ERGP (14) 23 - Report on benchmarking of the us tariffs

## ERGP Report

on the benchmarking of the universal service tariffs

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## EXECUTIVE SUMMARY

This ERGP report compares prices of Universal Service (US) products across Europe and considers possible drivers of price differentials across countries. The analysis undertaken goes beyond a simple price comparison. Specifically, single parameter linear regression models were used to investigate dependencies between price and i) country specific variables and ii) company specific variables.

Notwithstanding the limitation of this, it was found that price (for both letters and parcels) was moderately correlated with labour rates. This result was expected due to the significant proportion of labour costs in the provision of postal services.

Other correlations were not found when tested. The data found not to be correlated included parameters relating to geography, urban development, and quality of service. However the limited nature of the analysis means that no firm conclusions could be drawn from this.

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## 1 Introduction

The report includes information collated from 31 countries (listed in Annex 1) relating to each country's national postal market. The report attempts to capture the most recent data at the time of drafting (April to October 2014) with the result that prices reported are not those in place at a certain datum.

It should be noted that prices and not cost were investigated.
Initial work involved the identification of parameters (country and company specific) which were viewed likely to influence price. Parameter values were sourced externally (Eurostat ${ }^{1}$, WIK) and internally (ERGP questionnaire April 2014, updated September 2014). In addition, product characteristics, which could influence prices, were included in the analysis.

To better understand how bulk mail prices might be benchmarked, each country provided a description of the structure of bulk mail prices in their national market. This then informed the structure of an internal ERGP questionnaire on bulk mail prices which provided the data used to analyse prices in the bulk mail market.

Statistical analysis (single parameter linear regression analysis) was used to investigate correlations between prices and country, company and product specific characteristics.

In order to complete the analysis of prices on a like for like basis, prices were firstly converted into Euros (using 2012 average annual rates) and then expressed in terms of purchasing power parity (adjusted for differences in general price level ${ }^{2}$ ).

The following section of this report (chapter 2) describes factors which the ERGP considered might influence prices. Chapter 3 details the analysis completed.

## 2 Benchmarking

One of the challenges in benchmarking is to find one or more appropriate companies or countries to compare.

As described in the following section, differences driving price may relate to the scope of USO, country specifics or company specifics. Furthermore differences in product characteristics, product structure as well as consumer behaviour may influence both prices and the underlying cost.

This report provides a broad range of information which could form a start point for benchmarking.

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Ideally a benchmark should be limited to a few comparable countries and should analyse the specific situation in each country and company in much more detail than could be done within this report.

Nevertheless the report identifies parameters which may influence prices and, using simple linear regression, tests the extent to which variation in prices across member states could be accounted for by variation in a specific parameter.

Linear regression seeks to explain the value of a dependent variable (within this report the price of a certain product) by the value of one (simple regression) or more (multiple regression) independent variables (in this report country specific and company specific variables).

The "coefficient of determination" or " $\mathrm{R}^{2 \text { " }}$ is one of the key measures produced in linear regression analysis. It explains to what extent the variability of the dependent variable (e.g. price) can be explained by its linear relationship with the independent variable (e.g. country or company specific variables).

The coefficient of determination, in any linear regression model, ranges from $0 \%$ to $100 \%$; a value of $100 \%$ means that the variance of the dependent variable (e.g. prices for letter) can be completely explained by the parameter being investigated.

The coefficient of determination produced by each linear regression was reviewed to determine the extent to which the parameter under consideration could be considered to influence price. The higher the value, the greater extent to which the parameter could be considered to influence price.

ERGP is aware of the limitation of using single parameter regression models at the high level adopted, but further statistical analyses would go beyond the scope of this report.

### 2.1 Scope of the Universal Service Obligation (USO)

### 2.1.1 Overview

In this section we discuss how the scope of the Universal Service Obligation (USO) may influence tariffs. Specifically the scope of the USO may influence the cost of services which in turn may influence prices.

Under the pricing principles set out in Article 12 of the Third Postal Directive ${ }^{3}$, tariffs of USO products should be cost oriented, non-discriminatory, transparent and affordable. Further the service standard of the USO, for example the number of delivery days or the service levels, may influence the costs incurred, which in turn influence prices.

The scope of the USO within member states is defined with reference to the Postal Directive and includes at a minimum single piece letters and parcels. However, the precise implementation varies by member state and can be considered with reference to:-

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- The range of services included;
- Frequency of collection and delivery;
- The service targets applied.

Further, whilst not directly correlated to the scope of the USO, the $6^{\text {th }}$ VAT Directive of 1977 states that VAT exemptions should exist for public postal services. The correct interpretation of this statement has been the subject of much debate as discussed later in this chapter. The inclusion or exclusion of VAT, as it applies only to the USO provider, and can influence both competition and price, dependent on the end user's ability to reclaim the VAT.

### 2.1.2 Range of Services in USO

We observe that there is a difference in scope of services included across countries. Whilst, all countries include single piece letters and parcels, others include bulk letters (considered here to include bulk mail, direct mail and periodicals) and / or bulk parcels.

Figure 2-1: Variation in Service Scope of USO by Countries in 2013 (By Number of Countries) ${ }^{4}$


[^2][^3]

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Figure 2-2: Table of Variation in Service Scope of USO in 2013 by country

| Scope | Number | Countries |
| :--- | :---: | :--- |
| Single Piece Only | 9 | Bulgaria, Czech Republic, Germany, Estonia, Croatia, <br> Lithuania, Netherlands, Poland, United Kingdom |
| Single Piece and <br> Bulk Letters | 9 | Greece, France, Iceland, Italy, Cyprus, Latvia, <br> Slovenia, Sweden, Norway |
| All | 13 | Austria, Belgium, Denmark, Hungary, Ireland, Spain, <br> Luxembourg, Malta, Portugal, Romania, Serbia, <br> Slovakia, Switzerland |

### 2.1.3 Quality of Service

The quality of service of the USO may influence costs which in turn influence prices.
Quality of service can be considered with respect to five dimensions as outlined in the recent ERGP report "Quality of Service and End User Satisfaction".

These include:-

- Measurement of the quality of service concerning transit time
- Collection and Delivery
- Access Points
- Measurements of consumer satisfaction
- Surveys regarding customers' needs.

We consider the first two of these, providing an overview of how these may differ by member states and how they may influence prices.

### 2.1.3.1 Transit Time Service Standards

The Postal Directive also requires "the permanent provision of a postal service of specified quality ${ }^{\prime 6}$. Service standards are typically set and monitored by the National Regulatory Authority (NRA) and typically relate to the percentage of mail being delivered within a specified time limit e.g. the UK set a standard of $93 \%$ for the proportion of priority ( $D+1$ ) single piece mail that should arrive the next day.

The charts below show each member state's achieved letter service level against target.
The targets for priority single piece letters range from $80 \%$ to $97 \%$ with the majority of member states exceeding their targets and achieving between $90 \%$ and $97 \%$ service performance.

[^4]

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The targets for non-priority single piece letters range from $80 \%$ to $93 \%$ for $\mathrm{D}+2$ services applicable in some countries, to $85 \%$ to $98.5 \%$. Not all member states have targets for nonpriority mail.
(The line indicates achievement of target, markers to the left of the line have exceeded the target, and those to the right have not met the target.)

Figure 2-3: Priority ( $\mathrm{D}+1$ ) Single Piece Letter Service Quality Achieved vs Target by Country 2012 / $2013^{7}$


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Figure 2-4: Non-Priority (D+2) or (D+3) Single Piece Letter Service Quality Achieved vs Target by Country 2012 / $2013^{8}$


Both quality of service targets and performance may influence costs, which in turn may influence price.

Considering quality of service targets, for example, transit targets may influence the amount of air transportation required or the amount of sortation completed at night.

Further, poor quality of service performance could also increase costs, for example, by the double or triple handing of mail items.

Nevertheless, the relationship between quality and costs may be difficult to observe on a European level as countries and operators differ so widely. Factors such as the size of the country, the density of population, the structure of mail flows, the efficiency of the mail operator, for instance, are all likely to have an influence on the quality of service and on the costs.

### 2.1.3.2 Frequency of Collection and Delivery

Article 3 of the Postal Directive requires delivery and collection of the universal service on at least five working days a week but makes allowance for exceptional circumstances or geographies. All member states comply with the directive with some extending the requirement to 6 days per week for letters within the USO (Austria ${ }^{9}$, Denmark, Estonia,

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Norway, France, Malta, Norway and UK). ${ }^{10}$ The Netherlands has recently reduced its delivery days from 6 to 5 .

Exceptions have been granted in many countries, mainly related to geography.
We would expect the USO provider to incur greater costs dependent on the number of delivery and collection days. This in turn would be expected to lead to differences in prices.

### 2.1.4 VAT Exemptions

This subject of VAT exemptions in post has been a cause of considerable debate and legal cases, a summary of which is outlined in WIK's report "Main Developments in the Postal Sector (2010-2013)" ${ }^{n 11}$ and the ERGP report "Net Cost of USO - VAT Exemption a benefit or burden". ${ }^{12}$

As stated in the above reports, the 1977 Sixth VAT Directive mandates that the supply of "public postal services" should be exempt from VAT. The correct interpretation of this statement has been subject to review by the European Commission ${ }^{13}$ and through legal cases before the Court of Justice of the European Union. ${ }^{14}$

The resulting interpretation is that VAT exemption should only apply as far as the strict discharge of the universal service obligation is concerned. Hence, USO services provided by a designated provider should be exempt from VAT, however VAT remains applicable to the equivalent services when provided by non USO providers.

The prices reviewed in this document are shown excluding VAT, however member states do not apply the VAT exemption consistently, as documented in detail in the ERGP report (referenced above) and summarised in the table below.

