology
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ERGP WG Net Cost of USO – VAT as a benefit/burden

2014-05-13



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Summary

The purpose of this report is to explore the challenges to overcome when implementing a net cost calculation methodology based on a reference scenario. It is based on a questionnaire answered by the seven NRAs which have had experience of net cost calculation and the implementation of a methodology similar to a reference scenario. The NRAs asked were BIPT (Belgium), DTA (Denmark), ARCEP (France), ACM (The Netherlands), NPT (Norway), PostUrad (Slovakia) and Ofcom (UK). We also identified two interesting recent decisions from ComReg and ANACOM. Consequently the report does not reflect opinions expressed by ERGP but rather the reflections made by these seven countries.

The following challenges were identified; Products and services (delivery frequency, geographical coverage, material for the blind and quality standards), prices, the network design, demand reactions and efficiency. There is also a section in the report that deals with other challenges (including intangible benefits and data resources).

Only three (Slovakia, Norway and Denmark) of the seven countries have made a comprehensive net cost calculation. The other four countries (France, UK, The Netherlands and Belgium) have either made some preparations for an eventual net cost calculation or only calculated the net cost for a specific part of the universal services.

One big challenge mentioned by the respondents was the effects on the USO net cost if USP would propose a changed price structure in the reference scenario. Measures concerning the elasticity of supply and demand require a significant supporting analysis which yet hasn't been feasible, according to the respondents. This is one reason why none of the comprehensive net cost calculations so far have included a changed price structure.

Another challenge identified was to assess the cost of the service network if the USP's business strategy meant a lower number of access points than with the USO. The difficulty would then be to identify which access points or processes that would be eliminated. The overall challenges mentioned in this context are non-existence of necessary data, the difficulty choosing the correct cost-allocation keys and the allocation of administrative costs. Two strategies suggested to simplify this exercise: one to develop a bottom-up model of service outlets relying on cost functions based on relevant cost drivers that are used to estimate each outlet costs; another was to reason that the service outlets are necessary for many of the USP's profitable products, such as delivery of parcels, why the operator probably would be reluctant to diminish its postal network in its reference scenario.

The main difficulty when measuring elasticities and other characteristics of the demand function is that the relevant data corresponding to the counterfactual scenario are not available, as the counterfactual scenario is a fictitious situation. One way to handle this, mentioned by the respondents, is to rely on the USP's business strategy and its knowledge of the customers'



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preferences and needs when setting up the reference scenario. Another way is to make customer surveys or using benchmark of countries where there is some competition or in similar sectors.

The evaluation of efficiency of the USP is a difficult challenge according to the respondents. They have all used different approaches when taking into account the incentives for cost efficiencies in their calculations, depending on the specific national conditions such as efficiency of the USP, level of competition, profitability goals of the USP, availability of data etc. None of the respondents have demonstrated more in detail how the efficiency adjustment has been done.

The respondent agree that to quantify and estimate the intangible benefits is one of the biggest challenges within the net cost calculation as there doesn't exist an exact methodology and only a few limited experiences from calculating the value of them. It is also concluded that among the intangible benefits there is actually only a few which are directly caused by the USO, such as brand-value and VAT-exemption.



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1 Exploration of challenges to overcome when implementing a net cost calculation methodology based on a reference scenario - Benchmark of experiences

1.1 Background

The provision of the universal service (US) shall be ensured in the most cost-effective manner and the financing of net costs – if any – should be competitive neutral (“the least market distortive” concept). The net cost is to be calculated as the difference between the net costs for a designated universal service provider (USP) of operating with the universal service obligation (USO) and the same service provider operating without the USO (the reference scenario) or without some components of the USO (for instance moving from six to five rounds a week). The assessment of the net cost of the whole USO or of the net cost of some specific components has to be calculated by taking into account all relevant elements including the benefits of being a USP.

ERGP has in June 2013 presented a report on net cost calculation and evaluation of a reference scenario (without USO). The report covers the methodological aspects such as

- how a reference scenario could be constructed
- approaches and methods to assess the reference scenario,
- how the net cost could be verified by the NRA.

The aim is now to carry out an exploration of the implementation of a calculation of the net cost of the USO by analyzing the experiences made by the NRAs.

1.2 Purpose

The purpose of this report is to explore the challenges to overcome when implementing a net cost calculation methodology based on a reference scenario. It's important to emphasize that this report is thus based on fact finding and essentially responses to a questionnaire but where appropriate some theoretical parts have been added. Consequently the report does not reflect opinions expressed by ERGP.

The initial part of the work was to identify where relevant experiences have been made that could serve as a basis for the analysis. Accordingly ERGP had to find some countries that have carried out, or at least, initiated a net cost calculation in accordance with the principles presented in the earlier report (ERGP Report on net cost calculation and evaluation of a reference scenario). Next step was to identify challenges to overcome when implementing this methodology. We also



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wanted to look deeper into how the NRA's had tackled these challenges and what lessons they had learned from it.

2 Method

In May 2013 ERGP made a request to the NRAs to get a copy of their answers to Frontier's study on Methods applied to calculate the net costs of the USO¹. Unfortunately the elements we received were not sufficient to serve as a basis for the work.

The group then decided to change approach and to ask only a limited number of NRAs to share their experiences of net cost calculation. As an attempt to identify the challenges to overcome, a guideline (see Annex 2) was sent to seven NRAs that have had experience of net cost calculation and the implementation of a methodology similar to a reference scenario. The NRAs concerned were BIPT (Belgium), DTA (Denmark), ARCEP (France), ACM (The Netherlands), NPT (Norway), PostUrad (Slovakia) and Ofcom (UK). We also identified two interesting recently presented papers. The first one from ComReg² (Ireland) which sets out how a net cost submission should be made by a USP if it wishes to do so. The other one is the decision made by ANACOM which, by determination of 18 February 2014, has approved the methodology to be used for calculating the net cost of the universal postal service. ANACOM has also approved the concept of unfair financial burden for purposes of compensating the net cost of the universal service with respect to postal services.³

The focus in guideline was to explore what method had been used when calculating the net cost of USO, allocation of responsibilities, difficulties, how the respondent had solved different tasks within the calculation and the result. Although the answers received were fruitful we soon found there was a need to ask more analytical question. The new questions were focusing less on what had been done within the calculation but rather on why the calculation had been conducted in a specific way, what choices had led to the decisions taken, what challenges the NRA's had met during the calculation and how these challenges had been solved.

3 Calculating the net cost of USO using a reference scenario

The regulatory challenge is according to Annex 1 of the Directive (see Annex) to verify the net cost of USO. It is clearly stated that the responsibility to verify this cost lies on the NRA while the universal service provider (s) shall cooperate to enable the NRA to carry out this task. To facilitate the understanding of the concept we chose a simplified theoretical model as a basis for our earlier

¹ Frontier Economics (2013) "Study on the principles used to calculate the net costs of the postal USO", A REPORT PREPARED FOR THE EUROPEAN COMMISSION

² ComReg (2013) Response to Consultation and ComReg's determination on the form and manner of any net cost request by the universal postal service provider under section 35 of the 2011 Act .

³ <http://www.anacom.pt/render.jsp?contentId=1191322>



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report. The model included a number of elements that we considered necessary to be able to verify the net cost in line with the principles in Annex 1. The order in which they are presented is not aimed to be normative as it is not necessarily the only appropriate order. The same applies to the order of different measures and the interaction with the USP (s). To be able to verify the net cost we assume the following elements have to be considered.

- The setup of a reference scenario – i.e. how the universal service provider (s) would act if it did not have the USO
- The assessment of the reference scenario - i.e. to state whether the scenario as such is viable and credible
- Calculation of the net cost based on the difference (if any) in the net costs of the Universal Service Provider(s) with or without the USO that could serve as a basis for verification
- Verification of the net cost based on the calculation above
- The assessment whether the net cost constitutes a financial burden

In this report we have been focused the challenges met when dealing with the first two bullet points as these two elements are the essential base for the net cost calculation. They also contain a number of assumptions and uncertainties which can be simplified by exchange of experiences.

4 Overview of experiences

In the chapter below the studied countries are referred to as “countries”.

4.1 Guidelines used and the role of the NRA

All respondents have used the European and national legal framework as guidelines when calculating the net cost of USO. In all cases the USPs has been providing the figures and in some cases even made the calculation and setting up the reference scenario. The NRAs or the Ministries on the other hand have primary been responsible for choosing the methodology, assessing and determining the existence of an eventual net cost. In a few cases the NRA or a consultant (on behalf of the Ministry) have set up the reference scenario, made the calculation and verified the net cost.



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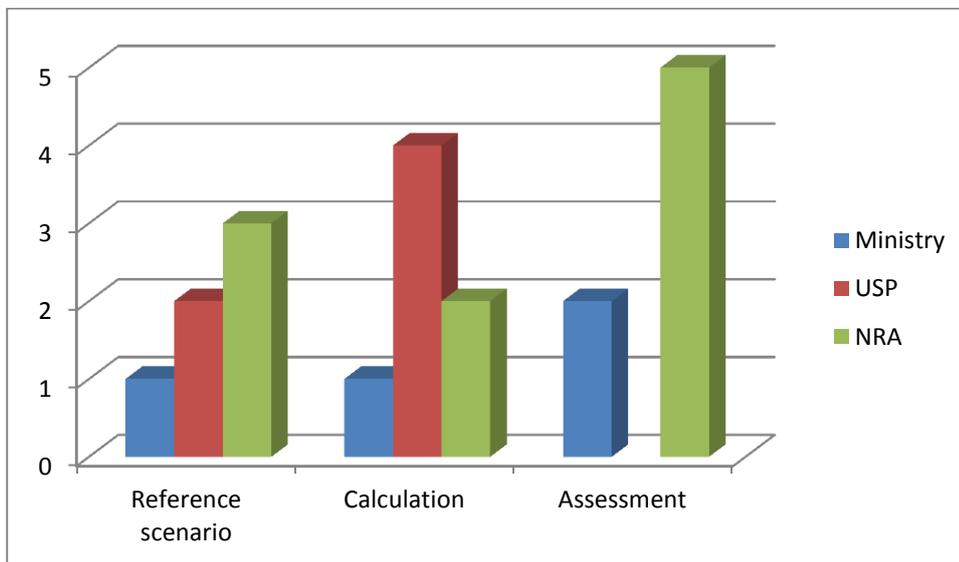


Figure 1: Responsibilities when calculating the net cost of USO

4.2 Calculations made of the net cost of USO

Only three (Slovakia, Norway and Denmark) of the seven countries have made a comprehensive net cost calculation. Norway Post is doing the net cost calculation annually since 2002, and in the other two countries the net cost calculation has only been done once by the NRA (Slovakia) or the Ministry (Denmark). The method they used is the commercial approach which means that the net cost is calculated as the difference between the current USP's net cost and the same operator's net cost without the USO (reference/counterfactual scenario).

The other four countries (France, UK, The Netherlands and Belgium) have either made some preparations for an eventual net cost calculation or only calculated the net cost for a specific part of the universal services. The methods used were variations of the commercial approach (Belgium), deficit approach⁴ (The Netherlands), NAC (including the transition costs that are incurred in making the changes) (UK) and a bottom-up model based on a reference scenario (France).

4.2.1 Experience of the commercial approach

PostUrad in Slovakia has answered that they tried to find compromise solution for obtaining of data and information for the model and that the Commercial approach method was chosen and incorporated into secondary legislation. The model was from the NRAs point of view the most suitable because it could be based on existing USP accounting data and the structure of the costing model of the USP. Further on it was the most objective method (including all aspects of USP

⁴ The Deficit Approach measures the overall profit or loss that the USP generates today from the provision of its USO. For a net cost of the USO to exist under this method, the profits of some USO products have to be lower than the losses of some other USO products.



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business activities and avoidance of potential double counting impacts). However, evaluation of the commercial scenario was the most difficult, because of using the estimation, and assumptions which are not possible to verify, from their point of view. Due to the fact that each country has different conditions, using a benchmark was problematic (controversial).

In Norway before “The Alternative Commercial Strategy” model was developed, Norway Post used another model (during 1996 – 2001), which was derived from the NAC method. Ultimately this first USO model was considered unsatisfactory as it demanded an overly complex set of detailed data. Whilst data quality can always be questioned, the complexity of the older model made it impossible to prove that there was no inefficient production included in the calculations. The level of detail was also a problem from another point of view: the more detailed data, the more areas of unprofitable business could be located, and hence this could indicate a higher NAC. Norway Post found this unsatisfactory as the calculations were used as a basis for an actual state compensation. Hence the new model was developed. As Norway Post underlines it is naturally difficult to say exactly what its business would look like without the USO, but by lowering the ambitions the most plausible strategy for the operator could be more realistically defined.

In Denmark Copenhagen Economics published a report 2008⁵, after a request from the Danish Chamber of Commerce. The mission was to assess whether the USO represents a heavy financial burden on the USP (Post Denmark). Copenhagen Economics recommends a commercial approach, when defining the net cost of USO, as the starting point when setting up the scenario should be the customers’ perspective. The commercial approach was lined up as follows: First define how the business strategy would change if there was no universal service obligation, and then present a business case for these changes. A change in business strategy could e.g. be going from six to five deliveries per week.