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Figure 2-5 Table Showing USO VAT Status across Member States ${ }^{15}$

| Country | VAT exemption regime applied | VAT rate on postal services | VAT exemption on all postal services <br> (USP and <br> alternatives) | Only the USP is exempted | VAT exemption on US only | VAT exemption on all USP's products | Recent changes | Effect of VAT changes |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Austria | $\checkmark$ | 20\% |  | $\checkmark$ | $\checkmark$ |  | The VAT exemption was lifted from non US products | The final prices were changed in the dimension of the amount VAT |
| Belgium | $\checkmark$ | 21\% |  | $\checkmark$ | $\checkmark$ |  |  |  |
| Bulgaria | $\sqrt{ }$ | 20\% |  | $\sqrt{ }$ |  | $\checkmark$ | "Postal money orders" service has been taken out from the US scope, respectively lifted from the VAT exemption | The prices for "Postal money orders" has been increased after the service was taken out of USO |
| Croatia | $\checkmark$ | 23\% |  | $\checkmark$ | $\sqrt{ }$ |  | The VAT exemption was lifted from items of correspondence up to 2 kilograms, packages up to 10 kilograms, and up to 20 kilograms in international incoming traffic, cecograms up to 7 kilograms | USP asked the increase in prices |
| Cyprus | $\checkmark$ | NA |  | $\checkmark$ |  | $\checkmark$ |  |  |
| Czech Republic | $\checkmark$ | 20\% |  | $\checkmark$ | $\checkmark$ |  |  |  |
| Denmark | $\sqrt{ }$ | 25\% |  | $\checkmark$ | $\sqrt{ }$ |  |  |  |
| Estonia | $\sqrt{ }$ | 20\% |  | $\sqrt{ }$ | $\sqrt{ }$ |  |  |  |
| Finl and | $\checkmark$ | 23\% |  | $\sqrt{ }$ | $\sqrt{ }$ |  | Since June 2011, the USP is VAT exempt | Decrease of parcels prices by $15 \%$ and stability of letters' tariffs |
| France | $\checkmark$ | 19,6\% |  |  | $\sqrt{ }$ |  | The VAT exemption was lifted on some services from the Industrial Direct marketing and thus are no longer part of the US scope, thus su bject to VAT | No change in net prices (VAT is added to current prices) and an adjustment of the services to offset the effects of VAT for some clients who cannot recoup VAT |
| Germany | $\checkmark$ | 19\% |  | $\checkmark$ | $\sqrt{ }$ |  | The VAT exemption scope was reduced. Bulk mail and accessservices of Deutsche Post AG are not longer VAT exempted | Deutsche Post AG has reduced prices for accessservices according to section 28 of the Postal Act (incidental services) |
| Greece | $\checkmark$ | 23\% |  | $\checkmark$ | $\checkmark$ |  |  |  |
| Hungary | $\checkmark$ | 27\% |  | $\checkmark$ | $\checkmark$ |  |  |  |
| Italy | $\sqrt{ }$ | 21\% |  | $\sqrt{ }$ | $\checkmark$ |  | VAT at $22 \%$ as of July 2013 |  |
| Latvia | $\checkmark$ | 22\% |  | $\checkmark$ | Only letters up to 50 gr. |  |  |  |
| Lithuania | $\sqrt{ }$ | 21\% |  | $\sqrt{ }$ | $\checkmark$ |  |  |  |
| Luxembourg | $\sqrt{ }$ | 15\% |  | $\sqrt{ }$ | $\sqrt{ }$ |  |  |  |
| Malta | $\sqrt{ }$ | 18\% |  | $\sqrt{ }$ | $\sqrt{ }$ |  |  |  |
| Norway |  | 25\% |  |  |  |  |  |  |
| Poland | $\checkmark$ | 23\% |  | $\sqrt{ }$ |  | $\sqrt{ }$ |  |  |
| Portugal | $\checkmark$ | 23\% |  | $\checkmark$ | $\checkmark$ |  |  |  |
| Rep. of Macedonia | $\checkmark$ | 18\% |  | $\sqrt{ }$ |  | $\checkmark$ |  |  |
| Romania | $\checkmark$ | 24\% |  | $\sqrt{ }$ | $\sqrt{ }$ |  |  |  |
| Slovakia | $\checkmark$ | 20\% |  | $\sqrt{ }$ | $\sqrt{ }$ |  |  |  |
| Slovenia | $\sqrt{ }$ | 20\% |  | $\sqrt{ }$ | $\sqrt{ }$ |  |  |  |
| Spain | $\sqrt{ }$ | 18\% |  | $\checkmark$ | $\sqrt{ }$ |  | The VAT exemption was lifted from 2005 to 2010 on USO from non reserved services | NA |
| Sweden |  | 25\% |  |  |  |  |  |  |
| Switzerland | $\checkmark$ | 8\% |  |  |  |  | Since 2009, the USP opted for liability to taxation under art. 22, para 1, of the VAT Act. All postal services are since liable to VAT | There were no change in final price |
| The Netherlands | $\checkmark$ | 19\% |  | $\checkmark$ | Some US: letters up to 2 kg parcels up to 10 kg postal items in braille up to 7 kg ; domestic transport of registered items and valueregistered items |  |  |  |
| United Kingdom | $\sqrt{ }$ | 20\% |  | $\checkmark$ | $\sqrt{ }$ |  | Bulk products came out of USO and lost their VAT exemption status. <br> A minor product "keepsafe" was added to the USO scope and became subject to VAT | NA |

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### 2.2 Country specifics

Other factors that might influence prices relate to country specific data. It seems a priori that price differences between products with similar characteristics might be explained by country specifics of an economic nature: general price level and costs, on the one hand, and drivers of demand, on the other hand, such as affordability and the level of competition.

In this section, potential drivers of price relating to country specific factors are identified together with the data used to represent each potential price driver in our simple regression models.

The parameters considered were:-

- Labour Costs
- Internet Usage (e-substitution)
- Affordability
- Urbanisation
- Postal Access Points (excluding letter boxes)
- Postal Items per Inhabitant
- Postal Competition (end to end only)


### 2.2.1 General Price Level

The differences in prices of homogeneous products (for instance, domestic priority single piece stamped letter up to 20 g ,) highlights the difficulties of comparing prices across borders across such an economically diversified international context. To enable a meaningful comparison, prices have been converted into Euros and adjusted for differences in general price level when investigating each potential price driver.

Table 2-1 shows price level disparities.
Comparative price level indices show the extent of price level differences and tell which countries are more expensive to live in (the highest values of the calculated index indicate the most expensive countries to live in). A price index higher than 100 indicates a relatively expensive country.

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Table 2-1 Price level disparities ${ }^{16}$

| Countries | Price level <br> disparity index |
| :--- | :---: |
| Austria | 109,9 |
| Belgium | 110,9 |
| Bulgaria | 45,1 |
| Croatia | 65,4 |
| Cyprus | 87,8 |
| Czech Republic | 70,4 |
| Denmark | 136,5 |
| Estonia | 71,4 |
| Finland | 120,8 |
| FYROM | 40,0 |
| France | 112,0 |
| Germany | 103,4 |
| Greece | 89,3 |
| Hungary | 57,5 |
| Iceland | 112,2 |
| Ireland | 108,6 |
| Italy | 100,4 |
| Latvia | 66,8 |
| Lithuania | 60,3 |
| Luxembourg | 120,3 |
| Malta | 74,6 |
| Montenegro | 48,9 |
| Netherlands | 109,9 |
| Norway | 156,1 |
| Poland | 57,8 |
| Portugal | 80,6 |
| Romania | 48,4 |
| Serbia | 45,5 |
| Slovakia | 67,8 |
| Slovenia | 80,3 |
| Spain | 91,2 |
| Sweden | 133,1 |
| Switzerland | 153,7 |
| United Kingdom | 113,3 |
|  |  |
|  |  |

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### 2.2.2 Labour Costs

The postal sector is considered to be a relatively labour-intensive industry.
Table 2-2 indicates the total (wage and non-wage) hourly labour costs in the services of the business economy converted into Euro at exchange rates adjusted for differences in general price level.

It shows large differences between countries with high cost of labour in the upper quartile of the series (Switzerland, Belgium, Sweden, ...) and countries with low cost of labour in the lower quartile (Bulgaria, Latvia, Lithuania, ...).

Despite adjustment for differences in general price level (i.e. the labour cost is divided by the price level disparity index), the dispersion is relatively large (the interquartile range ${ }^{17}$ equals $79.9 \%$ of the median ${ }^{18}$ value).

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Table 2-2 Labour costs ${ }^{19}$
Total (wage and non-wage) hourly labour costs in the services of the
business economy (EUR)

| Countries | at the current <br> exchange rates | at the exchange <br> rates adjusted <br> for differences in <br> general price <br> level |
| :--- | :---: | :---: |
| Austria | 29,2 | 26,6 |
| Belgium | 40,4 | 36,4 |
| Bulgaria | 4,0 | 8,8 |
| Croatia | 8,3 | 12,7 |
| Cyprus | 17,3 | 19,7 |
| Czech Republic | 10,9 | 15,5 |
| Denmark | 40,3 | 29,5 |
| Estonia | 8,8 | 12,3 |
| Finland | 29,6 | 24,5 |
| France | 34,7 | 31,0 |
| Germany | 28,4 | 27,5 |
| Greece | 15,6 | 17,5 |
| Hungary | 7,8 | 13,6 |
| Ireland | 26,6 | 24,5 |
| Italy | 27,6 | 27,5 |
| Latvia | 6,6 | 9,8 |
| Lithuania | 5,9 | 9,9 |
| Luxembourg | 37,9 | 31,5 |
| Malta | 12,8 | 17,2 |
| Netherlands | 30,7 | 27,9 |
| Norway | 45,1 | 28,9 |
| Poland | 7,2 | 12,5 |
| Portugal | 12,7 | 15,8 |
| Romania | 5,0 | 10,3 |
| Slovakia | 8,5 | 12,5 |
| Slovenia | 15,3 | 19,1 |
| Spain | 20,1 | 22,0 |
| Sweden | 42,2 | 31,7 |
| Switzerland | 58,1 | 37,8 |
| United Kingdom | 20,4 | 18,0 |
|  |  |  |
|  |  | 2 |

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### 2.2.3 E-Substitution

E-substitution might be considered to be closely related to levels of internet usage which could be seen to influence demand.

Table 2-3 provides data on the different levels of internet usage across member states. The table shows the percentage of people undertaking different internet related activities by country. (Data are for the year 2012 unless otherwise specified.)

Table 2-3 Internet use and activities ${ }^{20}$

| Countries | s!!еш-ә Ки!м!əәәл/Бu!puәs |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Austria | 73\% | 37\% | 16\% | 11\% | 42\% | 41\% | 53\% | 26\% | 48\% | 17\% |
| Belgium | 74\% | 49\% | 5\% | 4\% | 49\% | 36\% | 50\% | 29\% | 45\% | 15\% |
| Bulgaria | 42\% | 30\% | 10\% | 3\% | 38\% | 38\% | 27\% | 11\% | 9\% | 42\% |
| Croatia | 49\% | 35\% | 8\% | 7\% | 40\% | 56\% | 26\% | 9\% | 23\% | 35\% |
| Cyprus | 46\% | 37\% | 7\% | 3\% | 45\% | 48\% | 30\% | 15\% | 21\% | 36\% |
| Czech Republic | 69\% | 25\% | 14\% | 3\% | 38\% | 63\% | 30\% | 13\% | 32\% | 19\% |
| Denmark | 86\% | 48\% | 24\% | 11\% | 66\% | 70\% | 83\% | 69\% | 73\% | 6\% |
| Estonia | 70\% | 44\% | 17\% | 6\% | 52\% | 73\% | 55\% | 33\% | 23\% | 19\% |
| Finland | 81\% | 49\% | 43\% | 19\% | 51\% | 79\% | 70\% | 45\% | 65\% | 7\% |
| France | 72\% | 33\% | 8\% | 10\% | 40\% | 41\% | 61\% | 40\% | 57\% | 15\% |
| Germany | 76\% | 34\% | 23\% | 10\% | 44\% | 57\% | 51\% | 15\% | 65\% | 15\% |
| Greece | 41\% | 32\% | 15\% | 5\% | 37\% | 46\% | 34\% | 18\% | 20\% | 42\% |
| Hungary | 67\% | 43\% | 14\% | 3\% | 58\% | 60\% | 42\% | 21\% | 25\% | 26\% |
| Iceland | 93\% | 65\% | 40\% | 25\% | 80\% | 83\% | 86\% | 75\% | 54\% | 3\% |
| Ireland | 66\% | 46\% | 12\% | 3\% | 50\% | 33\% | 49\% | 38\% | 46\% | 18\% |
| Italy | 48\% | 29\% | 13\% | 6\% | 33\% | 40\% | 19\% | 8\% | 17\% | 37\% |
| Latvia | 63\% | 37\% | 27\% | 4\% | 55\% | 64\% | 47\% | 17\% | 27\% | 24\% |
| Lithuania | 53\% | 47\% | 21\% | 6\% | 44\% | 62\% | 36\% | 29\% | 20\% | 31\% |
| Luxembourg | 87\% | 50\% | 28\% | 13\% | 60\% | 77\% | 61\% | 25\% | 68\% | 6\% |
| Malta | 60\% | 44\% | 14\% | 9\% | 52\% | 48\% | 41\% | 17\% | 44\% | 29\% |
| Netherlands | 89\% | 65\% | 25\% | 7\% | 60\% | 56\% | 67\% | 50\% | 65\% | 6\% |
| Norway | 89\% | 58\% | 27\% | 10\% | 70\% | 87\% | 78\% | 51\% | 76\% | 4\% |
| Poland | 51\% | 42\% | 6\% | 2\% | 37\% | 27\% | 32\% | 11\% | 30\% | 32\% |
| Portugal | 53\% | 45\% | 15\% | 7\% | 45\% | 45\% | 39\% | 27\% | 22\% | 34\% |
| Romania | 38\% | 22\% | 7\% | 2\% | 34\% | 29\% | 31\% | 4\% | 5\% | 48\% |
| Slovakia | 70\% | 47\% | 8\% | 3\% | 49\% | 43\% | 42\% | 17\% | 45\% | 18\% |
| Slovenia | 57\% | 45\% | 14\% | 8\% | 39\% | 57\% | 48\% | 15\% | 34\% | 28\% |
| Spain | 62\% | 43\% | 14\% | 10\% | 48\% | 50\% | 45\% | 23\% | 31\% | 27\% |
| Sweden | 86\% | 54\% | 11\% | 14\% | 60\% | 80\% | 78\% | 45\% | 74\% | 5\% |
| Switzerland | 80\% | 27\% | 28\% | n.a. | 31\% | 63\% | 61\% | n.a. | 47\% | 14\% |
| United Kingdom | 78\% | 57\% | 12\% | 8\% | 61\% | 58\% | 43\% | 26\% | 73\% | 10\% |

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### 2.2.4 Affordability

Affordability can be measured with reference to the differences in nominal prices and net earnings. Table $2-4$ shows annual net earnings for a single person without children, which is the most homogeneous net earnings index. Consistent with our approach investigating each potential parameter, the figures have been converted into Euros and adjusted for differences in general price level.

Despite adjustment, the figures show large differences between countries in the upper quartile (or top $25 \%$, refer to earlier footnote on quartiles for definition) of the series with annual net earnings above or equal to than EUR 25.000 (Switzerland, Luxembourg, Norway, ...) and countries in the lower quartile with annual net earnings equal to or below EUR 11.400 (Bulgaria, Romania, Latvia, ...).

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Table 2-4 Annual net earnings - Single person without children ${ }^{21}$

| Countries | Annual net <br> earnings (EUR) - <br> single person <br> without children |
| :--- | :---: |
| Austria | 24.538 |
| Belgium | 23.769 |
| Bulgaria | 7.982 |
| Cyprus | 13.560 |
| Czech Republic | 11.040 |
| Denmark | 23.681 |
| Estonia | 12.285 |
| Finland | 24.240 |
| France | 23.472 |
| Germany | 26.039 |
| Greece | 16.787 |
| Hungary | 10.543 |
| Ireland | 24.664 |
| Italy | 19.926 |
| Latvia | 9.300 |
| Lithuania | 9.354 |
| Luxembourg | 30.775 |
| Malta | 22.160 |
| Netherlands | 28.746 |
| Norway | 29.642 |
| Poland | 12.092 |
| Portugal | 15.269 |
| Romania | 8.360 |
| Slovakia | 11.171 |
| Slovenia | 14.360 |
| Spain | 21.332 |
| Sweden | 25.280 |
| Switzerland | 38.342 |
| United Kingdom | 28.003 |
|  |  |

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### 2.2.5 Urbanisation and Population Density

Other country specific factors include transport and accessibility. These might be linked to geography (population density) or urban environment (distribution of population by degree of urbanisation and by dwelling type). Table 2-5 summarizes geographical and urban-related series and Table $2-6$ shows the average population density. There is no clear statistical relationship between these that could be used to establish a strict typology of European countries taking into account population density on the one hand and geographical and urban-related variables on the other hand.

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Table 2-5 Distribution of population by degree of urbanisation and dwelling type ${ }^{22}$

|  | Distribution of population (total) |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | by degr | ree of urban | ion |  | by dwelli | type |  |
| Countries |  |  |  |  |  | Flat in a building with less than ten dwellings | Flat in a building with ten or more dwellings |
| Austria | 30,2\% | 28,1\% | 41,8\% | 49,2\% | 7,2\% | 16,9\% | 25,6\% |
| Belgium | 53,7\% | 42,0\% | 4,3\% | 37,1\% | 41,8\% | 14,4\% | 6,4\% |
| Bulgaria | 42,8\% | 22,6\% | 34,6\% | 46,0\% | 10,5\% | 5,4\% | 37,8\% |
| Croatia | 29,7\% | 19,9\% | 50,4\% | 73,0\% | 6,1\% | 6,3\% | 14,5\% |
| Cyprus | 51,5\% | 21,7\% | 26,8\% | 47,0\% | 27,7\% | 15,8\% | 8,3\% |
| Czech Republic | 30,2\% | 31,0\% | 38,8\% | 37,2\% | 9,9\% | 12,5\% | 40,0\% |
| Denmark | 33,7\% | 21,7\% | 44,6\% | 57,1\% | 12,5\% | 7,0\% | 23,0\% |
| Estonia | 42,0\% | 16,9\% | 41,1\% | 29,8\% | 4,6\% | 9,9\% | 55,1\% |
| Finland | 26,3\% | 14,0\% | 59,7\% | 47,2\% | 18,6\% | 1,5\% | 32,1\% |
| France | 45,8\% | 19,7\% | 34,5\% | 44,2\% | 22,5\% | 11,1\% | 22,0\% |
| Germany | 35,3\% | 39,6\% | 25,2\% | 28,6\% | 16,7\% | 35,9\% | 17,3\% |
| Greece | 47,8\% | 12,4\% | 39,8\% | 32,1\% | 8,1\% | 35,0\% | 24,7\% |
| Hungary | 29,6\% | 32,6\% | 37,8\% | 63,9\% | 5,4\% | 4,4\% | 25,7\% |
| Iceland | 63,8\% | 0,0\% | 36,2\% | 34,9\% | 18,2\% | 14,1\% | 31,8\% |
| Ireland | 34,2\% | 27,4\% | 38,4\% | 35,7\% | 59,9\% | 2,3\% | 2,1\% |
| Italy | 43,5\% | 41,0\% | 15,5\% | 22,0\% | 26,5\% | 24,8\% | 26,2\% |
| Latvia | 45,3\% | 8,0\% | 46,8\% | 31,8\% | 3,6\% | 8,6\% | 55,8\% |
| Lithuania | 42,4\% | 10,3\% | 47,3\% | 35,2\% | 6,8\% | 6,6\% | 51,0\% |
| Luxembourg | 15,9\% | 37,8\% | 46,3\% | 36,4\% | 29,9\% | 22,7\% | 10,5\% |
| Malta | 88,9\% | 11,0\% | 0,1\% | 4,5\% | 44,8\% | 46,6\% | 3,7\% |
| Netherlands | 47,3\% | 38,0\% | 14,7\% | 16,2\% | 60,0\% | 4,9\% | 13,7\% |
| Norway | 53,3\% | 16,9\% | 29,8\% | 60,7\% | 20,2\% | 3,4\% | 10,0\% |
| Poland | 33,9\% | 24,5\% | 41,6\% | 48,9\% | 4,7\% | 9,6\% | 36,6\% |
| Portugal | 43,1\% | 28,6\% | 28,3\% | 40,6\% | 17,8\% | 24,1\% | 17,2\% |
| Romania | 33,7\% | 23,8\% | 42,5\% | 60,5\% | 1,7\% | 3,6\% | 34,2\% |
| Slovakia | 24,1\% | 31,5\% | 44,4\% | 49,9\% | 1,8\% | 6,8\% | 41,3\% |
| Slovenia | 18,8\% | 37,4\% | 43,9\% | 66,6\% | 4,1\% | 7,8\% | 21,1\% |
| Spain | 50,4\% | 22,9\% | 26,7\% | 13,6\% | 21,2\% | 18,9\% | 46,1\% |
| Sweden | 20,8\% | 17,0\% | 62,2\% | 50,6\% | 8,9\% | 8,8\% | 31,4\% |
| Switzerland | 26,1\% | 49,4\% | 24,5\% | 23,8\% | 13,1\% | 37,2\% | 22,4\% |
| United Kingdom | 57,0\% | 29,4\% | 13,6\% | 23,9\% | 60,9\% | 9,1\% | 5,4\% |

[^14]
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Table 2-6 Population density ${ }^{23}$

| Countries | Population <br> density <br> (inhabitant/km |
| :--- | :---: |
| Austria | 100,5 |
| Belgium | 364,5 |
| Bulgaria | 65,9 |
| Croatia | 75,4 |
| Cyprus | 93,4 |
| Czech Republic | 133,3 |
| Denmark | 129,8 |
| Estonia | 29,2 |
| Finland | 16,0 |
| FYROM | 80,2 |
| France | 115,2 |
| Germany | 229,5 |
| Greece | 84,1 |
| Hungary | 106,6 |
| Iceland | 3,1 |
| Ireland | 65,3 |
| Italy | 197,6 |
| Latvia | 31,5 |
| Lithuania | 45,8 |
| Luxembourg | 205,3 |
| Malta | $1.327,4$ |
| Montenegro | 45,0 |
| Netherlands | 403,3 |
| Norway | 15,5 |
| Poland | 123,2 |
| Portugal | 114,2 |
| Romania | 84,1 |
| Serbia | 92,9 |
| Slovakia | 110,3 |
| Slovenia | 101,5 |
| Spain | 92,6 |
| Sweden | 21,1 |
| Switzerland | 193,7 |
| United Kingdom | 261,5 |
|  |  |
|  |  |

[^15]

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### 2.2.6 Postal Access Points

Price differences might also be explained by postal statistics: cost factors (the number of access points to postal services), economies of scale (the number of postal items per inhabitant), and competition in the postal market (the number of key postal services providers, the cumulative market share of the major postal services providers).

Table 2-7 shows the total number of access points to postal services (excluding letter boxes) and the number of permanent access points to postal services (excluding letter boxes) per thousand square kilometres.

Except in Iceland (0,6), Finland (2,7), Sweden (4,0), Cyprus $(6,6)$, Germany (103,6) and Malta $(205,7)$ for different and purely circumstantial reasons, the number of permanent access points to postal services per thousand square kilometres does not present any large differences: the first quartile ${ }^{24}$ equals 22,6 and the median ${ }^{25}$ equals 30,8 whereas the average equals 32,2 .