4.2.2 Top-down versus bottom-up

ARCEP in France and BIPT in Belgium have used a commercial approach based on a bottom-up model when setting up the reference scenario. The main elements of the model are: defining a cost function and calibrating it; defining a demand function and calibrating it; identifying the relevant reference scenario and the counterfactual scenario. The costs functions are developed in three steps: (i) the dimensioning of the inputs related to relevant cost driver for the considered activity, (ii) the calibration of unit costs which, applied to the inputs, leads to a bottom-up cost, and (iii) the comparison and the reconciliation between the bottom-up costs and the costs derived from the

⁵ Copenhagen Economics (2008) “What is the cost of Post Denmark’s universal service obligation”, Report prepared for the Danish chamber of commerce.



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accounts (hereafter ‘top-down’). Additional control can be gained when data is available at an intermediary level.

Some assumptions were made in the bottom-up model where there was no available information. However, all cost functions are calibrated on the current costs incurred by the operator and verified by the statutory or the regulatory auditors. The advantages mentioned with this approach are: (i) avoiding the heavy process of the use of the analytical accounting system of the USP and (ii) calculate the cost of efficient processes and (iii) settle cost functions and other parameters that USP’s accounting system cannot provide. The disadvantage, as one the NRAs (ARCEP) described it, is that the bottom-up model sometimes is built on approximations why there can be a discrepancy between the bottom-up and top-down costs. Reconciliation between top-down and bottom-up data provides a check of the reliability of the model by identifying potential inaccuracies.

In its paper ComReg concludes that if the reference scenario presented by An Post (the USP) should depart significantly from the current USO, it would then be necessary for An Post to develop a bottom-up model in order to estimate the costs in its reference scenario, as it would be difficult to estimate the applicable costs based solely on historic accounting data. The NRA also concludes that the Profitability Cost (PC) will be used to calculate the net costs (if any) of providing the universal postal service. One of the reasons to use the PC approach is that this approach seeks to identify costs that could be avoided if changes to the USO were made. Therefore, Long Run Incremental Cost (LRIC) should be used where the reference scenario departs significantly from the current USO, as the concept of avoidable cost is more closely related to the use of LRIC. Consequently, if a bottom-up operational model is required, it should be based on LRIC, according to ComReg.⁶

The other five countries, even if not explicitly written, have used a top-down model. Ofcom stated that this approach was chosen as their exercise attempted to estimate the cost saving which would be achieved, if certain elements of the USO were to be removed. To do the estimation, Ofcom did qualitative and quantitative research, which complemented each other. For the quantitative work (to measure the costs of specific aspects of the service), Ofcom asked Royal Mail to provide them with estimates of incremental costs of providing certain aspects of the universal service. These estimates were reviewed for Ofcom by external consultants (Consult Sirius). Since these cost estimates were related to certain aspects of the USO and not the total net cost of the USO, it was sufficient to derive high-level estimates using a top down approach.

4.2.3 Experience of the deficit approach

Netherlands: ACM – that didn’t finalize the net cost calculation because the USP withdraw their request for compensation – mentioned that the initial request of the USP was based on the net

⁶ Response to Consultation and ComReg’s determination on the form and manner of any net cost request by the universal postal service provider under section 35 of the 2011 Act (p.8)



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cost concept laid down in the Postal Directive (profitability cost approach), but also contained a calculation of net cost following the net cost concept of the national law (a variation on the deficit approach). The latter calculation resulted in a higher amount of net cost, mainly because of the fact that USP added a substantial amount for 'missed reasonable profit' (which according to ACM was not relevant). The base for the model was really simple though: loss on US according to regulatory reports, minus "*other advantages*"⁷.

4.2.4 Experiences of NAC

UK: Ofcom used a model similar to NAC including the transition costs which would incur in making the changes. In this case NAC model was relevant as the exercise only attempted to estimate the cost savings which would be achieved if some specific elements of the universal service were to be removed.

Belgium: BIPT used a "hybrid approach" between the Commercial approach and the NAC approach. This model was chosen as the best compromise. Special focus was set on the fact that the USP is carrying out an important modernization of its process which should lead to improvement in the efficiency of the provision of the USO.

4.3 The use of a reference scenario

As we have mentioned above only three countries (Slovakia, Norway and Denmark) have made comprehensive net cost calculations using a reference scenario. To get an overview of what parameters that have been reviewed in the reference scenarios and to highlight some similarities we have listed them below:

Slovakia: The model assumes no changes in geographical coverage, delivery area, but following changes regarding USO services:

- The reduction of the **postal network** – reduction of the post offices, especially in rural areas - about 25% of current total number of post offices
- The **delivery frequency** reduction - in selected delivery routes (3 working days instead of 5 working days)
- **Change of quality of I. class letter**, I. class postal money order to address in selected regions (change of delivery frequency – see previous item)
- **Service changes:** Charging a fee for mail items for blinds

Norway: Taking into account the rise in electronic communications and other postal substitutes, the USP defined its alternative commercial strategy in the absence of a USO as follows:

⁷ (see further section 4.4.6.1, Intangible and market benefits)



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- **Delivery frequency** would be reduced from the current level of six deliveries per week to 5 deliveries per week to 95 % of the households and down to 2 days per week to the remaining 5 % (in the most costly rural routes).
- **Service changes:** Services to blind would not be offered for free, and some extra services related to insured and registered mail would not be offered at all post offices.
- **Uniform national rates** would not apply to mail and parcels sent to and from Svalbard, an archipelago far from mainland Norway.
- **Banking services** would not be offered.
- **Post office network:** Converting an even larger share of post offices to third party run “post in shops”.

Denmark: The requirements reviewed in the reference scenario were:

- **Delivery to the entire country**
- **Delivery frequency:** five days delivery instead of six days delivery
- Reliability of delivery (i.e. **Quality of Service** targets)
- **Liability to pay compensation**
- **Service change:** Free delivery of material for the blind
- **Uniform prices** of single letters in the entire country
- **Postal network:** Nationwide letter box network and network of service outlets
- The **USO accounting** requirements

In the end it was only the six days delivery (DKK 130 million) and free delivery of material for the blind (DKK 18 million) that were calculated to impose a net cost on Post Danmark. The rest of the requirements, Copenhagen Economics concluded, Post Danmark would fulfill also without the USO either because of its customers’ demands and Post Danmark’s business strategy or because of other requirements (from the Danish Competition Act for example).



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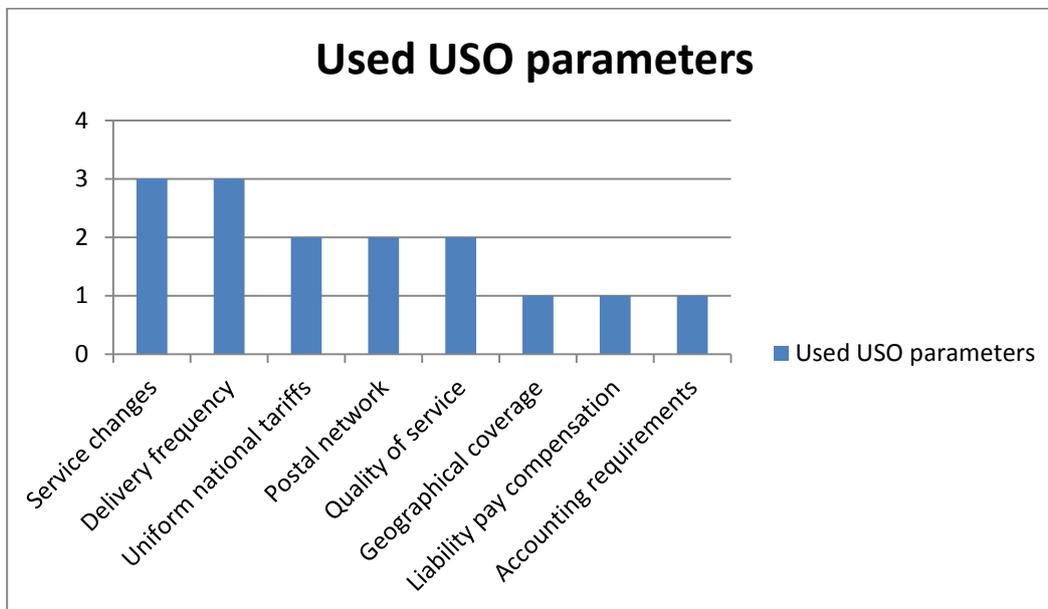


Figure 2 Parameters considered in the reference scenario

Conclusion: Not surprisingly service changes, such as delivery of material for blind people offered for free, is one parameter that would be considered when setting up the reference scenario. Another is delivery frequency which probably would be lower in most countries depending on the current delivery frequency and the geographic conditions. Uniform tariffs, postal network and quality of service (reliability of delivery) are three other parameters that probably would be considered when estimating the reference scenario.

4.3.1 Other calculations

The other four countries (Belgium, France, UK and The Netherlands) have calculated the net cost for specific parts of the USO, or haven't found the need to finalize the calculation yet. As The Netherlands used the deficit approach it didn't create a reference scenario, but the other different scenarios where as follows:

Belgium: Several counterfactual scenarios⁸ were designed in collaboration with the USP (bpost) and a definitive counterfactual scenario has not been chosen. The net cost calculation of USO was based on the comparison of the total profit between the current scenario and the reference scenario. It was not the fact that products are within or outside the USO that mattered, but the specific obligations related to the products within the perimeters of the USO. Within the counterfactual scenarios, simulations of the business model of the current USP without USO were

⁸ As bpost did not submit any request for funding, it was decided not to choose any specific counterfactual scenario at this stage. The USP considered that the choice of a counterfactual scenario depends of the strategy that a postal operator would choose in a specific context which may not be the same context at the moment of the design of the model. The design of the model allows implementing different counterfactual scenarios.



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designed. However, there was no change regarding tariffs (see section 4.4.2), only changes regarding costs and revenues (given the new perimeter of the USP without USO) were estimated.

For example in one of the possible counterfactual scenarios, there was a withdrawal of USO services for areas where it is not profitable to deliver postal items. The assessment regarding which area is profitable or not was based on a geographical analysis (to precisely define the geographical positioning of each network node and the interactions between these different nodes) of each of the 589 Belgian's municipalities.

BIPT also points out that settling the model well in advance allows the anticipation of a request for funding from the USP, by obtaining an agreement regarding the methodology with the USP before any request for funding. The publication of the model ensures the transparency of the net cost calculation before any application for a state subsidy, and this for the whole sector. The process implemented to design the model was based on the involvement of bpost at an early stage of the process at the operational level. The advantage to focus the approach on the operational level is to agree step by step with the USP on the way the process is designed and can be modelled afterwards.

The NRA did use approaches used in the telecom sector. The approaches that had been used were the Net Avoided Costs method, the bottom-up model and the geographical approach (profitable and less profitable areas). BIPT concluded that regarding the net cost of the USO, the assessment principles are the same whatever the sector, even if the components of the USO are different. As the net cost of the USO was calculated in the telecom sector earlier, it allows benefiting from the feedback of the different approaches applied.

UK: The model dealt with cost savings from removing elements of the universal service as:

- Earlier collection from low volume post boxes and removal of very low volume post boxes;
- Later final delivery times (up to 2 hour delay);
- Lower First Class (next day service) **quality of service** – low cost network;
- Lower First Class **quality of service** – intra mail center standard;
- Single class of service with delivery within two days of posting; and
- Five day **delivery** and collection.

France: Counterfactual scenario⁹: reduction its network from 17,000 contact points to 7,600 which represent its accessibility network. The identification of the outlets to be maintained in the counterfactual scenario is made by La Poste, using its own geographical modeling of cost and demand. This should be the subject of further investigation by ARCEP.

⁹ The counterfactual scenario is the scenario where the USP (La Poste) doesn't have SGEI obligation.



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Conclusion: Even if these reference/counterfactual scenarios haven't been finalized or designed to calculate the net cost of USO the focus have been on the postal network, quality of service and delivery frequency.

4.4 Challenges to overcome when implementing a net cost calculation

Following challenges areas, to overcome when implementing a net cost calculation methodology based on a reference scenario, were identified; *Products and services, Prices, the Network design, Demand reactions and Efficiency*. There is also a section in the report that deals with *Other challenges* (including for example data resources, calibration, intangible benefits etc.). In the following subsections the answers received from the NRAs are summarized. The answers are complemented with relevant articles and reports.

4.4.1 Services and products

In the first challenge area; "Service and products", it is interesting to mention the areas "the delivery frequency", "geographical coverage", "material for the blind" and "quality standards".

4.4.1.1 The delivery frequency

Denmark: Copenhagen Economics estimated that the obligation to deliver mail six instead of five days a week costs Post Danmark around DKK 130 million. By not delivering mail on Saturdays, Post Danmark will save on wage costs but lose on a likely drop in sales. The added costs are caused by the increased mail volume on the other delivery days, which will, among other things, necessitate more deposits. The drop in sales is due to product degradation because of customer who, for example, will not accept receiving their Saturday newspaper on Monday.¹⁰

Norway: In most rural areas, delivery frequency would be reduced from the current level of six deliveries per week. 15 percent of the households would likely receive mail five days per week, and another 5 percent would receive mail only twice a week.¹¹ As mentioned in section 4.3, from 2011 onwards the commercial strategy ("counterfactual") implies reduction to 5 days deliveries per week to 95 % of the households and twice a week to the remaining 5 %.