The countries surveyed can be divided into 3 categories according to the access points' density: Iow (Lithuania, Former Yugoslav Republic of Macedonia, Greece, Spain and Serbia), intermediate (Latvia, Slovenia, Romania, Hungary, Austria, France, Slovakia, Bulgaria and Croatia) and high (Portugal, Czech Republic, Belgium, Italy, Poland, United Kingdom, Netherlands and Switzerland).

[^16]ERGP (14) 23 - Report on benchmarking of us tariffs
Table 2-7 Access points to postal services ${ }^{26}$

| Number of permanent access points to postal services <br> (excluding letter boxes) |  |  |
| :--- | :---: | :---: |
|  | Total Number | Number per <br> thousand square <br> kilometres |
| Austria | 2.501 | 29,8 |
| Belgium | 1.353 | 50,2 |
| Bulgaria | 4.042 | 36,5 |
| Croatia | 2.119 | 37,4 |
| Cyprus | 61 | 6,6 |
| Czech Republic | 3.403 | 43,1 |
| Finland | 922 | 2,7 |
| FYROM | 330 | 12,8 |
| France | 17.000 | 30,8 |
| Germany | 36.999 | 103,6 |
| Greece | 2.054 | 15,6 |
| Hungary | 2.741 | 29,5 |
| Iceland | 63 | 0,6 |
| Italy | 13.676 | 45,4 |
| Latvia | 1.676 | 25,9 |
| Lithuania | 836 | 12,8 |
| Malta | 65 | 205,7 |
| Netherlands | 2.205 | 53,1 |
| Poland | 14.382 | 46,0 |
| Portugal | 3.861 | 41,9 |
| Romania | 6.859 | 28,8 |
| Serbia | 1.499 | 19,3 |
| Slovakia | 1.700 | 34,7 |
| Slovenia | 560 | 27,6 |
| Spain | 9.490 | 18,8 |
| Sweden | 1.815 | 4,0 |
| Switzerland | 2.254 | 54,6 |
| United Kingdom | 12.000 | 49,3 |
|  |  |  |

### 2.2.7 Postal Items per Inhabitant

Table $2-8$ shows the number of letter items per inhabitant, including addressed advertising items (direct mail), hybrid mail, registered and insured letters, but excluding newspapers.

[^17]

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This series shows considerable differences. The countries surveyed can be divided into 3 categories according to the number of letter items per inhabitant: low (Hungary, Latvia, Bulgaria, Romania, Lithuania, Former Yugoslav Republic of Macedonia, Greece and Serbia), intermediate (Slovakia, Cyprus, Croatia, Spain, Portugal, Italy, Malta, Germany, Iceland, Slovenia and Poland) and high (Finland, United Kingdom, Belgium, France, Sweden, Switzerland and Cyprus).

Table 2-8 Letter-items per inhabitant, per year ${ }^{27}$

| Countries | Number of letter post items <br> per inhabitant, including <br> addressed advertising items <br> (direct mail), hybrid mail, <br> registered and insured letters, <br> excluding newspapers, per <br> year |
| :--- | :---: |
| Belgium | 220,1 |
| Bulgaria | 21,0 |
| Croatia | 68,0 |
| Cyprus | 67,5 |
| Finland | 193,9 |
| FYROM | 31,0 |
| France | 224,9 |
| Germany | 106,2 |
| Greece | 42,9 |
| Hungary | 0,9 |
| Iceland | 110,4 |
| Italy | 88,7 |
| Latvia | 19,0 |
| Lithuania | 24,8 |
| Malta | 98,0 |
| Poland | 131,4 |
| Portugal | 77,6 |
| Romania | 24,4 |
| Serbia | 43,2 |
| Slovakia | 55,2 |
| Spain | 74,6 |
| Sweden | 267,4 |
| Switzerland | 333,8 |
| United Kingdom | 216,7 |
|  |  |

[^18]

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Country classifications or categorisations (1) according to the number of permanent access points to postal services per thousand square kilometres and (2) according to the number of letter items per inhabitant and per year correspond in the lower category for Lithuania, the Former Yugoslav Republic of Macedonia, Greece and Serbia, in the intermediate category for Slovenia, Slovakia and Croatia, and in the upper category for Belgium, the United Kingdom and Switzerland. The expansion of postal services in the other countries cannot be unambiguously identified based on these parameters.

### 2.2.8 Competition in Post

Competition in post can be characterised by the number of end to end postal services providers and the cumulative market share of the major postal services providers. In the different countries the postal market can be identified on the one hand as monopolistic, oligopolistic or fair, on the other hand as concentrated or fragmented. Table 2-9 shows the number of end to end postal service providers and the cumulative market share (based on revenues) of the 3 major postal service providers, including the designated universal service provider for both the letter and parcel markets.

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Table 2-9 Competition on the postal market ${ }^{28}$


[^19]

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Based on a $95 \%$ confidence interval ${ }^{30}$, there is clearly no statistical relationship between market openness (the number of key postal services providers) and concentration (the cumulative market share of the major postal services providers). On the basis of this observation, it must be concluded that establishing a single typology of European countries is not possible.

This analysis did not consider the prevalence of access competition.

### 2.3 Company specifics

Other factors that might influence prices relate to company specific data.
The postal companies themselves are very different, which may also cause differences in prices. Differences can be observed in the scope of business (businesses outside traditional postal services, international businesses), the degree of automation and the product mix (single piece, bulk, letter, parcel, financial services etc).

In this section, potential drivers of price relating to country specific factors are identified together with the data used to represent each potential price driver in our simple regression models.

The parameters considered were:-

- Scope of Postal Company's Business
- Level of Automation
- Product Mix


### 2.3.1 Company Scope

The following table shows the share of revenue for letter, parcels and financial services. Less than one third of the revenue coming from letter can be observed in Germany, Bulgaria, Serbia and Norway. More than two third of the revenue coming from letter can be observed in Lithuania, Former Yugoslav Republic of Macedonia, Portugal, Greece, Belgium and Poland.

In most countries the postal operator offers financial services except in Finland, Sweden, United Kingdom and Germany (only pension services). No information was available for Croatia, Denmark, Estonia, Iceland, Montenegro and Netherlands.

In Slovakia, Latvia, Italy, Former Yugoslav Republic of Macedonia, France, Hungary, Switzerland and Serbia $20 \%$ or more of the revenue is generated from financial services. One may suppose that a strong business coming from financial services may influence prices in letter or parcel markets. Analysis of the data available did not show a correlation

[^20]ERGP (14) 23 - Report on benchmarking of us tariffs
between prices of a single piece letter up to 20 g or a 2 kg parcel expressed in Euro and the different revenue-shares of letter, parcel or financial services.

Table 2-10 Revenue share intracompany ${ }^{31}$

| Countries | Letters | Parcels | Financial |
| :--- | :---: | :---: | :---: |
| Austria | $64,0 \%$ | $36,0 \%$ | $0,0 \%$ |
| Belgium | $78,5 \%$ | $7,0 \%$ | $9,0 \%$ |
| Bulgaria | $26,1 \%$ | $2,9 \%$ | $4,8 \%$ |
| Cyprus | $79,7 \%$ | $15,6 \%$ | $0,1 \%$ |
| Czech Republic | $42,0 \%$ | $14,0 \%$ | $21,0 \%$ |
| FYROM | $67,9 \%$ | $2,2 \%$ | $21,8 \%$ |
| France | $47,4 \%$ | $7,1 \%$ | $25,0 \%$ |
| Germany | $15,8 \%$ | $6,8 \%$ | - |
| Greece | $75,4 \%$ | $3,8 \%$ | $14,5 \%$ |
| Hungary | $48,6 \%$ | $23,8 \%$ | $27,6 \%$ |
| Iceland | $62,8 \%$ | $20,6 \%$ | - |
| Italy | $12,0 \%$ | $1,9 \%$ | $20,5 \%$ |
| Latvia | $60,0 \%$ | $7,0 \%$ | $20,0 \%$ |
| Lithuania | $67,3 \%$ | $11,9 \%$ | $18,7 \%$ |
| Poland | $80,3 \%$ | $7,3 \%$ | $\mathrm{n} / \mathrm{a}$ |
| Portugal | $74,0 \%$ | $18,0 \%$ | $8,0 \%$ |
| Serbia | $32,1 \%$ | $0,6 \%$ | $35,5 \%$ |
| Slovakia | $54,0 \%$ | $6,0 \%$ | $20,0 \%$ |
| Spain | $78,0 \%$ | $5,0 \%$ | $<1 \%$ |
| Sweden | $60,4 \%$ | $33,3 \%$ | $0,0 \%$ |
| Switzerland | $34,5 \%$ | $18,4 \%$ | $27,7 \%$ |
| United Kingdom | $52,0 \%$ | $48,0 \%$ | $0,0 \%$ |

A lot of postal operators run businesses in countries other than their home country, e.g. Finland, Sweden, United Kingdom, Germany, Austria, Belgium, France, Ireland, Norway, Portugal, Switzerland and Netherlands. These subsidiaries are not only in Europe but around the world.

Some of the countries offer services besides traditional postal and financial services, such as third party and logistics and express services.

[^21]

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### 2.3.2 Levels of Automation

Additionally across Europe there are very different levels of automation. There are some countries with $100 \%$ hand sorting and others with all sorting done by machines. This may influence prices, but due to the small numbers of countries with data available a statistical analysis was not possible.

### 2.3.3 Product Mix

The ERGP also considered that price (and costs) might be influenced by product mix, and in particular the relative volume of bulk mail. As there was only data from 16 countries available, a statistical analysis was not possible. The range of the relative share of bulk mail ranges from $32 \%$ up to $100 \%$.

Table 2-11 relative share bulk letters ${ }^{32}$

| Countries | Approximate share of bulk <br> letters (in \% of total letter <br> mail items) |
| :--- | :---: |
| Cyprus | $90,0 \%$ |
| FYROM | $60-70 \%$ |
| France | $32 \%$ |
| Greece | $52,7 \%$ |
| Hungary | $89,8 \%$ |
| Iceland | $56,4 \%$ |
| Italy | $73,0 \%$ |
| Lithuania | $50,8 \%$ |
| Malta | $100,0 \%$ |
| Portugal | $57,0 \%$ |
| Serbia | $76,0 \%$ |
| Slovakia | $50,0 \%$ |
| Spain | $80 \%$ |
| Sweden | $68,0 \%$ |
| Switzerland | $48,7 \%$ |
| United Kingdom | $70,0 \%$ |

[^22]ERGP (14) 23 - Report on benchmarking of us tariffs

## 3 Product Analysis

This chapter describes the analysis conducted to investigate which of the parameters outlined in chapter 2 influenced prices.

In order to conduct the analysis, common definitions of products were sought. However, very dissimilar weight categories were observed across countries.

In the letter market there are numerous countries with a first weight category of up to 20 g . Other countries have a much wider range of first weight step (e.g. Poland up to 350 g ). So, when comparing prices for 20 g one should bear in mind that e.g. for Poland the price is the same for letters up to 350 g .

Further, in some countries customers can use cheaper non-priority mail, whereas in other countries customers don't have this choice.

There are even more differences in the product structures of parcels. To facilitate comparison, specific product types were selected which included consideration of different weights, formats (length, etc.), payment methods (e.g. in Germany: different prices exist for Ordinary Parcels between those paid at a branch and online), destination (e.g. Bulgaria and Former Yugoslav Republic of Macedonia have different prices for "same city"/"same settlement" and "other city"/"other settlement") and speed of delivery (e.g. priority parcels are offered in Switzerland and Poland).

The products chosen to investigate price drivers and for comparison across countries were:-

- Single piece letter 20 g priority
- Single piece letter 50 g priority
- Single piece letter 500 g priority
- Single piece parcel 1 kg
- Single piece letter 2kg
- Single piece letter 10 kg
- Bulk mail


### 3.1 Single piece letter $\mathbf{2 0 g}$ priority

To compare prices in the report, the following prices were taken, for those countries where a choice was available:

- Norway: the price for a letter up to 2 cm thickness (there are also prices for letters up to 7 cm thickness)
- Lithuania: the price for a letter up to 2 cm thickness (there is also a price for large items (the sum of length, width, and thickness - not more than 900 mm , the greatest dimension may not exceed 600 mm )


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Table 3-1 compares the prices for a domestic letter ${ }^{33}$ up to $20 \mathrm{~g}^{34}$, converted into EUR

- at the current exchange rates (2012 average annual rates) and
- at the adjusted exchange rates, i.e. at the exchange rates adjusted for differences in general price level ${ }^{35}$.

[^23]ERGP (14) 23 - Report on benchmarking of us tariffs
Table 3-1 Price ( $€$ ) for a domestic priority single piece letter-post item 20 g within the universal service, stamped (excluding VAT) ${ }^{36}$

| Countries | at the current <br> exchange <br> rate | at the adjusted <br> exchange rates |
| :--- | :---: | :---: |
| Austria | 0,62 | 0,56 |
| Belgium | 0,77 | 0,69 |
| Bulgaria | 0,43 | 0,96 |
| Croatia | 0,61 | 0,93 |
| Cyprus | 0,43 | 0,49 |
| Czech Republic | 0,50 | 0,71 |
| Finland | 0,60 | 0,83 |
| France | 0,26 | 0,59 |
| FYROM | 0,60 | 0,65 |
| Germany | 0,72 | 0,58 |
| Greece | 0,48 | 0,81 |
| Hungary | 0,90 | 0,83 |
| Iceland | 0,70 | 0,63 |
| Ireland | 0,81 | 0,70 |
| Italy | 0,45 | 1,22 |
| Latvia | 0,60 | 0,75 |
| Lithuania | 0,26 | 0,50 |
| Luxembourg | 0,64 | 0,35 |
| Malta | 1,28 | 0,82 |
| Netherlands | 0,56 | 0,97 |
| Norway | 0,50 | 0,62 |
| Poland | 0,36 | 0,75 |
| Portugal | 0,65 | 0,96 |
| Romania | 0,40 | 0,50 |
| Slovakia | 0,81 | 0,61 |
| Slovenia | 0,75 | 0,49 |
| Sweden | 0,73 | 0,64 |
| Switzerland | $\mathbf{0 , 6 3}$ | $\mathbf{0 , 7 1}$ |
| United Kingdom | $\mathbf{0 , 6 2}$ | $\mathbf{0 , 6 9}$ |
| arithmetical mean |  |  |
| median |  |  |
|  |  | 0,80 |

[^24]

ERGP (14) 23 - Report on benchmarking of us tariffs
Figure 3-1 shows the differences and highlights the difficulties of comparing prices across borders in a so economically diversified international context.

Figure 3-1 Price ( $€$ ) for a domestic priority letter $\mathbf{2 0} \mathrm{g}$ (excluding VAT)


ERGP looked into dependencies between prices and labour cost. The postal sector is a relatively labour-intensive industry. Letter prices and labour costs are positively and, based on a $98 \%$ confidence interval, significantly correlated. The correlation coefficient ${ }^{37}$ between the letter prices ${ }^{38}$ and the hourly labour costs in the services of the business economy (both converted into EUR at the current exchange rates) equals 0,606 . The linear regression ${ }^{39}$ explains the dispersion to a certain extent: the coefficient of determination ${ }^{40}$ (the square of the correlation coefficient) equals $36,7 \%$. This means that $36,7 \%$ of the dispersion in prices is explained by differences in labour cost.

[^25]ERGP (14) 23 - Report on benchmarking of us tariffs
Figure 3-2 Work minutes (services of the business economy) per letter price (20g, priority)


As outlined in chapter 2, affordability can be measured as a comparison between nominal prices for standard letters and net earnings, the most homogeneous of which across Europe are those for a single person without children. Figure 3-3 indicates the letter prices ${ }^{41}$ expressed in part (per thousand) of the daily net earnings of a single person without children. This indicator varies from 4,7\% (more affordable) in Switzerland to $47,8 \%$ (less affordable) in Latvia.

[^26]ERGP (14) 23 - Report on benchmarking of us tariffs
Figure 3-3 Letter price ( $\mathbf{2 0 g}$, priority) in part of the daily net earnings (\%)


Other country specifics in relation with issues regarding transport and accessibility are geographical (population density) or linked to urban environment (distribution of population by degree of urbanisation and by dwelling type). However, the correlation coefficients between the price series and these geographical and urban-related series calculated from the data available are low.

Based on a $98 \%$ confidence interval, the correlation coefficient between the letter prices ${ }^{42}$ and the population density, is statistically significant. But the linear regression explains the dispersion to a small extent: only $20,2 \%$ of the dispersion in letter prices is explained by differences in population density.

On the other hand, the correlation coefficients between the letter prices ${ }^{43}$ and the distribution of the population by degree of urbanisation (densely-populated areas, intermediate urbanised areas and thinly-populated areas) are not statistically significant. In other words, there is no observed relationship between letter price and urbanisation degree.

On the contrary, the correlation coefficients between the letter prices ${ }^{44}$ and the distribution of the population by dwelling type (detached house, semi-detached house, flat in a building with less than ten dwellings and flat in a building with ten or more dwellings) are all significant. But even then the linear regression explains moderately the dispersion, since the coefficient of (multiple) determination does not exceed 49,1\%.

[^27]ERGP (14) 23 - Report on benchmarking of us tariffs

### 3.2 Single piece letter 50 g priority

This and the following chapter (parcels) will show the same charts as shown in the chapter before (for single piece letter 20 g priority). So first a table shows the prices of the product at current and at adjusted exchange rate, followed by a diagram based on this figures (sorted by the price at adjusted exchange rate). A next diagram will show how many minutes of work is covered by the price and finally a diagram shows the percentage (per mill) of the price related to the daily net-income.

As in the chapter before the following table and figure compares the prices for a domestic letter of 50 g , converted into EUR

- at the current exchange rates (2012 average annual rates) and
- at the adjusted exchange rates, i.e. at the exchange rates adjusted for differences in general price level.

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Table 3-2 Price ( $€$ ) for a domestic priority letter 50 g (excluding VAT) ${ }^{45}$

| Country | at the current <br> exchange rate | at the adjusted <br> exchange rates |
| :--- | :---: | :---: |
| Austria | 0,90 | 0,82 |
| Belgium | 0,77 | 0,69 |
| Bulgaria | 0,43 | 0,96 |
| Croatia | 0,61 | 0,93 |
| Cyprus | 0,43 | 0,49 |
| Czech Republic | 0,50 | 0,71 |
| Finland | 1,00 | 0,83 |
| France | 1,10 | 0,98 |
| FYROM | 0,52 | 1,30 |
| Germany | 0,90 | 0,87 |
| Greece | 0,90 | 1,01 |
| Hungary | 0,66 | 1,15 |
| Iceland | 0,90 | 0,80 |
| Ireland | 0,68 | 0,63 |
| Italy | 1,90 | 1,89 |
| Latvia | 0,87 | 1,30 |
| Lithuania ${ }^{46}$ | 0,48 | 0,79 |
| Luxembourg | 0,60 | 0,50 |
| Malta | 0,26 | 0,35 |
| Netherlands | 1,28 | 1,16 |
| Norway | 1,92 | 1,23 |
| Poland | 0,56 | 0,97 |
| Portugal | 0,75 | 0,93 |
| Romania | 0,41 | 0,84 |
| Slovakia | 0,65 | 0,96 |
| Slovenia | 0,40 | 0,50 |
| Sweden | 0,81 | 0,61 |
| Switzerland | 0,75 | 0,49 |
| United Kingdom | 0,73 | 0,64 |
| arithmetical mean | $\mathbf{0 , 7 8}$ | $\mathbf{0 , 8 7}$ |
| median |  |  |
|  |  | 0,84 |

[^28]

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Figure 3-4 Price $(\boldsymbol{\epsilon})$ for a domestic priority letter 50 g (excluding VAT) ${ }^{47}$


As in the chapter before ERGP analysed the dependencies between prices and labour cost. The correlation between prices and labour cost for a 50 g letter is less than for 20 g letter. The coefficient of determination is $25,6 \%(36,7 \%$ for a 20 g letter). Furthermore ERGP investigated possible dependencies between price and the following parameters:

- Flat in a building with ten or more dwellings
- Thinly-populated area
- Densely-populated area (density greater than 500 inhabitants / km2, population of at least 50.000 inhabitants)
- requirement D+1
- number of letters per inhabitant
- share of letter revenue
- share of bulk mail

These parameters didn`t show significant relationship with the price of 50 g letter.

[^29]ERGP (14) 23 - Report on benchmarking of us tariffs
Figure 3-5 Work minutes (services of the business economy) per letter price (50g, priority)


Figure 3-6 Letter price (50g, priority) in part of the daily net earnings (\%)



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As mentioned in the chapter before, one way affordability can be measured is comparing nominal prices and net earnings. Figure 3-6 indicates the letter prices ${ }^{48}$ expressed in part (per thousand) of the daily net earnings of a single person without children. This indicator varies from $4,7 \%$ (more affordable) in Switzerland to $51,1 \%$ (less affordable) in Latvia.

### 3.3 Single piece letter 500 g priority

The next table and figure compares the prices for a domestic letter of 500 g , converted into EUR in the same way as it was done for 20 g and 50 g .500 g was chosen as an example for a larger item, sent by letter rather than by parcel.