Slovakia: The main reason for the reduction in delivery frequency in the reference scenario (3 working days instead of 5 working days in selected delivery routes) was savings costs connecting with delivery in routes where number of items is low. The USP compared data about walking time and total working time recalculated by time standards of postman. In these routes, where walking time of postman was more than 50% of their working time, there were proposed reduction of delivery frequency and usage of the same postman for more delivery routes (or change of the way of delivery methods). This limit was determined on the base of professional estimation based on the assumption that it should not be effective if postman working for commercial postal operator

¹⁰ What is the cost of Post Danmark's universal service obligation (2008), p.8

¹¹ Calculating the net cost of the USO: a practical example from Norway (Handbook of worldwide Postal reform)



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spend more than 50 % of working time by walking. This estimation was confirmed by supplementary analyze of free postmen's capacity in delivery bags. In the case of low frequentation of delivery (3 days instead of 5 days) the same territory could be served by lower number of postmen, but with worth quality (violate D+1) and dropout of revenues.

4.4.1.2 Geographical coverage

Denmark: Copenhagen Economics concluded that the requirement for delivery to the entire country does not impose extra costs on Post Danmark. Even if Post Danmark was not subject to a USO, it would still deliver mail to the entire country. The reason is that Post Danmark would suffer a great loss of revenue, but only obtain limited cost-savings, by not delivering to the entire country. For example, many of Post Danmark's customers, such as banks and authorities, require national coverage. If the USP cannot meet these demands, sales are likely to drop dramatically and this will produce a significant loss of revenue. In addition, the USP would only achieve limited cost-savings by not delivering to the entire country since the extra cost of delivering to the most hard-to-reach recipients, such as small islands or the most sparsely populated areas is limited.¹²

Norway: Considering demographic and geographic facts, one might infer that the burden of the USO should be relatively heavy in a country like Norway. It has a very long coastline interrupted by deep fjords and with many populated islands. Mountains run north and south, producing a harsh winter climate in the interior. Due in part to long-standing government policies, Norway's population of only 4.5 million inhabitants is spread out in a relatively decentralized pattern. Population density is 12.3 inhabitants per square kilometer, about 60 percent of Sweden's and 40 percent that of the United States. Despite this unfavorable environment, however, it is not credible that Norway Post, as it currently envisages its business, would discontinue providing basic postal services to the entire population of Norway.¹³

Slovakia: In the commercial scenario there are no changes in geographical coverage and delivery areas from the reason that the USP wants to retain its markets shares and compete in competitive market with comparable quality. The NRA agrees with these assumptions.

4.4.1.3 Material for the blind

Denmark: Copenhagen Economics estimated that the requirement for free delivery of material for the blind is the only other USO requirement that will impose a cost on Post Danmark, namely approx. DKK 18 million. Therefore Copenhagen Economics assume that the USP would charge for the distribution of mail for the blind without the USO. (All other USO requirements regarding service, products and prices, letter boxes, post offices and accounting rules will not increase cost for Post Danmark.)

¹² What is the cost of Post Danmark's universal service obligation (2008), p.7-8

¹³ Calculating the net cost of the USO: a practical example from Norway (Handbook of worldwide Postal reform)



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Norway: Services to the blind would not be offered for free, and some extra services related to insured and registered mail would not be offered at all post offices.

Slovakia: The NRA accepted the assumption that the USP would charge a fee for mail items for the blind in the reference scenario. They were considering that the obligatory not to charge a fee for mail items for blinds is only for USP with USO.

4.4.1.4 Quality standards

In considering the impact of quality of service obligations (i.e. the transit time) and whether it constitutes a burden for the USP, the NRA has to assess if the provider would automatically lower its quality of service and delivery without the USO. The D+1 offer is sometimes perceived by universal service providers as a real constraint that generates large costs. It is therefore possible that without a quality obligation operators would be tempted to stop the D+1 delivery. It also depends on the chosen delivery frequency.

Norway: The USP (Norway Post) consider that the “Quality” requirement is a restrictive element of the USO. In particular the D+1 requirement on priority post is highly cost demanding as it implies a relatively large air transport network specifically devoted to satisfy that requirement, higher number of sorting terminals than otherwise etc.

Although the USP has not yet asked for relaxation of that requirement, they have very clearly expressed a need for more flexibility in the near future as letter mail volumes continue to fall. Relaxation of the “D+1” delivery standard will open up for substantial cost savings under the present 6 or 5 days-a-week delivery frequency. Moreover, in a longer prospective it will make a reduction in the number of delivery days possible. A substantial relaxation of the present delivery standard will probably become more in line with future demand. Basically, the best tool to help identify the alternative is the development in customer/market demand and willingness to pay for this service level, compared to costs.

The USP has not yet done any estimation on the net cost of the D+1 reduction. However the USP has done a survey among SMEs and households. The emphasis of the survey was not on present satisfaction with the postal service, but on the ongoing changes in customers’ service preferences and expectations. Moreover it had a broader scope than just delivery speed standard. Anyway, the survey clearly indicates that overnight delivery is less important to both SMEs and households today than it was just some few years ago. This decreasing importance is a trend due to more convenient and efficient electronic alternatives to many types of letter mail.

Slovakia: The NRA – that has calculated the net impact both as regards revenues and costs of D+1 – considers that the “Quality” requirement is a restrictive element of the USO, and that it is one of the reasons of USO burden existence. The “Quality” requirement creates higher costs of universal service, which are part of net costs calculation (frequency of delivery and time limit). According to the NRA the USP would without obligation reduce D+1 delivery standards in some



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delivery routes (for identification of realistic alternative to D+1 quality there were used the results of external surveys and internal analyses of USP).

UK: Quality of service can be a restrictive element of the USO, in the sense that by reducing quality targets, it is expected that the net cost of USO is reduced. For example, Royal Mail uses aero planes in the transportation of mail to some parts of the country to ensure a First Class (next day) service. A reduction in quality of service targets may allow Royal Mail to stop using air transport and save costs as a result, and if the revenue impact is less than the savings, the net cost of the USO will be reduced.

Denmark: In their report Copenhagen Economics stated that the USO contains requirements for reliability of delivery, i.e. the maximum time allowed for a letter to reach the recipient, and liability to pay compensation. The consultants though concluded that the requirements for reliability of delivery and liability to pay compensation did not constitute a burden for Post Danmark. This was due to the fact that both Post Danmark and its competitors¹⁴ voluntarily offered higher standards than required by the USO. This meant that the USO requirements were lower than the customers' requirements for Post Danmark.¹⁵

Conclusion: The three countries which have made a comprehensive net cost calculation state that the USP would probably lower the delivery frequency in at least some parts of the country if it wasn't designated. This USO requirement therefore constitutes a burden in these parts if the USO constraint means a higher delivery frequency than communicated within USP's business strategy. None of the USPs are (in the studied cases) considering delivery to the entire country as a burden as the service remains a competitive advantage of the USP compared to its competitors.

Materials for the blinds would not be offered for free and therefore constitutes a burden for the USP. On the contrary the reliability of delivery probably wouldn't constitute a burden as most USPs voluntary offer higher standards than required by the USO and as it constitutes a competitive advantage. None of the asked countries have mentioned any specific challenges when estimating the net cost of these requirements.

4.4.2 Prices/tariffs

In general, postal operators are likely to have an incentive to set prices to *maximize profits*, meaning that they increase prices as long as it is profitable and permitted under regulatory constraints. Prices are increased until the increased revenue from the higher price is outweighed by the loss in revenue from lost volumes. In Figure 3 below, this means that prices are increased until area B equals area A.¹⁶

¹⁴ In 2007 Bring Citymail Denmark A/S was still operating in Denmark.

¹⁵ What is the cost of Post Danmark's universal service obligation (2008), p.70.

¹⁶ Pricing behavior of Postal operators (2012), p.115-116



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- its compliance with the tariff requirements (such as cost orientation, affordability, non-discrimination) under section 28 of the 2011 Act.

Denmark: Post Denmark's prices of products covered by the USO must be uniform in the entire country. Copenhagen Economics assess that the requirement for uniform prices for single letters in Denmark does not constitute a real constraint on Post Denmark. There are three reasons for this. *Firstly*, Post Denmark has a de facto monopoly. This means that Post Denmark does not have to fear that its competitors steal the customers in the cheapest parts of the country and leave the expensive customers to Post Denmark. *Secondly*, price differentiation would confuse the customers as they would have to know whether an address is located in an expensive or a cheap area when stamping their letters. It would not cost the same to send a letter to two different towns in Denmark. *Thirdly*, the benefits of price differentiation are quite limited. One of the reasons is that price differentiation cannot be used to raise the average price due to the price ceiling. This means that it would only be profitable to price differentiate if the customers start sending more letters to recipients in the cheap parts of the country and fewer letters to recipients in the expensive parts. However, in practice it is hardly likely that people would react to small price adjustments when deciding to whom to write.¹⁸

Slovakia: The calculation of the net cost under commercial scenario deals with all USO dimensions together (including the price parameter).

Belgium: Unlike PostUrad, BIPT's model deals with all USO dimensions together – except for the pricing dimension. This is due to the fact that the pricing dimension requires an additional approach based on the assessment of the price sensitivity of the demand for each category of customer (e.g. through a survey) and the assessment of the strategic plan of a postal operator without USO (e.g. with the help of a benchmark of countries where there is some competition or in similar sectors). In the absence of specific, sensitive and reliable measures concerning the elasticity of supply and demand, it was considered reasonable not to take into account tariff's modifications in the reference scenario.

Norway: Norway Post's alternative commercial strategy in the absence of the USO would here mean that uniform national rates would not apply to mail and parcels sent to and from Svalbard¹⁹.

Conclusion: Most countries have counted on the same price structure when calculating their reference scenario. This either because non-uniform pricing for a single piece universal postal service is likely to lie outside the range of commercial strategies as it could lead to for example customer disruption, acceleration in e-substitution or entry/expansion of competitors. The other

¹⁸ What is the cost of Post Danmark's universal service obligation (2008), p.69-70.

¹⁹ An archipelago with about 2,200 inhabitants lying well inside the Arctic Circle far from mainland Norway



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reason is that measures concerning the elasticity of supply and demand need a significant supporting analysis which yet hasn't been feasible.

4.4.3 The postal network

The most technically complex part of building a reference scenario is probably network re-optimization. The reference scenario should be based on a network which is not designed for delivering the universal service, but is re-optimized to delivery services which the postal operator may find commercially viable in the absence of the universal service obligation.

The network in the reference scenario could be significantly different from the universal service network depending on the operator's business strategy. For example, it may require considerably smaller number of mail sorting centers and sorting machines, lorries, and delivery walks.

Network re-optimization may also involve various highly technical and operational assumptions. The NRAs are therefore likely to find it challenging to assess these assumptions. The use of operational postal experts may help the NRAs, because these experts may be able to provide detailed technical knowledge and experience about designing and re-optimizing postal networks.

International comparisons may also help the NRA in these assessments. However, there is a limit to how useful international bench-marking is due to factors which contribute to the incomparability of networks in different countries, e.g. geography and population density.

Comparison with other postal companies which operate in the country but are not obligated to provide a universal service may also be helpful. Such comparisons will not have the incomparability issues of international bench-marking. However, these domestic comparisons may be of limited use if the other postal operators provide considerably different services, e.g. they deliver parcels only; or they serve specific regions only and not the whole country; or their operations are limited to parts of the postal process (e.g. upstream operations only and not end to end operations).

This section sets out a summary of the experiences of some of the NRAs in tackling network re-optimization.

France: The USP in France, La Poste, has two missions concerning its geographical presence: (i) the obligation to provide access points within the scope of the universal service, and (ii) the territorial presence obligation beyond the USO. The two missions have different implications for the size of the retail network.

The universal service accessibility mission requires the retail network to satisfy some geographical criteria to ensure a certain level of outlet density throughout the French territory. The territorial presence obligation adds additional geographical constraints, including an overall obligation to maintain at least 17,000 outlets throughout the French territory. The latter means La



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Poste has to increase its territorial presence above and beyond its universal service accessibility obligations.

The net cost calculation that was done in France concerns La Poste's public mission of territorial presence. It concerns the retail network of contact points. No modifications of other networks (collection points, sorting centers, transportations routes, etc.) were considered.

The net cost calculation required determining the postal outlets that La Poste would maintain without its mission, i.e. in the reference scenario. This meant identifying the outlets that serve the territorial presence mission in particular. The approach was to use cost functions to evaluate every outlet costs and revenues. In the end, the net cost of the mission would be the difference between the cost of all the outlets that are in the mission's scope and their revenues.

ARCEP used La Poste's model for this exercise. La Poste developed its model based on a segmentation of the French territory and the evaluation the minimum population density each contact point covers. The model identifies the contact points that serve the universal service mission, and those that serve the territorial presence obligation. The argument is that, without its territorial presence obligation, La Poste would have dismantled all the outlets of the territorial presence mission scope (7,500 contact points out of 17,000 in 2012).

The calculation of the net cost required establishing the cost function for a postal outlet. It implied some modeling, since La Poste's accounting information system does not provide all the necessary data at the postal outlet level. A bottom-up model of retail outlets has been developed.²⁰ It relies on cost functions based on relevant cost drivers that are used to estimate each outlet costs. Cost functions for different activities were identified.

Slovakia: The postal network was re-designed by modifying the existing network to suit a non-USO environment. The re-design of the network impacts mainly the number of operated post offices and the posting part of the post offices.