[^30]ERGP (14) 23 - Report on benchmarking of us tariffs
Table 3-3 Price ( $€$ ) for a domestic priority letter 500 g (excluding VAT)

| Country | at the current <br> exchange rate | at the adjusted <br> exchange rates |
| :--- | :---: | :---: |
| Austria | 1,45 | 1,32 |
| Belgium | 3,85 | 3,47 |
| Bulgaria | 0,69 | 1,53 |
| Croatia | 1,36 | 2,08 |
| Cyprus | 0,66 | 0,75 |
| Czech Republic | 4,00 | 1,15 |
| Finland | 3,55 | 3,31 |
| France | 1,94 | 3,17 |
| FYROM | 1,45 | 4,86 |
| Germany | 2,80 | 1,40 |
| Greece | 1,82 | 3,14 |
| Hungary | 1,59 | 3,16 |
| Iceland | 5,25 | 1,41 |
| Ireland | 1,57 | 2,07 |
| Italy | 0,72 | 5,18 |
| Latvia | 1,60 | 2,35 |
| Lithuania ${ }^{49}$ | 2,22 | 1,20 |
| Luxembourg | 3,84 | 2,98 |
| Malta | 3,85 | 3,49 |
| Netherlands | 1,07 | 2,47 |
| Norway | 2,05 | 1,86 |
| Poland | 1,68 | 2,54 |
| Portugal | 1,00 | 3,46 |
| Romania | 1,33 | 1,47 |
| Slovakia | 4,86 | 1,66 |
| Slovenia | 1,13 | 3,65 |
| Sweden | $\mathbf{2 , 9 4}$ | 0,73 |
| Switzerland | $\mathbf{1 , 6 8}$ | 1,72 |
| United Kingdom |  | $\mathbf{2 , 3 8}$ |
| arithmetical mean | $\mathbf{2 , 0 8}$ |  |
| median |  |  |
|  |  |  |

[^31]

ERGP (14) 23 - Report on benchmarking of us tariffs
Figure 3-7 Price $(€)$ for a domestic priority letter up to 500 g (excluding VAT)


As in the chapters before ERGP analysed the dependencies between prices and labour cost. The correlation between prices and labour cost for a 500 g letter is less than for 20 g letter. The coefficient of determination is $28,5 \%(36,7 \%$ for a 20 g letter). Furthermore ERGP investigated possible dependencies between price and the following parameters:

- Flat in a building with ten or more dwellings
- Thinly-populated area
- Densely-populated area (density greater than 500 inhabitants / km2, population of at least 50.000 inhabitants)
- requirement $\mathrm{D}+1$
- number of letters per inhabitant
- share of letter revenue
- share of bulk mail

These parameters didn`t show significant relationship with prices.

ERGP (14) 23 - Report on benchmarking of us tariffs
Figure 3-8 Work minutes (services of the business economy) per letter price ( 500 g , priority)


Figure 3-9 Letter price (500g, priority) in part of the daily net earnings (\%o)


ERGP (14) 23 - Report on benchmarking of us tariffs

As mentioned in the chapter before, one way affordability can be measured is comparing nominal prices and net earnings.

Figure 3-9 indicates the letter prices ${ }^{50}$ expressed in part (per thousand) of the daily net earnings of a single person without children. This indicator varies from 7,0 \%o (more affordable) in Switzerland to 151,3 \% (less affordable) in Romania.

[^32]ERGP (14) 23 - Report on benchmarking of us tariffs

### 3.4 Single piece parcel 1 kg

To compare prices for parcels in the report, the following prices were taken, if there were different prices (for $1 \mathrm{~kg}, 2 \mathrm{~kg}$ and 10 kg ):

- Bulgaria: price for "other settlement" (additional there is a price for "same settlement")
- FYR Macedonia: price for "other city" (additional there is a price for "same city")
- Poland: prices for priority ( $\mathrm{D}+1$ ) (additional there is a price for $\mathrm{D}+3$ )
- Serbia: prices for Serbia has been left out as there is a price-function, which makes it difficult to find comparable prices (Price has two components : weight and insured value. $P$ - part of price for insured value $=1 \%$ of insured value)
- Switzerland: prices for priority ( $D+1$ ) (additional there is a price for $D+2$ )

As in the chapters before the following table and figure compares the prices for a domestic single piece parcel of 1 kg , converted into EUR

- at the current exchange rates (2012 average annual rates) and
- at the adjusted exchange rates, i.e. at the exchange rates adjusted for differences in general price level ${ }^{51}$.

[^33]ERGP (14) 23 - Report on benchmarking of us tariffs
Table 3-4 Price (€) for a domestic parcel up to 1 kg (excluding VAT)

| Country | at the current <br> exchange rate | at the adjusted <br> exchange rates |
| :--- | :---: | :---: |
| Austria | 4,45 | 4,05 |
| Belgium | 6,50 | 5,86 |
| Bulgaria | 1,15 | 2,55 |
| Croatia | 2,38 | 3,64 |
| Cyprus | 4,20 | 4,78 |
| Czech Republic | 2,81 | 3,99 |
| Finland | 7,60 | 6,29 |
| France | 0,84 | 6,70 |
| FYROM | 6,99 | 2,11 |
| Germany | 3,50 | 6,76 |
| Greece | 4,05 | 3,92 |
| Hungary | 5,38 | 7,02 |
| Iceland | 7,00 | 4,79 |
| Ireland | 9,10 | 6,45 |
| Italy | 2,99 | 9,06 |
| Latvia | 2,55 | 6,39 |
| Lithuania | 7,00 | 4,23 |
| Luxembourg | 4,02 | 5,82 |
| Malta | 6,95 | 5,39 |
| Netherlands | 19,25 | 6,32 |
| Norway | 2,62 | 12,33 |
| Poland | 4,50 | 4,54 |
| Portugal | 0,54 | 5,58 |
| Romania | 3,50 | 1,12 |
| Slovakia | 3,09 | 5,16 |
| Slovenia | 6,77 | 3,85 |
| Switzerland | 6,66 | 4,40 |
| United Kingdom | 5,61 | 5,87 |
| arithmetical mean | $\mathbf{4 , 4 8}$ | 5,65 |
| median |  | 5,49 |
|  |  |  |



ERGP (14) 23 - Report on benchmarking of us tariffs
Figure 3-10 Price ( $€$ ) for a domestic parcel up to $1 \mathbf{k g}$ (excluding VAT)


ERGP analysed the dependencies between prices and labour cost. The coefficient of determination is $54,1 \%$, which is higher than the coefficient of determination of a letter of 20 g. Furthermore ERGP investigated possible dependencies between price and the following parameters:

- Flat in a building with ten or more dwellings
- Thinly-populated area
- Densely-populated area (density greater than 500 inhabitants / km2, population of at least 50.000 inhabitants)
- Number of postal parcels, including insured and registered parcels, excluding express items
- Number of parcels per inhabitant
- Online purchase
- share of parcel revenue

These parameters didn`t show significant relationship with prices.

Figure 3-11 Work minutes (services of the business economy) per parcel price (1 kg)


Figure 3-12 Parcel price ( 1 kg ) in part of the daily net earnings (\%)



ERGP (14) 23 - Report on benchmarking of us tariffs
As mentioned in the chapters before, one way affordability can be measured is a comparison between nominal prices and net earnings. Figure 3-9 indicates the parcel prices ${ }^{52}$ expressed as percentage of the daily net earnings of a single person without children. This indicator varies from 4,19\% (more affordable) in Switzerland to $24,3 \%$ (less affordable) in Hungary.

[^34]
## ERGP (14) 23 - Report on benchmarking of us tariffs

### 3.5 Single piece parcel $\mathbf{2 k g}$

The next table and figures compare the prices for a domestic single piece parcel up to 2 kg in the same way as it was done for in the chapters before.

Table 3-5 Price (€) for a domestic parcel 2kg (excluding VAT)

| Country | at the current <br> exchange rate | at the adjusted <br> exchange rates |
| :--- | :---: | :---: |
| Austria | 4,45 | 4,05 |
| Belgium | 6,95 | 5,86 |
| Bulgaria | 1,33 | 2,95 |
| Croatia | 2,38 | 3,64 |
| Cyprus | 4,50 | 5,13 |
| Czech Republic | 2,81 | 3,99 |
| Denmark | 1,44 | 1,06 |
| Finland | 7,60 | 6,29 |
| France | 1,04 | 7,59 |
| FYROM | 6,99 | 2,61 |
| Germany | 4,10 | 6,76 |
| Greece | 4,05 | 4,59 |
| Hungary | 5,79 | 7,02 |
| Iceland | 8,25 | 5,16 |
| Ireland | 9,10 | 7,60 |
| Italy | 3,54 | 9,06 |
| Latvia | 2,70 | 7,56 |
| Lithuania | 7,00 | 4,47 |
| Luxembourg | 9,00 | 5,82 |
| Malta | 6,75 | 12,06 |
| Netherlands | 19,25 | 6,32 |
| Norway | 3,10 | 12,33 |
| Poland | 4,50 | 5,36 |
| Portugal | 0,82 | 5,58 |
| Romania | 2,80 | 1,69 |
| Slovakia | 3,09 | 4,13 |
| Slovenia | 7,30 | 3,85 |
| Spain | 17,92 | 8,00 |
| Sweden | 6,77 | 13,47 |
| Switzerland | 10,48 | 4,40 |
| United Kingdom | $\mathbf{6 , 1 1}$ | 9,25 |
| arithmetical mean | 5,15 | $\mathbf{6 , 2 5}$ |
| median |  | 5,70 |
|  |  |  |
|  |  |  |



ERGP (14) 23 - Report on benchmarking of us tariffs
Figure 3-13 Price $(€)$ for a domestic parcel 2 kg (excluding VAT)


ERGP analysed the dependencies between prices and labour cost. The coefficient of determination is $46,9 \%$, which is higher than the coefficient of determination of a letter of 20 g but less than the coefficient of determination of a parcel of 1 kg .

Furthermore ERGP investigated possible dependencies between price and the following parameters:

- Flat in a building with ten or more dwellings
- Thinly-populated area
- Densely-populated area (density greater than 500 inhabitants / km2, population of at least 50.000 inhabitants)
- Number of postal parcels, including insured and registered parcels, excluding express items
- Number of parcels per inhabitant
- Online purchase
- share of parcel revenue

These parameters didn`t show significant relationship with prices.

ERGP (14) 23 - Report on benchmarking of us tariffs
Figure 3-14 Work minutes (services of the business economy) per parcel price ( $\mathbf{2} \mathbf{~ k g}$ )


Figure 3-15 Parcel price ( 2 kg ) in part of the daily net earnings (\%)



ERGP (14) 23 - Report on benchmarking of us tariffs
As mentioned in the chapters before, one way affordability can be measured is comparing nominal prices and net earnings. Figure 3-15 indicates the parcel prices ${ }^{53}$ expressed as percentage of the daily net earnings of a single person without children. This indicator varies from 4,19 \% (more affordable) in Switzerland to 24,3 \% (less affordable) in Hungary.

[^35]
## ERGP (14) 23 - Report on benchmarking of us tariffs

### 3.6 Single piece parcel 10kg

The next table and figure compare the prices for a domestic single piece parcel up to 2 kg in the same way as it was done for in the chapters before.

Table 3-6 Price ( $€$ ) for a domestic parcel 10kg (excluding VAT)

| Country | at the current <br> exchange rate | at the adjusted <br> exchange rates |
| :--- | :---: | :---: |
| Austria | 8,30 | 7,55 |
| Belgium | 8,80 | 7,93 |
| Bulgaria | 2,25 | 4,99 |
| Croatia | 8,04 | 4,65 |
| Cyprus | 3,66 | 9,85 |
| Czech Republic | 10,20 | 5,20 |
| Finland | 17,40 | 8,44 |
| France | 1,82 | 15,54 |
| FYROM | 6,99 | 4,56 |
| Germany | 9,30 | 6,76 |
| Greece | 5,07 | 10,41 |
| Hungary | 9,10 | 8,79 |
| Iceland | 19,50 | 8,11 |
| Ireland | 9,10 | 17,96 |
| Italy | 5,73 | 9,06 |
| Latvia | 3,86 | 12,24 |
| Lithuania | 8,00 | 6,39 |
| Luxembourg | 9,00 | 6,65 |
| Malta | 6,95 | 12,06 |
| Netherlands | 32,72 | 6,32 |
| Norway | 4,89 | 20,96 |
| Poland | 8,25 | 8,45 |
| Portugal | 2,99 | 10,24 |
| Romania | 4,00 | 6,18 |
| Slovakia | 5,91 | 5,90 |
| Slovenia | 10,30 | 7,36 |
| Spain | 27,17 | 11,29 |
| Sweden | 9,03 | 20,42 |
| Switzerland | 25,80 | 5,87 |
| United Kingdom | $\mathbf{9 , 6 3}$ | 22,77 |
| arithmetical mean | $\mathbf{8 , 2 8}$ | $\mathbf{9 , 8 1}$ |
| median |  |  |
|  | 8,28 |  |



ERGP (14) 23 - Report on benchmarking of us tariffs
Figure 3-16 Price $(€)$ for a domestic parcel 10 kg (excluding VAT)


ERGP analysed the dependencies between prices and labour cost. The coefficient of determination is $31,7 \%$, which is higher than the coefficient of determination of a letter of 20 g but less than the coefficient of determination of a parcel of 1 and 2 kg .