The reference scenario was built based on the assumption that postal users would post their items from other post offices close to their residence or workplace. It was calculated that 25% of the existing post offices would be closed, and the USP would establish 60 new contact (delivery) points for receiving of undelivered registered items. The commercial scenario contains the exact list of post offices, which would be operated and which would be closed. The list was laid down on the base of detailed selection (using criteria and assumptions). Assumptions of customer behavior (posting of items near residence or near working place) were laid down on the base of external research.

With respect to post offices which act as collection points, the main criteria for keeping or removing them were:

²⁰ See section 4.2.2.



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- Strategic importance of post office (point of delivery, logistics, sorting and other aspects): all post offices which are important from the point of ordinary operating activity, in term of delivery, logistics, sorting and processing of items, to provide express services and allotment (distribution) of cash holding to other (smaller) post offices. These post offices would be operated irrespective of economic criterion.
- Profitability of post office: total revenues - total costs
- Profitability of the postal part: Each profitable post office would be operated. Because this criterion could deform selection, it was supplemented by other criterion: Profit/costs of the postal part of post offices. Costs of the postal part of post office are all costs reduced by costs of deliverymen. If profitability of costs of the postal part of post office is higher than WACC²¹, this post would be operated.

Other elements of the network (mail sorting centers, transportation routes, etc.) were designed based on the new delivery process (in particular the new frequency). It is assumed in the reference scenario that 45% of delivery routes would be operated 3 days instead of the current 5 days. Some transportation routes would be combined with the motorized delivery routes. The processes in the particular elements were not changed, only slowed-down according to the reduced delivery.

The reduction in the total number of postal network employees - which would happen in line with the re-optimization of the network - would also impact the number of operational management employees (leading to savings in staff costs at Head office and District management level).

The USP carried out the re-optimization which was reviewed by PostUrad. Originally, the USP proposed that the reference scenario should include a reduction of about 48 % of the post offices. However, PostUrad argued that some post offices are operated by the USP voluntarily, beyond the USO. Following detailed analysis of the USP's submitted list of post office according to criteria set out above, PostUrad came to the conclusion that a 25% reduction of current total number of post offices is acceptable and reasonable for the reference scenario.

The USP made an analysis based on a comparison of the results of criteria (mentioned above). Because these criteria were set in the secondary legislation (Order of PostUrad on calculation of net costs), PostUrad checked the results and checked calculation of this part of net costs (postal network). Hereby PostUrad has compared the extent of the network (number of post offices per inhabitant or per 100 km²) with other EU countries. The most contentious issues were the choice of those post offices which would close and the post offices that would take over their residual activities, as well as the feasibility of the proposal in terms of location, human resources, facilities

²¹WACC stands for weighted average cost of capital, which is the rate that a company is expected to pay on average to all its security holders to finance its assets.



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etc. There were also discussions over the cost-allocation keys, in particular in relation to the calculation of administrative overhead costs savings.

Belgium: TERA Consultants²² helped BIPT to build the model of net cost calculation. This assistance has been very helpful for the following reasons: the consultant has knowledge of the postal market in many countries in Europe (and in other parts of the world) and a strong experience in building models of cost calculation. The USP, bpost, had sent to BIPT (and TERA consultants) the necessary data they needed to build the model.

To re-optimize the network, the existing network was modified to suit a non-USO environment. This was done by removing the processes that would no longer be carried out without the USO.

The management structure was considered to be variable and dependent on the operations. The indirect costs of management and support services were assessed via the application of a mark-up.

Denmark: To discharge the USO, Post Danmark must have a network of letter boxes for the collection of letters. However, there are no requirements on Post Danmark's under the Postal Act regarding the number or positioning of letter boxes used for collection. Copenhagen Economics therefore assessed that the requirement for a nationwide network of letter boxes does not constitute a major burden for Post Danmark. This was due to the fact that Post Danmark is allowed great flexibility as to how to fulfil this requirement

The USO only requires Post Danmark to maintain a nationwide network of service outlets. This means that Post Danmark must have at least one full-service outlet in every town or city with more than 5,000 inhabitants.⁶⁴ In towns with 2,000-5,000 inhabitants, Post Danmark can only close a full-service outlet if a new service outlet is established in the town. Service outlets in small towns and rural districts may not be closed if this would imply that the users would have more than ten kilometers to the nearest service outlet. Finally, Post Danmark must ensure that the nearest service outlet is no more than five kilometers away.

Copenhagen Economics assessed that the requirement for a nationwide network of service outlets didn't really constitute a major burden for Post Danmark, which was explained by following two reasons:

- *Firstly*, the service outlets do not have to be post offices. The service outlets may also be post shops not owned by Post Danmark. This gives Post Danmark a wide scope for reducing the costs of the post office network by closing post offices and replacing them with post shops.

²² 39 rue d'Aboukir 75002 – PARIS



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- *Secondly*, Post Danmark would probably have a network of post offices with or without the USO. This is due to the fact that the service outlets generate earnings via commercial activities, such as sale of tickets, and that the service outlets are necessary for many of Post Danmark's profitable products. The service outlets are particularly important for the delivery of parcels, such that with fewer service outlets, Post Danmark would lose some of its parcel business.²³

Conclusion:

The first question the countries which have calculated the net cost of the USO postal network have asked themselves is if the service network would look significantly different if the USP wasn't designated. This depends mainly on two things; the business strategy of the USP (pointed out by Slovakia and Denmark) and if there is a further territorial presence obligation which adds additional geographical constraints (pointed out by France). If for example the access points needed within the USP's business strategy or if there is a territorial constraint which goes beyond the requirement of access points within the USO obligation, this requirement doesn't constitute a real restraint on the USP. On the contrary, if the USO obligation is more extensive, the gap will constitute a restraint to the USP.

The second question would then be which access points that would be eliminated. Both Slovakia and France have concentrated on which post offices that would be closed, while Belgium focused more on the processes that would no longer be carried out. The overall challenges mentioned are non-existence of necessary data, the difficulty choosing the correct cost-allocation keys and the allocation of administrative costs.

4.4.4 The demand reaction

The purpose of this analysis was to get a deeper insight as to how national regulatory authorities (NRAs) deal with eventual changes of demand reaction in practice; What were the main challengers when estimating the demand reaction and what were the main conclusions.

The analysis shows that besides the three countries that have made a complete net cost calculation of USO (Denmark, Norway and Slovakia), also UK and France have considered the demand reaction in their models.

The answers and explanations received from NRAs allow making the conclusion that different countries have evaluated the demand reaction in different ways. Depending on a methodology of net cost calculation applied, different methods of analysis have been chosen. In some cases the special regard has been paid to particularities of a country (i.e. special requirements for USP, for example, obligation of "territorial presence"). The NRAs have identified different aims when calculating the net cost, and that had some influence or resulted in evaluation of one or some other element.

²³ What is the cost of Post Danmark's universal service obligation (2008), p.73-74.



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UK: In order to estimate the demand reaction under PC approach different methods can be used in the UK; non-price effects, a “pyramid approach” (proposed by Royal Mail). In this case, when calculating the net cost of USO, the aim of Ofcom has been to assess whether the market for provision of postal services currently meets the reasonable needs of users. For that purpose, the NRA has defined a number of hypothetical scenarios, based on potential changes of the existing universal service. These scenarios have enabled the NRA to test the reaction of postal users to potential changes of the universal service by doing the market analysis. The NRA has also carried out – with an input from Royal Mail – an indicative analysis of some of these potential changes on Royal Mail’s costs. In determining the effect of potential changes to various aspects of universal service, the NRA has fulfilled the following:

- Taken the universal service required by the Directive as the starting point.
- Considered the views of stakeholders²⁴, including the responses to Review of Regulatory Conditions relating to the universal service²⁵.
- Considered Ofcom’s existing body of knowledge about the costs and benefits of postal services; and where there has been evidence of both benefits and costs, have suggested that it would be worth more detailed assessing of the needs of users.
- Reviewed practice in other countries.

As the result of the analysis, the NRA has not found a need on users’ part for changing the scope of the universal service.

Slovakia: The USP relied also on the results of external survey about customer behavior conducted by independent companies (University of Žilina, TNS Slovakia). Also own USP analyses were used for assessment of demand reaction. The survey was oriented on using/restriction of postal services in case of the closed post office and using/restriction of postal services in case of longer delivery time. The main conclusions of this survey were:

- 19,75 % of current users (in selected regions) would use 2. class letter instead of 1. class letter;
- 2,72 % of current users (in selected regions) would use express items instead of 1. class letter ;

According to conclusions of survey the decrease of the revenues was calculated in commercial scenario.

¹⁶ Consumer Focus, Citizens Advice and Citizens Advice Scotland, Age UK, the Federation of Small Businesses, the Direct Marketing Association, the Mail Users’ Association, ISBA (Incorporated Society of British Advertisers), Postaf, Royal Mail, the Mail Competition Forum, the Department for Business, Innovation and Skills, and Intellect. We also engaged with Ofcom’s advisory committees and received comments from RNIB.

¹⁷ <http://stakeholders.ofcom.org.uk/consultations/review-of-regulatory-conditions/>



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France: The French national regulatory authority, ARCEP, is in charge of calculation of the corresponding net cost since 2011. The obligation of "territorial presence" is constraining La Poste to maintain 17,000 postal outlets throughout the national territory. ARCEP has shared its practical experience on how they have considered the demand reaction in their model.

In order to estimate demand reaction, many aspects have been examined and different analyses have been conducted on the demand (econometrics, surveys, other). The demand function aims at determining the level of activities and the revenues in the postal outlets, depending on the extent of the network, in the current network and in any counterfactual situation with a reduced network. Concerning the current demand, the information system of La Poste records the operations actually taking place at the outlet level. Therefore, there is no need to rely on a model for identifying the demand in the current situation. A model is still required for determining the demand level in the counterfactual scenario. The demand is modeled as the time of activity, recorded in each outlet (evaluated as the standard time per operation applied to the recorded operations at the outlet). As for the demand reaction following a change in La Poste network, ARCEP has considered so far that the total demand remains unchanged in the counterfactual scenario: the demand of removed outlets is uniformly spread over the maintained outlets. Hence, no loss in revenues is considered. Also, no other postal operators were considered in the "territorial presence".

The total number of operations remains constant when the network is modified, but the share of automated operations is modified. As the number of outlets is reduced and outlet activity increases, it becomes increasingly profitable to roll out stamp dispensers and ATM. The rate of automated operations is a function of the total activity in each postal outlet. This function is calibrated on the observed level of automated operations in the current network.²⁶

4.4.4.1 Calibration of a demand function

ARCEP, using practical experience, presented its remarks upon the problems it had to contend with and what main lessons can be drawn.

Part of a net cost evaluation consists in implementing the right demand function. The loss of demand encountered in a counterfactual scenario depends on several aspects of the demand, such as the demand elasticity to the offer diversity, to the price, or to the distance to access a postal outlet.

²⁶ Net cost calculation. A practical example concerning La Poste and its territorial presence obligation
Frédéric Fustier, Lionel Janin and Racha Sahly (ARCEP) Paris, version: 28 May 2013



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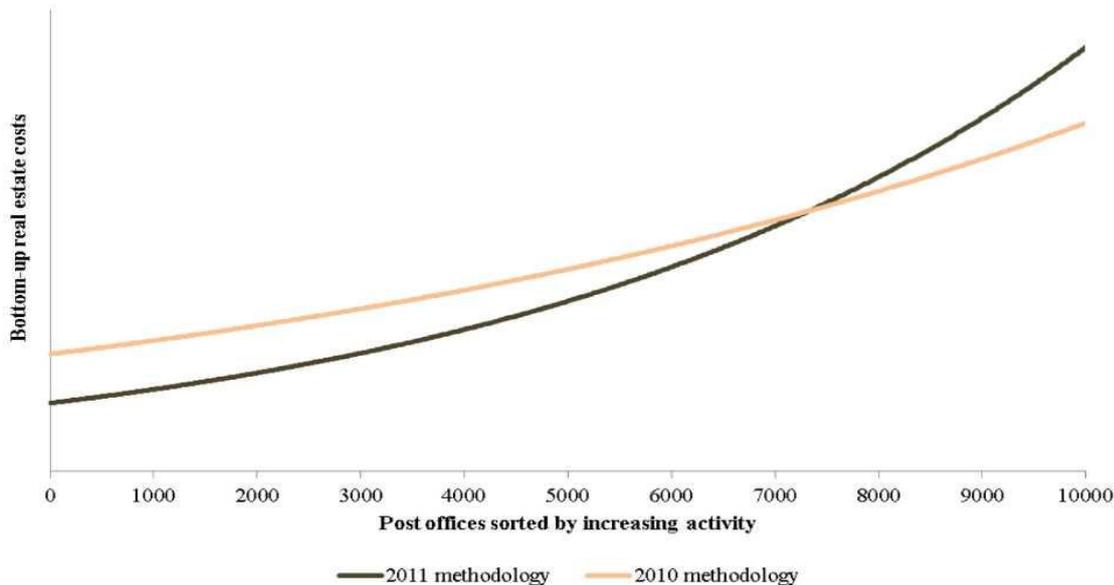


Figure 4: comparison between two bottom-up cost functions (2010 versus 2011 methodology)

The main difficulty when measuring such elasticities and other characteristics of the demand function is that the relevant data corresponding to the counterfactual scenario are not available, as the counterfactual scenario is a fictitious situation.

To overcome this difficulty, econometrics is a first option to consider. J.P. Klingenberg et al. (2013) present examples of econometric analysis that can be made on a postal retail network, and point out the usefulness of such methodology. However, they remind that this methodology can encounter difficulties, especially in its implementation given the variety of explanatory variables. This methodology potentially lacks the requested variability enabling to capture the impact on the demand of a counterfactual scenario with far less outlets that actually observed. Typically, in the case of the net cost evaluation of the territorial presence, regressions results between the average distances currently covered by people to their local postal outlet may not capture the potential impact on the demand of the removal of 10,000 postal outlets out of 17,000.

An alternative methodology consists in relying on 'stated preferences' (Lee-Gosselin, 1995) from surveys administered to users of postal services. The latter are asked about their current consumption habits and the consequence that a change in the extension of the retail network would have on them. The difficulty of such a methodology, apart from designing a clear and understandable questionnaire, is the credit that can be given to the answers provided. The respondents are indeed asked to project themselves in a fictitious situation and to evaluate their reaction. This methodology can raise three objections: (i) the limited capacity for respondents to fully assess the extent of the counterfactual scenario, (ii) the potential discrepancies between 'stated preferences and 'real behavior', and (iii) the limited degree of rationality of consumers



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(infinite elasticity to offer diversity, price or distance). The first issue (i) can be addressed through a well-designed questionnaire. Using known comparisons or visual assessments will help the respondents assessing their potential behavior in the counterfactual scenario. The second issue (ii) has been examined in several studies in the transport sector where stated preferences have been used to estimate the impact on a counterfactual scenario of transports on demand. These studies do not identify systematic bias in the answers likely to discredit the results of the surveys. More important, thanks to past experiences, Adler (2011) underlines the match, in most of the case, between stated preferences and actual choices in a long term perspective. The last issue (iii) can be treated by identifying and isolating the irrational answers.

In the end, it appears that no methodology automatically guarantees a relevant calibration of the demand function. In this view, a review of the evidence shall prevail in the net cost evaluation. The evidence should cover the different analyses conducted on the demand (econometrics, surveys, other) and also on any other evidence provided by interested parties (other postal operators, public bodies, and so on). In the case of the territorial presence net cost, this review of evidence has led ARCEP to consider in its first two evaluations that the total demand would be maintained in the counterfactual scenario.

Denmark and Norway: Copenhagen Economics and Norway Post have approached the demand function in a rather different way. As they have used the USP's business strategy as a starting point and have relied on the USP's knowledge of its customers' needs they have been able to simplify the exercise a bit. In each USO requirement, such as delivery to the entire country, delivery six days a week, free materials for the blinds etc. the effects on the demand has been considered jointly with the cost and revenue effects.

For example, when discussing the full national coverage Copenhagen Economics reasons that reaching all parts of the country is one of Post Danmark's most important sales arguments. Many of Post Danmark's customers, such as banks and public authorities, need to have letters delivered to all parts of the country. If Post Danmark fails to meet its customers' demands, they may switch to nationwide competitors. Consequently, they conclude that Post Danmark would deliver mail directly to households.

Conclusion:

According to the responses received, all NRAs used recommendations of external consulting companies, or made their own estimations based on different studies and examples when estimating the demand reaction in the net cost calculation. It can be concluded, that difficulties may occur when assessing the reference scenario, such as determining its parameters (delivery frequency, postal network, geographical coverage, quality and prices), determining the services that the USP will be willing to offer even without USO and evaluating the reaction on the demand side after putting out the hypothesis. The main difficulty when measuring elasticities and other characteristics of the demand function is that the relevant data corresponding to the



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counterfactual scenario are not available, as the counterfactual scenario is a fictitious situation. Estimation of the demand reaction requires an additional approach based on the assessment of the price sensitivity of the demand for each category of customer (e.g. through a survey) and the assessment of the counterfactual scenario of a postal operator working without USO (e.g. with the help of a benchmark of countries where there is some competition or in similar sectors). An alternative way (which Denmark and Norway points out) is to concentrate on the USP's business strategy and rely on the USP's knowledge of its customers' needs when making an overall estimation of demand reaction on costs and revenues.

4.4.5 Efficiency

4.4.5.1 Incentives for cost efficiency

Incentives for efficiency are required by the European Commission when a compensation mechanism of a service of general economic interest (SGEI) is implemented. On its new package of State aid rules for SGEI²⁷, adopted on December 2011²⁸, the European Commission takes a greater account of the efficiency criterion. A new element brought by the new framework is the introduction by Member States of efficiency incentives in the compensation system, if it is feasible. The objective of implementing such incentives is that funding mechanism (such as a compensation fund) should fulfil its goal (cover the net cost of the USO) by avoiding economic distortions in the market and, therefore, be competitive neutral.

Ensuring an efficient provision of universal services is one of the objectives of the Postal Directive. According to its Annex I, the calculation of the net cost of USO "shall take into account [...] incentives for cost efficiency"²⁹. The main objectives of introducing incentives for cost efficiency in a net cost calculation are first, to make sure that the services are provided at lower cost, thus at the most profitable way for final consumers; second, to insure that the compensation does not create market distortions and, third, to make sure that the compensation does not compensate the USP's inefficiencies but only the net cost of providing USO.

In order to comply with the Directive's recommendation, any inefficiency should not be part of the net cost of the USO, the calculation must then neutralize the USP cost's inefficiencies if any, to avoid compensating extra costs caused by inefficiencies. Therefore, there is a need of detecting any inefficiency in the USO production process and determining what would be the efficient cost level at which the USO can be provided, and finally how the calculation of the net cost of the USO could take account of incentives for cost efficiency.

²⁷SGEI are services of an economic nature that public authorities identify as being of particular importance to citizens, but which are not supplied by market forces alone, or at least not to the extent and under the conditions requested by society. Their provision may therefore require public intervention.

²⁸ Reform of the EU State Aid Rules on Services of General Economic Interest, COM (2011) 146 final, Brussels, 23.3.2011.

²⁹ Annex 1, Directive (2008/6/EC).



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4.4.5.2 Cost methodology and efficiency

In order to measure the net cost of USO, we have seen that a cost methodology must first be chosen from several methodologies which are commonly used: the Fully Distributed Cost (FDC), the Net Avoided Cost (NAC), the Entry Pricing, the Profitability Cost (PC) and the Commercial approach. The calculation method should be able to take efficiency into account.

As the FDC approach is an accounting method which is used by USP to prepare separated regulatory accounts for their postal operations, it does not intrinsically consider incentives for cost efficiency. It is also the case of the NAC approach that uses actual costs, and where some inefficiency may be hidden in the calculated net cost of USO. Therefore, an efficiency adjustment could be needed to comply with the directive recommendation. Concerning the Commercial approach, this method could be expanded in order to take into account incentives for cost efficiency. Indeed, in the reference scenario, commercial decisions are considered to be taken by a competitive, thus efficient, service provider. When calculating the net cost, it would be possible to take into account, within the net cost calculation model, whether the provision of the universal services element is efficient. Therefore, in the case of the Commercial approach, there is no need to make any inefficiency adjustment as an ex-post exercise, i.e. after the calculation of the net cost of USO, which would be the case if other cost methodologies were being used.³⁰

4.4.5.3 Measuring efficiency

The evaluation of efficiency has been subject of a lot of academic discussions but still remains a great challenge when assessing the net cost of USO. The Commission guidelines on the compensation of an SGEI or its Annex I of the Postal Directive give no precision on what the incentives for efficiency should be or on how to measure efficiency. Measuring efficiency implies identifying the cost function of the USP, and estimate the cost level of an output delivery. This cost level should then be compared to an efficient cost level reference. The difference between the two levels would then determine if the USP is efficient in providing the universal services. The idea seems to be that a firm is efficient if it produces a given quantity of an output at the minimum cost possible. In order to measure efficiency, the level of the minimum cost used for an output must be identified first. In practice, it is a difficult task to do, but yet many indicators could be used in order to assess if the USP supplies efficiently the universal services.

To quantify the efficiency level, a methodology that is preconized is to define the minimum cost function and the relation between the cost and the output, by using a benchmark.³¹ It could either be a sector benchmark (if the competition level allows it) or a benchmark within the USP (by using the company's strategic efficiency targets or its best historical cost performance). This methodology assesses efficiency of each USO elements.

³⁰ Copenhagen Economics, Manual For Calculating the Net Cost of the USO (2011), p 29.

³¹ Frontier Economics, Study on the principles used to calculate the net costs of the postal USO A REPORT PREPARED FOR THE EUROPEAN COMMISSION, January 2013



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Another methodology which could be used is to assess the USP efficiency as a whole, and not for each output, or USO segments. This method uses a bundle of indicators³² which contribute to the USP efficiency, such as its innovation level, price level, level of competition, revenues per employee, ownership structure, assessment of the potential for production process reorganization or the presence of efficiency factors in tariff regulation models.

4.4.5.4 Correcting inefficiencies

Adjusting the level of efficiency may be required when assessing the net cost of USO.³³ First, if the cost methodology that is being used does not take into account the possibility that the USP operates inefficiently, an ex-post efficiency adjustment can be made. After determining the level of inefficiency that should be corrected by using the economic indicators discussed above, the adjustment may be applied by correcting the calculated net cost as a final step of the evaluation. The efficiency adjustment may for example be represented by a mark-up (x %) applied on the net cost of USO. This ex-post adjustment exercise could be applied under some cost approach such as the FDC, NAC, or PC approach.

Second, an ex-ante adjustment can be made if a bottom up model is used. Such modelling can explicitly demonstrate the costs faced by an efficient operator under both the base case and reference scenario. The costs included in the net cost calculation should be equivalent to those of an efficient operator so that the net cost excludes inefficiencies. In the Commercial approach eventual inefficiencies could be considered and eliminated both when setting up the reference scenario (ex-ante adjustment) and also when studying the net cost for each universal service requirement separately.

4.4.5.5 The survey

Belgium: The NRA designed a bottom-up model based on the best available technologies, as the USP was considered to have an efficient organization. This position was taken after a deep understanding of the operational processes of bpost (with the help of visits to sites and technical discussion with operational staff members of bpost) and a comparison between bpost's operational processes and best standards in Europe. Therefore the NRA has been chosen to base the bottom-up model on a scorched node approach.

In the specific context of Belgium, the scorched node³⁴ bottom-up model was considered as a good compromise. The most important was to keep a bottom-up approach which allows reflecting the cost sensitivity to the variation of activities. As any model, a model provides a simplified approach of the reality and serves a specific purpose. However no specific shortcoming has been identified so far regarding the cost calculation.

³² Copenhagen Economics, Manual For Calculating the Net Cost of the USO (2011) p. 54.

³³ Frontier Economics, Study on the principles used to calculate the net costs of the postal USO A REPORT PREPARED FOR THE EUROPEAN COMMISSION, January 2013.

³⁴ In the scorched node approach, the existing network nodes are said to be fixed, though all other network elements can be optimised.



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UK: The USP based its costs on an estimate of its future post-modernization costs to ensure the best available estimate of efficient costs is used in the calculations.

In estimating the counterfactual scenario, the natural inclination will be to consider the most efficient operations capable of meeting the revised USO specification. However, if the existing operations against which the counterfactual is compared incorporate material inefficiencies, then the difference between the existing and counterfactual operations will include both:

- a) savings attributable to a change in the USO specification; and
- b) efficiencies already achievable under the existing USO specification.

As a result, the counterfactual comparison will tend to overstate the cost savings properly attributable to the USO specification³⁵. In order to try and avoid this, one can consider a counterfactual at the same relative level of efficiency as existing operations. However, this is not an easy thing to judge, particularly if existing inefficiencies are significant.

The evidence suggests that the potential for Royal Mail to become more efficient within the existing USO specification is significant. Therefore, it is difficult to have confidence that any counterfactual analysis based on current or recent operations and costs does not mistakenly include efficiencies already achievable.

To address these issues, the projected operations, volumes and costs at 2015/16 were used as a starting point in the analysis. This significantly reduced the level of existing inefficiencies and the risk of mistakenly including efficiencies under the existing specification. 2015/16 was the last year for which Royal Mail had detailed projections, and as it happens by that year a substantial part of the modernization plan will have been completed.

Even with the 2015/16 starting point, some risk remains. Therefore, within each scenario, they have considered the sources of the cost savings and tried to ensure that only cost savings attributable to the USO change under consideration are taken into account.

There is also the issue of using projected rather than actual results: the latter are hard facts, while the former is based on assumptions which may turn out to be not entirely valid. This risk can, by nature, never be eliminated. However, the risk was mitigated in this case by basing the calculations on Royal Mail's most recent and detailed business plan at the time which was also used by the company to restructure its business in 2011 to return to profitability and restore its viability.

³⁵ If we compare the costs as they are, with the efficient costs without USO, then the difference will include both the USO related costs and efficiency related costs. If we then take that difference to be the net cost of USO, we would be overstating.



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Assuming the actual level of efficiency in the reference scenario (or inefficiency for that matter) has the advantage of side-stepping the challenge of determining what a fully or reasonably efficient reference scenario would be. However, the challenge is to retain the same level of efficiency in the counterfactual scenario. But building the counterfactual scenario may involve a hypothetical re-design of the network and operations (or parts of them) as well as the products, particularly if the approach is bottom-up.