Furthermore ERGP investigated possible dependencies between price and the following parameters:

- Flat in a building with ten or more dwellings
- Thinly-populated area
- Densely-populated area (density greater than 500 inhabitants / km2, population of at least 50.000 inhabitants)
- Number of postal parcels, including insured and registered parcels, excluding express items
- Number of parcels per inhabitant
- Online purchase
- share of parcel revenue

These parameters didn`t show significant relationship with prices.

ERGP (14) 23 - Report on benchmarking of us tariffs
Figure 3-17 Work minutes (services of the business economy) per parcel price ( 10 kg )


Figure 3-18 Parcel price ( 10 kg ) in part of the daily net earnings (\%)



ERGP (14) 23 - Report on benchmarking of us tariffs
As mentioned in the chapters before, one way affordability can be measured is comparing nominal prices and net earnings. Figure $3-18$ indicates the parcel prices ${ }^{54}$ expressed as percentage of the daily net earnings of a single person without children. This indicator varies from 5,59 \% (more affordable) in Switzerland to 33,7 \% (less affordable) in Latvia.

[^36]ERGP (14) 23 - Report on benchmarking of us tariffs

### 3.7 Bulk (Letter) Mail

### 3.7.1 Definition and differences across Europe

Bulk mail refers to large batches of (similar) mail items deposited to the postal operator in one instance at designated drop off points. (Note that the data collected and presented here refers to letter mail products only, and not to bulk parcels.) The scope of supplied bulk mail services differs between different countries quite extensively. In some countries, bulk mail services are only offered for one or a few different letter mail products, while in others there is a bulk mail service for most or all of the different letter mail products.

As seen in section 2.1.2 bulk letter mail services are part of the USO in 20 out of 30 countries in the study. Being part of USO could theoretically also affect the pricing of these USO bulk mail services in comparison to non-USO bulk mail services, due to the pricing requirements of Article 12 in the Postal Directive that apply to the former services. For example, for USO bulk mail services cost savings due to the more efficient processing of bulk mail items should be reflected in the pricing. The scope of this study is only on USO bulk letter mail products, and the analysis below is based on the available data presented in Table 3-1 for two main types of letter mail products.

Table 3-1 Available data on bulk letter mail

| Priority letter mail | Non-priority letter mail | Direct mail |
| :--- | :--- | :--- |
| Austria | Belgium | Austria (priority) |
| Belgium | Croatia | Belgium |
| Bulgaria | Cyprus | Germany |
| Cyprus | Greece | Norway |
| Germany | Italy | Slovakia |
| Hungary | FYROM | Sweden |
| Iceland | Norway | Republic of Serbia |
| Malta | Portugal |  |
| Norway | Republic of Serbia |  |
| Slovakia <br> Slovenia <br> Sw <br> Sweden | Romania <br> Slovakia <br> Slovenia |  |
|  | Spain |  |
|  | Sweden |  |
|  | Switzerland |  |

[^37]
### 3.7.2 Discounts for bulk mail

There are two types of discounts that apply to bulk letter mail that is offered in almost all countries and products of the study (as in Table 3-2) - discounts for volume and discounts for preparatory work (such as pre-sorting). In Hungary and Belgium revenue is used instead of volume (no data available from Malta). Other often occurring criteria for granting discounts are required pre-announcements of deposits and early (day-time) deposits.

The requirement of cost-oriented prices is implemented in different ways across Europe. In some countries each discount should be cost-oriented (Italy, Norway, Republic of Serbia, Spain, Sweden, Switzerland), in one country the discounts taken together should be costoriented (Bulgaria), and in three countries both these criteria should be fulfilled (Germany, Iceland, Slovakia).

Further, it is quite common procedure to require that discounts are non-discriminatory (Belgium, Bulgaria, Germany, Ireland, Iceland, Italy, FYROM, Portugal, Romania, Republic of Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland) and/or published [Belgium, Bulgaria, Germany (not applicable to direct mail), Greece, Hungary, Ireland, Iceland, Italy, FYROM, Norway, Portugal, Romania, Republic of Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland].

### 3.7.3 Adressed bulk mail price comparison

The comparison is limited to those countries where it has been possibly to find price data, and is presented for two main bulk letter mail products: priority ( $\mathrm{D}+1$ delivery) and nonpriority letters. The comparison is based on list prices and is calculated for letter weights of $20 \mathrm{~g}, 50 \mathrm{~g}$ and 100 g per item, respectively. However, one should bear in mind that different criteria for qualifying for the bulk mail service are applied across the countries (for example minimum amount of letters per shipment).

Table 3-2 List prices for bulk priority letter mail

|  | At current exchange rate |  |  | At adjusted exchange rate |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | (EUR) |  |  |  | (EUR) |  |  |
| Country | $\mathbf{2 0 g}$ | $\mathbf{5 0 g}$ | $\mathbf{1 0 0 g}$ | $\mathbf{2 0 g}$ | $\mathbf{5 0 g}$ | $\mathbf{1 0 0 g}$ |  |
| Austria | 0,62 | 0,90 | 1,45 | 0,56 | 0,82 | 1,32 |  |
| Belgium | 0,51 | 0,63 | 0,71 | 0,46 | 0,57 | 0,64 |  |
| Bulgaria | 0,16 | 0,16 | 0,18 | 0,36 | 0,36 | 0,40 |  |
| Cyprus | 0,29 | 0,30 | 0,40 | 0,33 | 0,34 | 0,46 |  |
| Hungary | 0,39 | 0,51 | 0,69 | 0,67 | 0,88 | 1,20 |  |
| Iceland | 0,67 | 0,67 | 1,03 | 0,59 | 0,59 | 0,91 |  |
| Malta | 0,24 | 0,24 | 0,36 | 0,32 | 0,32 | 0,48 |  |
| Slovakia | 0,65 | 0,65 | 0,80 | 0,96 | 0,96 | 1,18 |  |
| Sweden | 0,39 | 0,45 | 0,56 | 0,29 | 0,34 | 0,42 |  |



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In current prices, Bulgaria has the lowest prices for bulk priority letters. Taking price level disparities into account, Sweden, Malta and Bulgaria stand out as being the countries with the lowest prices (see further Figure 3-19).

Figure 3-19 List prices for bulk priority letters, adjusted exchange rates


Table 3-3 List prices for bulk non-priority letter mail

|  | At current exchange rate |  |  | At adjusted exchange rate |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
|  | (EUR) |  |  | $\mathbf{5 0 g})$ |  |  |
| Country | $\mathbf{2 0 g}$ | $\mathbf{5 0 g}$ | $\mathbf{1 0 0} \mathbf{g}$ | $\mathbf{2 0 g}$ | $\mathbf{5 0 g}$ | $\mathbf{1 0 0} \mathbf{g}$ |
| Croatia | 0,41 | 0,41 | 0,59 | 0,63 | 0,63 | 0,91 |
| Greece | 0,57 | 0,83 | 0,83 | 0,64 | 0,93 | 0,93 |
| Italy | 0,30 | 0,52 | 1,20 | 0,30 | 0,52 | 1,20 |
| FYROM | 0,26 | 0,52 | 0,55 | 0,65 | 1,29 | 1,38 |
| Portugal | 0,28 | 0,48 | $\mathrm{n} / \mathrm{a}$ | 0,35 | 0,60 | $\mathrm{n} / \mathrm{a}$ |
| Republic of Serbia | 0,16 | 0,25 | 0,25 | 0,36 | 0,55 | 0,55 |
| Romania | 0,23 | 0,36 | 0,45 | 0,47 | 0,75 | 0,94 |
| Slovakia | 0,45 | 0,45 | 0,60 | 0,66 | 0,66 | 0,88 |
| Sweden | 0,28 | 0,31 | 0,38 | 0,21 | 0,24 | 0,28 |
| Switzerland | 0,35 | 0,42 | 0,44 | 0,23 | 0,27 | 0,28 |

For non-priority bulk letters, Republic of Serbia has the lowest prices. Taking price level disparities into account, Switzerland and Sweden stand out as the two countries with the lowest price levels for non-priority bulk letters (see further Figure 3-20)


ERGP (14) 23 - Report on benchmarking of us tariffs
Figure 3-20 List prices for bulk non-priority letters, adjusted exchange rates


Now, it is important to remember that the prices considered so far are list prices. For a specific shipment, additional discounts may apply. To get a more general view of the final bulk letter prices (or price level) postal customers face across countries in Europe, we would need to have estimates of the average discounts in each country. Such figures are however not available. Instead, we have collected the minimum and maximum discount levels on bulk mail for each country in the sample (Tables 3-4 to 3-6). The discount levels are calculated as the percentage of the single piece price in each country.

Table 3-4 Minimum and maximum discounts from corresponding single piece price, on priority bulk mail letters

| Country | Min | Max |
| :--- | :---: | :---: |
| Austria | $0,5 \%$ | $7,5 \%$ |
| Belgium | $1,0 \%$ | $6,0 \%{ }^{57}$ |
| Bulgaria | $0,5 \%$ | $7,0 \%$ |
| Cyprus | $1,0 \%$ | $2,0 \%$ |
| Germany | $22,0 \%$ | $40,0 \%$ |
| Hungary | $1,0 \%$ | $7,0 \%$ |
| Iceland | $4,0 \%$ | $12,0 \%$ |
| Norway | $2,0 \%$ | $25,0 \%$ |
| Slovakia | $4,6 \%$ | n.a. |
| Slovenia | $3,0 \%$ | $12,0 \%$ |
| Sweden | $7,2 \%$ | $57,6 \%$ |

[^38]ERGP (14) 23 - Report on benchmarking of us tariffs

Table 3-5 Minimum and maximum discounts from corresponding single piece price, on non-priority bulk mail letters

| Country | Min | Max |
| :--- | :---: | :---: |
| Bulgaria | $0,5 \%$ | $7,0 \%$ |
| Croatia | $10-18 \%$ | $53-55 \%$ |
| Cyprus | $1,0 \%$ | $2,0 \%$ |
| Greece | $0,5 \%$ | $5,0 \%$ |
| Hungary | $1,0 \%$ | $7,0 \%$ |
| FYROM | $5,0 \%$ | $13,0 \%$ |
| Norway | $2,0 \%$ | $25,0 \%$ |
| Portugal $^{58}$ | $19,0 \%$ | $33,0 \%$ |
| Republic of Serbia | $5,0 \%$ | $20,0 \%$ |
| Romania | $1,0 \%$ | $49,0 \%$ |
| Slovakia | $6,7 \%$ | n.a. |
| Slovenia | $3,0 \%$ | $12,0 \%$ |
| Spain | $20-30 \%$ | $50-60 \%$ |
| Sweden | $14,5 \%$ | $61,8 \%$ |
| Switzerland | $8,9 \%$ | n.a. |

Table 3-6 Minimum and maximum discounts from corresponding single piece price, on bulk direct mail letters

| Country | Min | Max |
| :--- | :---: | :---: |
| Austria | $1,0 \%$ | $3,0 \%$ |
| Belgium | $1,0 \%$ | $8,0 \%{ }^{59}$ |
| Germany | $1,0 \%$ | $8,0 \%$ |
| Norway | $2,0 \%$ | $25,0 \%$ |
| Republic of Serbia | $5,0 \%$ | $20,0 \%$ |
| Slovakia | $7,5 \%$ | n.a. |
| Sweden | $14,4 \%$ | $62,8 \%$ |

[^39]
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## 5 Appendix

Countries

- Austria
- Belgium
- Bulgaria
- Croatia
- Cyprus
- Czech Republic
- Finland
- Former Yugoslav Republic of Macedonia (FYROM)
- France
- Germany
- Greece
- Hungary
- Iceland
- Ireland
- Italy
- Latvia
- Lithuania
- Luxembourg
- Malta
- Netherlands
- Norway
- Poland
- Portugal
- Romania
- Serbia
- Slovakia
- Slovenia
- Spain
- Sweden
- Switzerland
- United Kingdom

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Table 5-1 Exchange Rate at the 2012 average annual rates ${ }^{60}$

| Austria | 1,0000 |
| :--- | :--- |
| Belgium | 1,0000 |
| Bulgaria | 0,5115 |
| Croatia | 0,1321 |
| Cyprus | 1,0000 |
| Czech Republic | 0,0385 |
| Denmark | 0,1341 |
| Estonia | 1,0000 |
| Finland | 1,0000 |
| Former Yugoslav Republic of Macedonia | 0,0162 |
| France | 1,0000 |
| Germany | 1,0000 |
| Greece | 1,0000 |
| Hungary | 0,0034 |
| Iceland | 0,0062 |
| Ireland | 1,0000 |
| Italy | 1,0000 |
| Latvia | 1,4268 |
| Lithuania | 0,2899 |
| Luxembourg | 1,0000 |
| Malta | 1,0000 |
| Montenegro | 1,0000 |
| Netherlands | 1,0000 |
| Norway | 0,1283 |
| Poland | 0,2383 |
| Portugal | 1,0000 |
| Romania | 0,2266 |
| Serbia | 1,0089 |
| Slovakia | 1,0000 |
| Slovenia | 1,0000 |
| Spain | 0,1156 |
| Sweden | Switzerland |
| United Kingdom |  |

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Regression Analysis
Figure 5-1 Example Regression Analysis




[^0]:    ${ }^{1}$ Indicators for the year 2012 (without any further specification).
    ${ }^{2}$ Comparative price level indices show the extent of price level differences and tell which countries are more expensive to live in.

[^1]:    ${ }^{3}$ Directive 2008/06/EC

[^2]:    * Bulk defined to be included if one or more of Bulk Mail, Direct Mail, or Periodicals are included in the USO definition.

[^3]:    ${ }^{4}$ WIK Consult Report "Main Developments in the Postal Sector (2010-2013)" Table 2-16 ; Reviewed by Member States in ERGP Working Group

[^4]:    ${ }^{5}$ ERGP Report 2013 "Quality of Service and End User Satisfaction"
    ${ }^{6}$ Third Postal Directive, Article 3

[^5]:    ${ }^{7}$ Source: 2014 ERGP Survey

[^6]:    ${ }^{8}$ Source: 2014 ERGP Survey
    ${ }^{9} 6$ days for newspapers, 5 days for all other products

[^7]:    ${ }^{10}$ ERGP Report 2013 on the Quality of Service and End User Satisfaction
    ${ }^{11}$ WIK "Main Developments in the Postal Sector (2010-2013)" Chapter 2.2.5
    ${ }^{12}$ ERGP Report 2012
    ${ }^{13}$ European Commission IP/06/484 (10 Apr 2006)
    ${ }^{14}$ European Commission IP/08/141 (31 Jan 2008) and Case C-357/07 TNT Post UK Ltd v The Commissioners for HMRC [2009] ECR I-3025

[^8]:    ${ }^{15}$ ERGP Report on Net Cost of USO. Note, since this table was produced the VAT in Slovenia has now been changed to $22 \%$, and that of the Czech Republic to $21 \%$

[^9]:    ${ }^{16}$ Source: Eurostat 2012, Price level indices (EU $28=100$ ), Purchasing power parities (PPPs), Price level indices and real expenditures for ESA95 aggregates.

[^10]:    ${ }^{17}$ The quartiles of a data set are the three points that divide the ranked set of data values into four equal groups, each group comprising of a quarter of the data. The interquartile range equals the difference between the third point (or upper quartile) and the first point (or lower quartile). It provides a measure of the spread of the data (the statistical dispersion).
    ${ }^{18}$ The median is the data point which splits the ranked data set into two equal groups, each group comprising half of the data. The median is another name for the second quartile as described above.

[^11]:    ${ }^{19}$ Source: Eurostat 2012, Labour cost levels (Services of the business economy), Total labour costs (total). Calculations performed by ERGP. These labour rates are not for delivery of postal services, actual labour rates for delivery of postal services may be higher or lower in respective European countries.

[^12]:    ${ }^{20}$ Source: Eurostat 2012, Internet use and activities.

[^13]:    ${ }^{21}$ Source: Eurostat 2012, Annual net earnings (National currency). Calculations performed by ERGP.

[^14]:    ${ }^{22}$ Source: Eurostat 2012, Distribution of population by degree of urbanisation, dwelling type and income group (source: SILC).

[^15]:    ${ }^{23}$ Source: Eurostat 2012, Land cover overview; Population on 1 January by age and sex. Calculations performed by ERGP.

[^16]:    ${ }^{24}$ Refer to earlier footnote definition. The first (also called the lower) quartile splits off the lowest $25 \%$ of a data set from the highest $75 \%$.
    ${ }^{25}$ Refer to earlier definition. The median splits off the lower half of a data set from the higher half.

[^17]:    ${ }^{26}$ Source: 2014 ERGP Survey

[^18]:    ${ }^{27}$ Source: 2014 ERGP Survey

[^19]:    ${ }^{28}$ Source: 2014 ERGP Survey
    ${ }^{29}$ end-to-end competition

[^20]:    ${ }^{30}$ Confidence intervals are used to describe how reliable survey results are.

[^21]:    ${ }^{31}$ Source: 2014 ERGP Survey

[^22]:    ${ }^{32}$ Source: 2014 ERGP Survey

[^23]:    ${ }^{33}$ Prices (excluding VAT) for a domestic priority single piece letter-post item up to 20 g within the universal service, stamped.
    ${ }^{34} \mathrm{In}$ practice, however: up to $\mathbf{3 0} \mathbf{g}$ in Hungary, up to 50 g in Belgium, Bulgaria, Croatia, the Czech Republic, Finland, Luxembourg, Malta, Slovakia and Sweden, up to 100 g in Ireland, Switzerland and the United Kingdom, and up to 350 g in Poland.
    ${ }^{35}$ Cf. Eurostat 2012, Price level indices (EU $28=100$ ), Purchasing power parities (PPPs), Price level indices and real expenditures for ESA95 aggregates. Comparative price level indices show the extent of price level differences and tell which countries are more expensive to live in.

[^24]:    ${ }^{36}$ Source: 2014 ERGP Survey

[^25]:    ${ }^{37}$ The correlation coefficient indicates the degree to which the movements of two variables are associated. Its value may vary within the limits from -1 to +1 . -1 indicates perfect negative correlation and +1 indicates perfect positive correlation. Correlation does not imply causation.
    ${ }^{38}$ Prices (excluding VAT) for a domestic priority single piece letter-post item up to 20 g within the universal service, stamped.
    ${ }^{39}$ Linear regression is an approach for modelling the relationship between a dependent variable and one (simple linear regression) or more (multiple linear regression) explanatory variables.
    ${ }^{40}$ The coefficient of determination indicates how well data fit a statistical model.

[^26]:    ${ }^{41}$ Prices (excluding VAT) for a domestic priority single piece letter-post item 20 g within the universal service, stamped.

[^27]:    ${ }^{42}$ Price (excluding VAT) for a domestic priority single piece letter-post item 20 g within the universal service, ${ }_{43}$ stamped, converted into EUR at the exchange rates adjusted for differences in general price level.
    ${ }^{43} \mathrm{ld}$.
    ${ }^{44}$ Id.

[^28]:    ${ }^{45}$ Same price for letters up to $\mathbf{1 0 0} \mathbf{g}$ in Ireland, Switzerland and the United Kingdom, and up to $\mathbf{3 5 0} \mathbf{g}$ in Poland.
    ${ }^{46}$ Lithuania: price for 50 g letter up to 2 cm thickness (there are also price for 50 g large correspondence item (the sum of length, width, and thickness - not more than 900 mm , the greatest dimension may not exceed 600 mm )

[^29]:    ${ }^{47}$ Source: 2014 ERGP Survey

[^30]:    ${ }^{48}$ Prices (excluding VAT) for a domestic priority single piece letter-post item 50 g within the universal service, stamped.

[^31]:    ${ }^{49}$ Lithuania: price for 500 g letter up to 2 cm thickness (there are also price for 500 g large correspondence item (the sum of length, width, and thickness - not more than 900 mm , the greatest dimension may not exceed 600 mm )

[^32]:    ${ }^{50}$ Prices (excluding VAT) for a domestic priority single piece letter-post item 500 g within the universal service, stamped.

[^33]:    ${ }^{51}$ Cf. Eurostat 2012, Price level indices (EU $28=100$ ), Purchasing power parities (PPPs), Price level indices and real expenditures for ESA95 aggregates. Comparative price level indices show the extent of price level differences and tell which countries are more expensive to live in.

[^34]:    ${ }^{52}$ Prices (excluding VAT) for a domestic single piece parcel 1 kg within the universal service.

[^35]:    ${ }^{53}$ Prices (excluding VAT) for a domestic single piece parcel 2 kg within the universal service.

[^36]:    ${ }^{54}$ Prices (excluding VAT) for a domestic single piece parcel 10kg within the universal service.

[^37]:    ${ }^{55}$ In Slovenia bulk mail as a service does not exists. There are discounts on quantity for single piece mail. Slovenia does not have priority and non-priority letters. Standard letter (stamp A, machine sorted) and ordinary letter (stamp B) have both the same quality requirements.
    ${ }^{56}$ id

[^38]:    ${ }^{57}$ volume up to $6 \%$ and operational discounts up to $7 \%$

[^39]:    ${ }^{58}$ Minimum and maximum discounts for letters up to 20 grams
    ${ }^{59}$ discounts depends on kind of DM services and kind of operational discounts

[^40]:    ${ }^{60}$ Source: Eurostat 2012