For example, if in building the counterfactual, a particular operation or business unit and its products are entirely removed, then the net cost calculation would include any potential efficiency gains which could be had in that operation or unit. To address such problems, they will then need to disentangle the efficiency gain from the scope related cost savings. If this had to be done in various areas or for significant parts of the scenario, then the exercise would be increasingly similar to determining what an efficient reference scenario would be. And this would defeat the object of side-stepping the efficiency adjustments.

If there are difficult challenges in retaining in the counterfactual the same level of efficiency as the reference scenario, it may be more straightforward to look at efficient scenarios instead: determine what an efficient reference scenario would be, and then compare that with the efficient counterfactual.

Slovakia: Cost efficiency was estimated by USP in the Net cost calculation by the Method of Historical Comparison Total Productivity Factor as ex-post efficiency adjustment. This means that total Net costs identified according to accounting data were adjusted by specified indicator of inefficiency.

For determination of inefficiencies following indicators of cost efficiency was used:

$$\text{Cost efficiency} = \text{total costs}/\text{number of items}$$

Historical comparison of indicator of cost efficiency (2008 -2012) was basis for determination of indicator of inefficiencies.

The most difficult matter when quantifying the inefficiencies was to determine method of quantification the inefficiency and basis for determination of indicator of inefficiency. NRA used for assessment of inefficiency also statement of independent auditor KPMG, that didn't argued against the method of calculation.

The NRA didn't use any quality indicators. Assessment of inefficiency is very difficult and there is not sufficient relevant information in postal sector. Quantification of inefficiency was calculated as ex-post adjustment of Net costs. It means that total Net costs identified according to accounting data were adjusted by specified indicator of inefficiency.



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Regarding on what the NRA thinks about the approach that consists on taking the current efficiency level of the USP (without enquiring whether it is or not efficient enough/optimal) for both scenarios (reference case and counterfactual scenario), the NRA says that this could be the right approach, but only if the commercial scenario contents the same level of efficiency/inefficiency. It is difficult to recognize if the changes in the commercial scenario eliminates only US obligation or also inefficiency, and the NRA *didn't* use this approach. Final net costs were reduced by indicator (approx. 3 % of net costs).

Netherlands: The efficiency parameter was not considered in the model. The legal basis for efficiency adjustments is weak, because Dutch law takes the factual costs of the US as a starting point. So the NRA gave little priority to this issue. However If the USP would not have withdrawn its request, the NRA might have come to it in a later stage.

The regulator say that *If* they would quantify the inefficiencies, probably they would look into the internal supply structure (which is a quite complex chain of internal deliveries, which might lead to inefficiencies) and hence into the underlying costs of the transfer prices (which the USP accepts as costs).The NRA would look into the effects of the cost savings programs the USP has been executing over the years and their effect in terms of cost per unit. Also the NRA would look into the numbers of post offices and mailboxes (which are higher than legally necessary). Further if the NRA would correct any inefficiency in the model, they would do that ex post.

France: N/A. The evaluation of efficiency is subject of a great challenge. ARCEP has been working on identifying the relevant scope of cost and revenues, estimating the appropriate cost and demand functions, in particular trying to limit the amount of common costs, and using discrepancies between top-down and bottom-up approach to identify potential flaws in the calculation. As for other steps that might be considered, it is an issue for additional research.

Norway: The Alternative Commercial Strategy identifies cost inefficiencies from a commercial/business point of view inherent in the USO itself. On condition of providing the USO those costs are not inefficiency costs, though. Hence, these costs go into the net USO cost calculation.

According to the USP there is no specific method integrated in the net cost model to detect inefficiencies. However, it is an underlying condition of efficiency gains in the compensation scheme/net cost calculation. It is left to the USP to identify inefficiencies and to realize cost efficiency improvements. The management has strong incentives to this end due to market competitive pressures – present and in longer term - together with profitability goals (owner's overall return on capital demands and regular assessments of market value of the company). The USP has continuously proved over a long period since the late 1990's that it is capable of achieving substantial efficiency gains through reorganizations, modernization of services provision (such as changing from post offices run by the USP itself to third party run "post in shops"), technological



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change, automatizing of sorting processes, etc. and by continuous, general “day-to-day” efficiency improvements. Present inefficiencies are most of all a result of USO conditions in itself; such as the obligation to over-night-delivery six days a week which directly implies high fixed, structural costs irrespective of continuous drop in letter mail volumes.

Further, competitive pressures in the Nordic market (digitalization of communication, competitive logistics and parcels market, etc.) - short term and long term - combined with owner’s return on capital demands and regular assessment of market value of the company, contribute, although external to the model, together with the internal basic condition of efficiency improvements, to safeguard that the calculation is based on efficient costs. Price cap regulation on USO services which is implemented in Norway has no additional impact on efficiency.

Regarding if the USP should take the same or a different level of efficiency for the two scenarios, - reference case and counterfactual scenario -, the USP *comments on the use of the term “counterfactual scenario”*: “Counterfactual” gives an impression of the alternative strategy as something theoretical or far away from the actual service provision and running of the universal service provider (reference scenario). At least for the case in Norway this is a misleading impression. We believe it is crucial that the counterfactual should represent a realistic, commercially defined alternative for the universal service provider. In Norway the Alternative Commercial Strategy is defined by the USP and represents a very realistic deviation from the factual with regard to some few, specified obligations in the overall USO. Hence, the alternative strategy represents adjustments in service provisions that could easily be implemented by the company. The net cost of the USO is consequently calculated on basis of the actual costs of the company as it is.”

The cost cutting side of the counterfactual scenario is based on the costs and rate of cost efficiency improvement in the actual scenario with USO. The cost difference between the two scenarios is mainly reductions in fixed, structural costs which follow directly from the USO itself. As mentioned above, from a commercial/business point of view these costs are inefficiency costs although the provision of the USO is cost efficient.

The USP does not agree entirely with the approach/general assumption that the net cost of USO would be free of inefficiencies when cost differences between the reference/factual and the “counterfactual” are calculated on basis of the current efficiency level of the USP. For example; two operators operating under similar conditions/environment and with the same volumes of letter mail, would have different cost levels in distribution if one has, a more efficient delivery route structure and/or fuel efficient cars than the other. If both operators’ counterfactual scenario is to reduce delivery frequency from 6 days per week to 5 days per week, the cost reductions associated with that change would be higher for the less efficient operator than for the efficient one. Hence, the net cost of the USO would be different, reflecting differences in efficiency. In practical terms however, such differences may be relatively small.



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Moreover, the net cost may include substantial inefficiency costs if the counterfactual scenario implies a fundamental, conceptual change in the provision of a USO service. This is true for example when the counterfactual consists of overall changing the post office structure from offices run by the USO provider itself to third party/franchise “post in shops”. Even though the original post offices are run efficiently as such, the change of service provision concept in the counterfactual would represent a shift in efficiency. The cost reductions associated with that efficiency shift would go directly into the net cost calculation.

Conclusion:

The respondents have used different approaches when taking into account the incentives for cost efficiencies in their calculations.

- In Belgium the NRA designed a bottom-up model based on the best available technologies.
- The USP in UK has estimated its future post-modernization costs to ensure the best available estimate of efficient costs is used in the calculations.
- The USP in Slovakia has used the Method of Historical Comparison Total Productivity Factor as ex-post efficiency adjustment.
- The NRA in the Netherlands says that if they would quantify the inefficiencies in a future net cost calculation, probably they would look into the internal supply structure and correct eventual inefficiency in the model ex post.
- The NRA in France has been using discrepancies between top-down and bottom-up approach to identify potential flaws in the calculation.
- In Norway the USP’s operations has been considered efficient due to market competitive pressures – present and in longer term - together with profitability goals (owner’s overall return on capital demands and regular assessments of market value of the company)
- In the Danish net cost calculation incentives for cost efficiencies haven’t been taken into account explicitly

The answers show the spread of alternatives when including the incentive for efficiency into the net cost calculation. This illustrates that there is not one correct answer how to deal with this challenge, but the method chosen should be depending on the specific national conditions such as efficiency of the USP, level of competition, profitability goals of the USP, availability of data etc. None of the respondents have demonstrated more in detail how the efficiency adjustment has been done.

4.4.6 Other challenges

Other challenges recognized within this work have been the incorporation of intangible and market benefits in the net cost calculation and the lack of data.



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4.4.6.1 *Intangible and market benefits*

Belgium: The NRA mentions that all intangible benefits were already taken into account in the model itself, except for following aspects of intangible benefits which are incorporated in the calculation; Enhanced advertising effect, enhancement of corporate reputation/brand value and VAT exemption.

Netherlands: As mentioned earlier in this report, in 2012 the USP filed a request for compensation of net cost for the year 2011. In April 2013 the USP withdrew this request. At that moment the analysis of ACM was not yet finished. This means that ACM has never approved the calculation, confirmed the existence of net cost or set an amount.

The model itself can be explained relatively simple; loss on US according to regulatory reports, minus “other advantages”. Some of the “other advantages” considered were:

- Ubiquity
- Brand preference
- The right to print the name of the nation on stamps
- Better bargaining position
- Access to philately market
- Better access to public registers
- Demand complementarities
- (dis-) economies of scale and scope
- Avoidance of municipal taxes
- Parking/stopping exemptions
- VAT exemption (minus unrecoverable VAT because of exemption)
- Exemptions from customs regulation.

The NRA states that most of the advantages (except for the last four, which are “the most material”) appeared to be difficult (if not impossible) to quantify and many of them were expected to be either irrelevant or immaterial. However, because the USP withdrew the request before ACM finished their analysis, this was not further elaborated.

The NRA explains the difficulties and challenges when quantifying many of the “other advantages”; First of all, they thought it would be difficult to define and calculate the other advantages in the reference scenario. Also, the statements of the USP often appeared very hard to check. E.g. in the case of the avoidance of municipal taxes this would require checking data with more than 400 municipalities and would require a lot of detailed knowledge of local regulations. The significance of this topic would not countervail this amount of work. The same goes for exemptions of parking and stopping prohibitions and custom legislation.



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Secondly, the value of the exclusive right to print the name of the nation on the stamps was estimated to be 'limited' by their consultants. Thirdly, demand complementarities, low transaction costs due to uniform prices as well as economies of scope were also considered to be limited because the USP would also have these in the reference scenario. Also brand and customer preferences, customer loyalty, ubiquity and the financial advantages of presale of stamps were not considered to be unique to the reference scenario.

UK: While the calculation of costs are challenging, due to the need for estimating incremental costs based on largely FAC data, and estimating efficient costs; the bigger challenge is to estimate the benefits, which are wider than simply the revenues generated by the universal service. *See also comments under Lessons learned (section 4.7).*

Slovakia: The net costs calculation analyses the following potential or existing market benefits: brand value, VAT benefit, economies of scale and higher power with suppliers, access to the philately market, marketing effect. Regarding assessment and quantification of intangible benefits (especially VAT exemption, brand value, economies of scale, better bargaining position), the NRA faced challenges when adjusting the net cost calculation because there didn't exist exact methodology or experience of calculation. The NRA relied on KPMG quantification of intangible benefits and they also leaned on studies of Frontier Economics³⁶ and mutual meetings with USP.

France: So far the NRA has not considered any intangible benefits. The investigations on that matter are still on track so that some intangible benefits could be applied for the 2012 exercise (advertising value of the USP's logo).

Norway: Focusing on changes in overall business strategy alters the basic concept of what exactly the USO burden comprises. The burden is not primarily connected to the obligation of being universal, but rather to the obligation to be universal in a specific way. When both scenarios basically involves universal presence the problem of quantifying potential benefits from the USO, that is, economies of scale and scope or advantages in the marketplace stemming from the universal presence, disappears.

Denmark: Copenhagen Economics concluded that the USO includes a number of competitive advantages for Post Danmark. As they expected the liberalization in Denmark only resulted in minor decreases in Post Danmark's market shares. This was due to the fact that Post Danmark could continue to enjoy major advantages relative to its competitors such as a solid customer base in the course of its time as a monopoly, and partly to special advantages such as VAT exemption and ownership of the postal infrastructure. Post Danmark owns a recipient database with special rights in relation to the Danish Civil Registration System (CPR). Post Danmark may use this

³⁶ Frontier Economics, Study on the principles used to calculate the net costs of the postal USO A REPORT PREPARED FOR THE EUROPEAN COMMISSION, January 2013.



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ownership to make life harder for its competitors by making access to the postal infrastructure difficult. However, some of the advantages would be a direct result of the USO. Copenhagen Economics states that the USO will give Post Danmark additional goodwill in three ways. Firstly, the USO will strengthen Post Danmark's strong brand, which was built during the monopoly. Secondly, Post Danmark will gain special goodwill from its sale of stamps. Post Danmark has the exclusive right and obligation to issue stamps with the word "Danmark" printed on them. It is assessed that Post Danmark will in all probability obtain a certain amount of goodwill as the company issuing stamps bearing a country designation. The fact that the state has granted this right to the company is thus assessed to build confidence in the public to some extent. In addition, it gives the company another opportunity to raise its profile vis-à-vis the consumers. This will generally give the company a competitive advantage. Post Danmark intentionally uses the stamps in its marketing, among other things in connection with the election of the stamp of the year. In addition, Post Danmark in effect has an interest-free loan of approx. DKK 100 million, which represents the average value of unused stamps. Finally, many stamps will never be used because they are lost or are purchased by stamp collectors. This amounts to considerable additional income for Post Danmark. Thirdly, the USO gives Post Danmark both the obligation and the right to use the crowned coach horn. The crown is the state symbol used by all state institutions and public offices. The right to use this state symbol gives Post Danmark additional goodwill and consumer confidence.

4.4.6.1.1 The VAT - exemption

Two of three countries (Slovakia and Denmark) that have made net cost calculations of the entire USO have also calculated the net effect of the VAT-exemption. In the third member state (Norway) the USP is not exempted from VAT. One of the other four countries (Belgium), that haven't yet made net cost calculations of the entire USO, has made the conclusion that the VAT exempt has a negligible impact effect on the USP.

Slovakia: VAT exemption was calculated as an intangible benefit in the commercial scenario by the method of the ERGP report of VAT exemption³⁷. For calculation of VAT exemption effect NRA used conclusions of external consulting company KPMG. They have calculated the VAT exemption as a small benefit, whereas USP has calculated this as negligible disadvantage or zero advantage.

Denmark: Post Danmark is exempt from paying VAT on USO products. However, its competitors must pay VAT. This gives Post Danmark a clear competitive advantage in respect of the customers who cannot set off the VAT as Post Danmark in effect can offer a lower price. Post Danmark has previously disclosed that its VAT benefit amounted to approx. DKK 200 million.³⁸

³⁷ Net cost of USO – VAT exemption as a benefit or a burden (2013)

³⁸ The Danish Ministry of Transport (2003): "Considerations regarding the postal policy of the future" (In Danish).



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Norway: In Norway VAT is applied to all postal services, hence possible benefits or burdens related to a VAT exemption are not relevant. However, from a principal point of view the regulator agrees with the ERGP VAT report that effects on costs and the market of a VAT-exemption should be assessed in relation to net cost- and compensation calculations. Moreover, taken into account that the exemption to some degree distorts the market, replacement of the exemption with other less distortive, more transparent mechanisms of proper compensation while safeguarding “affordability” of basic postal services, should be considered closely.

Belgium: The VAT exemption has been taken into account. However the NRA and the USP agreed on the negligible impact of this effect for the USP (since charged VAT would be offset by deducted VAT). This would otherwise have required a close analysis of the activities of bpost (depending on whether they are taxable or not) to obtain a result that is assumed to be neutral in a global perspective.

4.4.6.2 Availability of data

Another challenge when calculating the net cost is how to deal with nonexistent data. Many of the NRAs mentioned that they hadn’t all the necessary data when estimating the net cost of USO and had to do estimations and assumptions, which naturally were difficult to verify.

Belgium: Where no data existed assumptions were made in collaboration with the USP, for example concerning the average speed of vehicles and the average speed of off-loading. Most of the data exist, but are available at aggregated levels. It was only necessary to make assumptions and have them validated by bpost when data had to be linked with more refined activity levels.

France: Where no data existed we used bottom up- and econometric modeling.

Netherlands: Obtaining data from the USP was difficult. It got even more difficult as the concept of the net cost in the postal act (a variation of the Deficit Approach) is different from what is prescribed in the appendix in the Directive. This led to lots of discussions with the USP.

Slovakia: Data sources where accounting system of USP, statistical data of USP, the survey of customer behavior, estimation. For nonexistent data the NRA used some assumptions or recommendations of external consulting company KPMG. If there were not any credible data/estimation, following the recommendation of KPMG, the NRA rejected assumption/calculation of this part.

Methodology of Net cost calculation is defined in a way that makes it very complicated to use the same classification as in the USP’s regulatory cost accounting. But the NRA used regulatory cost accounting data for (logical) cross checking and for assessment of unfair financial burden. The NRA mentions that collecting relevant data in some cases was difficult, but easier than using another method. Difficulties were especially in these cases that:



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- the NRA had to make predictions
- accounting data structure didn't respond to requirements of Net costs calculation
- the comparative postal market data didn't exist.

Norway: The first model to calculate the net cost of USO (used between 1996 -2001) was considered unsatisfactory. On the technical side, the model demanded an overly complex set of detailed data. Collecting and vetting this information involved a great deal of work, especially when the underlying business was in a constant state of flux (during the years the model was used, the number of regions varied from 29 to 12 depending on which reorganization was applicable). Moreover, while Norway Post considered the quality of data to be satisfactory, data quality can always be questioned. Even if external auditors were added to the system, the complexity was such that it is always difficult to know whether the results can really be trusted. Another issue was the problem of potentially inefficient production. Forecasts tried to ameliorate this issue by allowing for savings from, for example, restructuring the post office network or cutting surplus staff. However, the model being so complex, it could not positively be proved that there was no inefficient production included in the calculations. Finally, government simply subtracted an arbitrary amount from the calculated net USO cost to allow for an assumed level of inefficiency. The level of detail was also a problem from another point of view: the more detailed data, the more unprofitable business could be located, and hence the higher the NAC. This, of course, is unsatisfactory when the calculations are used as a basis for an actual payment. Yet the shortcomings of the model from a political point of view were even more fundamental. The complexity of the model made it very difficult to explain to politicians.

In early 2001, the Ministry of Transport and Communications and Norway Post agreed that a new USO cost model should be developed. For both parties a major goal was a simplified model, whose results would be easier to communicate and less sensitive to data, so that distrust in the calculated results could be minimized. Using the new approach, it has become relatively simple for Norway Post and the ministry to develop an agreed calculation of the USO cost. The costs and revenues expected from the current commercial strategy with the USO must be calculated and compared to the costs and revenues that would be expected from the alternative commercial strategy. The difference is the estimated cost of the USO. As with the first model, all of Norway Post's calculations are examined by an external auditor, and all calculations are transparently documented to the ministry. Since these calculations are much less complex and require a far more limited quantity of data, it is much easier for the ministry to examine all parts of the assumptions and calculations and to have confidence in its evaluation of the results.

Denmark: Regarding investigation of mail delivery to small islands Copenhagen Economics have examined how Post Danmark delivers mail to the 37 islands with a USO but with no road connection. In order to do this, they have contacted the relevant ferry services, tourist agencies, local traders or residents' associations. When examining mail delivery in the most expensive postcode areas calculations of Copenhagen Economics were based on data on the number of



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different household types in each postcode area, data from Statistics Denmark regarding the location of letter boxes and a budget model previously used by Post Danmark up to 2002.

Conclusion:

The respondents agree that quantifying and estimating the intangible benefits is one of the biggest challenges within the net cost calculation as there doesn't exist an exact methodology or lots of experiences from calculating the value of them. It is also concluded that among the intangible benefits there is actually only a few which are directly caused by the USO, such as brand-value and VAT-exemption. The latter is generally seen as an advantage for the USP, but to what extent is not agreed on among the respondents.

The answers reflect two ways to handle the issue of non-existing data within the net cost calculation. One tactic is to keep the net cost calculation on an aggregated level if possible and avoid assumptions if credible data/estimations are not available. An alternative way is to use econometric modeling (in a bottom-up model) within a net cost calculation and build a more theoretical scenario. Cost accounting data were in most cases more useful as logical cross checking than as a base for the net cost calculation.

4.5 Reasonable profit and unfair burden

Belgium: The current level of the USP's profit is used as reasonable profit level. The definition of the threshold regarding the unfair burden is defined within the Belgian law; there is an unfair burden if the USO net cost is over 3% of the USP's revenues. The WACC has not been calculated up to now for the postal sector and its calculation is outside the scope of the procurement.

UK: The criterion for the finance ability of the universal service is as follows: An indicative EBIT margin range of 5% to 10% for the totality of all the activities within the core network, which provides both universal service and non-universal service products, is consistent with the need for the USP to earn a reasonable commercial rate of return commensurate with the level of risk within the business.

Slovakia: The reasonable profit is calculated by the method of WACC. The NRA has considered unfair financial burden mainly on evaluation of USO development. In determination of USP behavior without USO we reviewed if the commercial scenario is feasible and if in the commercial scenario are not included the changes that USP is able to make at present (with USO).

Today net cost calculation and unfair financial burden is defined quite generally. For the future the NRA propose to define more concrete formula and limitations. For example definition as concrete % of revenues or cost of USO, or defined maximum amount of net cost equal to loss of USO or another adequate economic indicator.

The Criteria for evaluation of unfair financial burden (defined by the NRA):



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- a) whether net costs include only supportable and economically justified costs, both direct and indirect costs of the USP, incurred in providing USO,
- b) whether difference between net costs and intangible benefits is positive,
- c) extent how net costs affected the profitability (revenues) of USP,
- d) size of the difference between profitability (of revenues) of USP and other postal providers,
- e) the level of the usage of the universal service, its development, economic results and the influence on the economic situation of the USP,
- f) relation between net costs and total revenues from USO,
- g) market share of USP on the market of USO and interchangeable postal services.

4.6 The results of the net cost calculation

In the following section we summarize the conclusions made *by the three countries* that have made a comprehensive net cost calculation;

- Copenhagen Economics estimated USO costs for Post Danmark to DKK 150 million, or 1.5 per cent of its total costs. The costs are primarily driven by two requirements: the obligation to deliver mail six days per week and the obligation to provide free services for the blind. Post Danmark had previously disclosed that its VAT benefit amounted to approximately DKK 200 million. Copenhagen Economics conclude that the burden of the USO is not unfair for Post Danmark. Hence, they conclude that there is no need to compensate the USP for the USO, neither financially nor by imposing special obligations on other actors on the market.
- In the case of Norway Post, the calculated cost of the USO came out to about 3 percent of total sales. By far the most important element in this calculation was the cost savings arising from projected reductions in delivery frequency. This was considered an unfair burden and Norway Post is receiving a yearly payment from the state based on the methodology.
- In the Slovakian case the net cost of 2012 was determined to 4,04 % of the total costs of USP, and was considered as an unfair financial burden. These costs were paid from the compensation fund (contributions from both the state budget and postal companies). The most important part of the cost savings arose from reducing the postal network and reduction of frequency of delivery.

4.7 Lessons learned from the net cost calculation

In the questionnaire the respondents were asked to provide information about the lessons learned when calculating the net cost of USO. These answers can be summarized as follows.



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Belgium: The design of a model for calculating the net cost of USO requires developing:

1. A deep understanding of customer's habits regarding postal services.
2. A good understanding of the postal processes of the USP.
3. A collaborative process with USP to validate the design of the model step by step.

Netherlands: Keep it simple and try to base the analysis on "hard" data as much as possible.

UK: While the calculation of costs are challenging, due to the need for estimating incremental costs based on largely FAC data, and estimating efficient costs; the bigger challenge is to estimate the benefits, which are wider than simply the revenues generated by the universal service.

Slovakia: Evaluation of the commercial scenario was the most difficult, because of using the estimation and assumptions which are not possible to verify. As different conditions prevail in each country using a benchmark was problematic.

Norway: Using the alternative commercial strategy, it has become relatively simple for Norway Post and the ministry to develop an agreed calculation of the USO cost. Focusing on changes in overall business strategy alters the basic concept of what exactly the USO burden comprises. The burden is not primarily connected to the obligation of being universal, but rather to the obligation to be universal in a specific way.

5 Overall conclusions

As indicated initially the purpose of this report is to explore the challenges to overcome when implementing a net cost calculation methodology based on a reference scenario. The result presented in this report reflects this fact finding exercise.

Generally there are still just limited experiences of net cost calculation in the European countries and the application of a reference scenario in that context. The gathering of information has focused on a limited number of countries that have carried out, or at least, initiated a net cost calculation. The conclusions below are based on these answers and do not reflect opinions expressed by ERGP.

5.1 Changes in services

The delivery frequency is likely to be lower in at least some parts of the countries, depending on the geographical conditions, if the USPs wouldn't be designated. On the other hand the studied USPs would still deliver to the entire country as it is a competitive advantage for the operator compared to its competitors. The answers also indicate that the quality standard probably doesn't constitute a burden as most USPs voluntary offer higher standards than required by the USO. None of the studied USPs has said that the service for the blinds would be offered for free without



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the USO, why this requirement constitutes a burden for the USPs. No specific challenges when estimating the net cost of these requirements have been mentioned in the answers.

5.2 Changes in prices/tariffs

All studied countries have counted on the same price structure when calculating their reference scenario. This either because non-uniform pricing for a single piece universal postal service is likely to lie outside the range of commercial strategies as it could lead to for example customer disruption, acceleration in e-substitution or entry/expansion of competitors. The other reason is that measures concerning the elasticity of supply and demand need a significant supporting analysis which yet hasn't been feasible.

5.3 Postal network

The first question the countries which have calculated the net cost of the USO postal network have asked themselves is if the service network would look significantly different if the USP wasn't designated. This depends mainly on two things: the size of the postal network in the reference scenario is naturally depending on the USP's business strategy (pointed out by Slovakia and Denmark), but also if there is a further territorial presence obligation which adds geographical constraints on the operator (pointed out by France). If the USO requirement goes beyond these constraints the question would then be which access points that would be eliminated. Both Slovakia and France have concentrated on which post offices that would be closed, while Belgium focused more on the processes that would no longer be carried out. The overall challenges mentioned are non-existence of necessary data, the difficulty choosing the correct cost-allocation keys and the allocation of administrative costs.

5.4 The demand reaction

According to the responses received, all NRAs used recommendations of external consulting companies, or made their own estimations based on different studies and examples when estimating the demand reaction in the net cost calculation. The main difficulty when measuring elasticities and other characteristics of the demand function is that the relevant data corresponding to the counterfactual scenario are not available, as the counterfactual scenario is a fictitious situation. Estimation of the demand reaction requires an additional approach based on the assessment of the price sensitivity of the demand for each category of customer (e.g. through a survey) and the assessment of the counterfactual scenario of a postal operator working without USO (e.g. with the help of a benchmark of countries where there is some competition or in similar sectors).

An alternative way (pointed out by Norway and Denmark) is to concentrate on the USP's business strategy and rely on its knowledge of its customers' preferences and needs when making an overall estimation of demand contra costs and revenues.



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5.5 Efficiency

The respondents have used different approaches when taking into account the incentives for cost efficiencies in their calculations such as: A bottom-up model based on the best available technologies; used future post-modernization costs in the net cost calculation; Method of Historical Comparison Total Productivity Factor as ex-post efficiency adjustment; Look into the internal supply structure and correct eventual inefficiency in the model ex post; Discrepancies between top-down and bottom-up approach to identify potential flaws in the calculation; The USP's operations have been considered efficient due to market competitive pressures – present and in longer term - together with profitability goals.

The answers show the spread of alternatives when including the incentive for efficiency into the net cost calculation. This illustrates that there is not one correct answer how to deal with this challenge, but the method should be depending on the specific national conditions such as efficiency of the USP, level of competition, profitability goals of the USP, availability of data etc. None of the respondents have demonstrated more in detail how the efficiency adjustment has been done.

5.6 Other challenges

The respondents agree that to quantify and estimate the intangible benefits is one of the biggest challenges within the net cost calculation as there doesn't exist an exact methodology or lots of experience from calculating the value of them. It is also concluded that among the intangible benefits there is actually only a few which are directly caused by the USO, such as brand-value and VAT-exemption. The latter is generally seen as an advantage for the USP, but to what extent is not agreed on among the respondents.

The answers reflect two ways to handle the issue of non-existing data within the net cost calculation. One tactic is to keep the net cost calculation on an aggregated level if possible and avoid assumptions if credible data/estimations are not available. An alternative way is to use econometric modeling (in a bottom-up model) within a net cost calculation and build a more theoretical scenario. Cost accounting data were in most cases more useful as logical cross checking than as a base for the net cost calculation.

5.7 Final comment

It is quite clear that after having completed this report there is still a lot of work to be done before more general answers and solutions, to the challenges met when doing a net cost calculation, can be expected. At this stage the challenges have been identified but few answers, how to tackle these, have been served by the interviewed countries. Furthermore there are different national conditions which make the task of creating a template for a uniform net cost calculation difficult.

Based on the calculations presented we have identified two main tracks. One way is to build the reference scenario from scratch with the help of bottom-up modeling. An advantage mentioned is



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that when using this approach the processes are free from cost-inefficiencies which could be hidden within a non-competitive USP's operations. Furthermore the USP's operations in the reference scenario appear to look quite different when it is built from scratch. On the other hand this model is quite often based on approximations, and there can be discrepancies between the bottom-up and top-down costs.

In the other main track identified among the respondents, the NRAs have been relying on the USPs' current business strategies. This means assuming only minor changes in the operators' overall business strategies in the reference scenario, leading to a few actual differences in service level. A catchword is to keep the net cost calculation as simple and clear as possible and to avoid unnecessary assumptions, using the existing operations as a starting point (top-down modelling). As the interviewed countries have stated, detecting and quantifying existing inefficiencies can be a challenging task. As substantial competition (from e-substitution and/or other operators) generally tends to contribute to efficiency, this approach might be more appropriate where competition is fierce and USP is considered as efficient due to market competitive pressures.

This report shows that the process of calculating the net cost of USO on postal services has been limited in Europe and more countries will probably have to deal with this task in the near future. This means that a similar study within a few years probably will get us one step closer to the answers how to tackle the challenges met when calculating the net cost of USO.



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6 Annex - The legal framework

6.1.1 Article 7 Postal Services Directive 2008/6/EC

1. Member States shall not grant or maintain in force exclusive or special rights for the establishment and provision of postal services. Member States may finance the provision of universal services in accordance with one or more of the means provided for in paragraphs 2, 3 and 4, or in accordance with any other means compatible with the Treaty.

2. Member States may ensure the provision of universal services by procuring such services in accordance with applicable public procurement rules and regulations, including, as provided for in Directive 2004/17/EC of the European Parliament and of the Council of 31 March 2004 coordinating the procurement procedures of entities operating in the water, energy, transport and postal services (*), competitive dialogue or negotiated procedures with or without publication of a contract notice.

3. Where a Member State determines that the universal service obligations, as provided for in this Directive, entail a net cost, calculated taking into account Annex I, and represent an unfair financial burden on the universal service provider(s), it may introduce:

(a) a mechanism to compensate the undertaking(s) concerned from public funds; or

(b) a mechanism for the sharing of the net cost of the universal service obligations between providers of services and/or users.

4. Where the net cost is shared in accordance with paragraph 3(b), Member States may establish a compensation fund which may be funded by service providers and/or users' fees, and is administered for this purpose by a body independent of the beneficiary or beneficiaries. Member States may make the granting of authorizations to service providers under Article 9(2) subject to an obligation to make a financial contribution to that fund or to comply with universal service obligations. The universal service obligations of the universal service provider(s) set out in Article 3 may be financed in this manner.

5. Member States shall ensure that the principles of transparency, non-discrimination and proportionality are respected in establishing the compensation fund and when fixing the level of the financial contributions referred to in paragraphs 3 and 4. Decisions taken in accordance with paragraphs 3 and 4 shall be based on objective and verifiable criteria and be made public.

6.1.2 Annex I - Guidance on calculating the net cost, if any, of universal service

6.1.2.1 Part A: Definition of the universal service obligations

Universal service obligations refer to the obligations referred to in Article 3 placed upon a postal service provider by a Member State which concern the provision of a postal service throughout a specified geographical area, including, where required, uniform prices in that geographical area for the provision of that service or provision of certain free services for blind and partially-sighted persons. Those obligations may include, among others, the following:

- a number of days of delivery, superior to those set in this Directive,
- accessibility to access points, in order to satisfy the universal service obligations,
- the tariffs affordability of the universal service,
- uniform prices for universal service,
- the provision of certain free services for blind and partially-sighted persons.

6.1.2.2 Part B: Calculation of net cost

National regulatory authorities are to consider all means to ensure appropriate incentives for postal service providers (designated or not) to provide universal service obligations cost efficiently. The net cost of universal service obligations is any cost related to and necessary for the operation of the universal service provision. The net cost of universal service obligations



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is to be calculated, as the difference between the net cost for a designated universal service provider of operating with the universal service obligations and the same postal service provider operating without the universal service obligations.

The calculation shall take into account all other relevant elements, including any intangible and market benefits which accrue to a postal service provider designated to provide universal service, the entitlement to a reasonable profit and incentives for cost efficiency.

Due attention is to be given to correctly assessing the costs that any designated universal service provider would have chosen to avoid, had there been no universal service obligation.

The net cost calculation should assess the benefits, including intangible benefits, to the universal service operator. The calculation is to be based upon the costs attributable to:

- (i) elements of the identified services which can only be provided at a loss or provided under cost conditions falling outside normal commercial standards. This category may include service elements such as the services defined in Part A;
- (ii) specific users or groups of users who, taking into account the cost of providing the specified service, the revenue generated and any uniform prices imposed by the Member State, can only be served at a loss or under cost conditions falling outside normal commercial standards.

This category includes those users or groups of users that would not be served by a commercial operator that did not have an obligation to provide universal service.

The calculation of the net cost of specific aspects of universal service obligations is to be made separately and so as to avoid the double counting of any direct or indirect benefits and costs. The overall net cost of universal service obligations to any designated universal service provider is to be calculated as the sum of the net costs arising from the specific components of universal service obligations, taking account of any intangible benefits. The responsibility for verifying the net cost lies with the national regulatory authority. The universal service provider(s) shall cooperate with the national regulatory authority to enable it to verify the net cost.

6.1.2.3 Part C: Recovery of any net costs of universal service obligations

The recovery or financing of any net costs of universal service obligations may require designated universal service providers to be compensated for the services that they provide under non-commercial conditions. As such compensation involves financial transfers, Member States have to ensure that they are undertaken in an objective, transparent, non-discriminatory and proportionate manner. This means that the transfers result as far as possible in the least distortion to competition and to user demand. A sharing mechanism based on a fund referred to in Article 7(4) should use a transparent and neutral mechanism for collecting contributions that avoids a double imposition of contributions falling on both outputs and inputs of undertakings. The independent body administering the fund is to be responsible for collecting contributions from undertakings, which are assessed as liable to contribute to the net cost of universal service obligations in the Member State and is to oversee the transfer of sums due to the undertakings entitled to receive payments from the fund.



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7 Annex 2 First questionnaire – guidelines

ERGP – Net cost of USO –VAT as a benefit/burden

Experimentation/exploration of the implementation of methodology of the net cost calculation of USO

Methods of Net cost calculations

GUIDELINES FOR THE ATTENTION OF NRAs

Concerning the context:

- 1) For what reason a net cost calculation has been made (internal purposes within the NRA, approval of calculation made by USP, other issues)?
- 2) If the reason was approval of calculation made by USP have you discussed this calculation or the methodology with them? Were there any difficulties within the interactions (especially to obtain data or any information for the model)?
- 3) Have these companies or authorities calculated the net cost of the USO?
 - a. The USP
 - b. The NRA
 - c. Ministry
 - d. Competition Authority
 - e. If other please specify.
- 4) Is there a fund involved? What was the timing?
- 5) What SGEI is involved? What is the legal context?
- 6) What were the guidelines for the calculation of the net cost of the USO (for ex. legal framework, other)?
- 7) What is the role of the NRA in that matter?

Concerning the methodology

- 1) Which methodology or the approach did you use for the calculation of the net cost of USO and why (Commercial approach, FAC, NAC, etc.)? What considerations guided this process? Could you explain why you think this approach is the best one? Why have you rejected the others? Was your choice a practical or a theoretical one?
- 2) Have you set up a bottom-up model? Top-down? Scratch node? Other? Why?



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- 3) Have you chosen to set up a counterfactual scenario? If yes, what is your main definition of the counterfactual scenario? If not what was the methodology?
- 4) Have the methods used for calculating the net costs of the USO changed over time? If yes what was the methodology used before and what were the reasons for change?
- 5) Have you submit your methodology to any public consultation? Only to the postal operator? If yes, what were the reactions? (Especially from the postal operator). Have you made some amendments to your methodology according to the responses?

Concerning the model

- 1) Can you explain briefly how does your model work?
- 2) What are the cost allocation keys that it uses?
- 3) If we take the USO example. Does the model deal with the USO dimensions (frequency, geography, pricing, distribution, etc.) all together? Or have you made several models and then combined the results?
- 4) What were assumed choices, for the counterfactual scenario that you used, (Withdrawal of all USO services in the whole country or just for the specific areas or other)?
- 5) How did you incorporate Non-USO products in counterfactual scenario?
- 6) What other elements did you consider in counterfactual scenario?
- 7) Which data sources did you use in the counterfactual scenario (accounting systems of USP, other)?
- 8) What were the results of the counterfactual scenario?
- 9) Did you consider the intangible and market benefits? If yes, how?
- 10) Did you consider reasonable profits in the calculation of the cost of USO? If yes how?
- 11) Did you consider unfair financial burden in the calculation of the cost of USO? If yes how? How did you determine what the postal operator would have done without the obligation? (In the case of the USO: delivery frequency, geographical coverage, postal network, tariffs conditions, services and products, quality of service, etc.).
- 12) What was the criteria for evaluation of unfair financial burden / or what was the criteria for not existence of unfair financial burden? Please specify
- 13) Should all the criteria (the set of criteria/ or conditions) be met to define an unfair financial burden? (i.e. if all the criteria are met to establish if the unfair financial burden exists or compliance to 1 essential criterion is sufficient to define the financial burden?)



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- 14) Who has defined a set of criteria (conditions) for evaluation of unfair financial burden? (NRA, Ministry, Other)
- 15) Who carried out the evaluation of unfair financial burden? What data and information sources have been used for the evaluation of unfair financial burden?
- 16) Is a positive Net cost of the USO considered to be an unfair financial burden?
- 17) Have you made an evaluation on the demand reaction (i.e. direct and indirect revenue effect, price and quantity)? If yes, how? (Did you use a particular model or a survey to evaluate the demand function and price elasticity? How did you integrate it to the cost model?). What was the difficulty that you were confronted to?
If not, why? What is the hypothesis that has been taken then?
- 18) Have you taken into account the VAT exemption effect? (If the postal operator is a US operator). If yes how? (→ See figure 1 VAT report).
- 19) The European legislation provides for example that the USO shall be fulfilled in the most effective manner. How did you manage to deal with the cost efficiency issue?
What do you think is the best way to deal with that matter?
- 20) Please describe main lessons in relation to the implementation of the methods used for calculation of the net cost of USO?

After the calculation

- 1) What were the results of the calculation of the net cost of the USO? Please define results also in %.
- 2) How did you manage to deal with nonexistent data?
- 3) Have you calibrated the model with the postal operator's regulatory cost accounting?
If yes, was there any significant difference? If no, do you think of another way to verify the net cost?
- 4) Based on your experiences gained what should be done in another way if your were to do a net cost calculation today?
- 5) Are you planning to modify the model? Not only to upgrade some variables but is there any improvement to make within the hypothesis or the modeling?



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APPENDIX: References

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