

# Methods for collecting consumer prices of services

Version 15 May 2006

Final report

Development of a statistical methodology for launching price surveys of services provided to consumers in Europe

*Report to the European Commission, Health & Consumer Protection Directorate-General, Directorate B – Consumer Affairs, B1 – Policy Analysis and Development; relations with consumer organisations; international relations*



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## 1. Executive summary

The aim of the present study was to elaborate a methodology to collect prices for services 'as paid for by the consumer'. Our working group aimed at providing the Commission with the most appropriate method of price data collection for selected services. 'Most appropriate' in two ways: efficient for data collection for the various services, as well as dedicated to the Commission's aims, *i.e.* a tool to collect robust and reliable data on absolute prices of services.

According to the terms of reference<sup>1</sup>, the two main tasks of this study were formulated as follows:

1. *"Determine which consumer services would be most relevant to study and monitor in the long term."*
2. *"Define a statistical methodology to collect prices as absolute values, on a regular and repeated basis."*

### 1.1. The most relevant services to study and monitor in the long term

On the basis of a list of potential cross-border services, included in the specifications, covering different areas (financial services, insurance, tourism, information society and services of general interest), an additional survey was conducted, on cross-border consumption of services in the European Union, amongst consumer organisations and Consumer Information Centres (ECC's). The output resulting from the first phase was a long list of 49 services - *i.e.* a first listing of services of potential interest for the project; a first draft of the selection criteria; and the selection process to facilitate the path to a short list of services provided to consumers as the specific object of study.

The most relevant selection criteria for the choice of services were decided on the basis of the following criteria:

- Importance (actual or potential) as 'share in household consumption',
- Homogeneity,
- Transparency or non-transparency of price/quality or no previous inclusion in PPP/CPI indices,

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<sup>1</sup> Service contract 17.010403/04/383235

- Potential cross-border tradability (the lack of actual (and current) tradability should not be an eliminative criterion for the short list of services, as this may change in the future),
- Appeal (i.e., interest to consumers), and
- The existing knowledge base (availability and usability of data).

After application of these criteria, 22 services, covering different areas, appear to be the most relevant services to study and monitor in the long term. The first short-list included: all inclusive holiday, cable tariffs, car insurance, car rental, dental services (inlay), distant learning, electricity, internet connection at home, internet savings account, laundry (dry cleaning), long distance transport between places, lottery (bookmaker's services), mobile phone calls, personal loan (initial and interest costs), removal contractor, rent for holiday accommodation, security services, sending a parcel to a specific place, taxi trip, transport between places, travel insurance (year round) and treatment by a dental hygienist.

As it was not realistic, for the purpose of this study, to work on the short-list of 22 services, a second short-list of 11 services was established incorporating a large diversity of types of service; diversity towards methodology and complexity with regards to price composition and structure. The final short-list resulted in the following: cable and satellite television, car insurance, car rental, dental hygiene (treatment), electricity, Internet connection at home, (Internet) current account, mobile phone calls (roaming included), personal loans, postal services (letters and parcels) and train transport.

## 1.2. Methods for collecting consumer prices of services

### **Main general findings**

#### *The existing situation*

For many services, data collection methods do not exist or are presently only under construction. The publication of price data collections carried out by statistical offices is anonymous and the figures delivered are aggregated. Aggregated data as produced by statistical offices hides service differentiation, segmentation, and range of choices. As this study is aimed at providing the European Commission with a methodology that will enable data collection for services 'as paid for by consumers', the use of aggregated data, averages, indices or adjusted figures is incompatible with this aim.

A general methodology which can be applied to all consumer services appears to be viable only as a strategy for research into specific methodologies for each service. This general methodology was designed and successfully tested in all short studies and pilots. The search for a general methodology for

services has resulted in the identification of a number of service characteristics that are directly relevant for the collection of price data on any service (section 4.3 of this report). This search for a general methodology was based on general theoretical studies, on the development of a specific method for each separate service and on the experiences in the execution phase.

*On the price data collection methodology*

- A top-down approach is too ambitious. In the top down approach, one would start with developing a general method(ology) of price data collection and, then, find out whether it is suited for all or for certain types of services. The methodology needs a bottom-up approach. The latter consists of beginning with the best suited method for each single service and, ex post, try to find the similarities in the methods. These are the so-called 'common elements' in our report.
- The procedures, methods and tools used by the statistical offices in the Member States to determine the consumer price index and purchasing power parities, cannot suffice for all aims included in (the contract of) this mission. The required method and tools have to cope with additional needs:
  - Detailed (disaggregated) absolute prices (in addition to statistics that are representative for groups of consumers or groups of services).
  - Need of complete market coverage (in addition to adequate samples of price data).
  - Appropriate for reporting names of brands and providers in a competing market (in addition to anonymous prices).
- The major problem in data collection is: knowing what prices need to be collected. This is the case with product prices, but it is even a greater problem with service prices.
- Price composition does not always reflect service composition.
- If the consumer characteristics have an impact on the price and/or the content of the service, this affects the data collection method.
- Several kinds of data play a role in the methodology. The most efficient and reliable way to collect data will vary by the kind of data and the kind of service.
- Interpretation problems can be triggered by language but also by lack of knowledge of the local situation. Interpretation issues arise at all levels.
- A very rough estimate of an EU wide price survey amounts to 600 to 1,200 hours per service. This is based on minimal 10 services, primary internet and telephone research, limited field- and travel costs.

## Main general recommendations

- Before starting a large scale price data collection, the purposes of the data set, require precise definition, including details of the analysis that will be carried out using the data
- There is no standard recipe for the organisation of price surveys. Price surveys may serve all kinds of purposes. The information looked for and the specific market situation for the service or sector determines the final methodology. Although some general starting points may be agreed upon, for every new research subject, the exact methodology, must be decided upon, depending on the aim of the research, the market situation and the complexity of the service itself, etc.
- If a common method for different services is desirable, then the aim of the price study has to be identical for each service.
- Specify precisely the service and the scope of the service to collect data for. Be precise, not general. (E.g. "tourism" or "transportation" is not the service. "A trip to Paris" is the service).
- Before conducting any major data collection it is necessary to do a market study, identifying suppliers and main components of the service.
- In many cases market analysis and price data collection go hand in hand. A feed-back system from the field to the researcher makes it possible to adjust along the way and may prevent failures and inefficiencies.
- The common denominator of the service in each EU countries needs to be identified).
- Break down the service into the basic service components.
- For price comparison over time it is essential to monitor and update the complete list of service components on a regular basis.
- If the usage pattern by consumers has an impact on the unit price of the service (total price divided by volume), usage profiles (not user profiles) are needed.
- User profiles, so-called reference customers, should represent model European consumers of the service. Profiles should be built dedicated to the study of the service.
- If qualitative differences across countries are significant, these should be corrected as far as possible.
- In setting the timing of the research, promotions, seasonality, peak and off-peak hours, etc. must be taken into account.
- Data collection through Internet proved to be very successful in markets where all providers were present. It can be the preferred method, additionally to be verified by a secondary method.
- As far as questionnaires to service providers are used to collect data, special measures are needed to stimulate a full response. Some adaptation of the professionally well known measures are advised,
- Before starting a large scale price data collection, make use of experts with knowledge of the service and of the differences of the service in Europe. An extensive knowledge of the local service markets

is indispensable.

- During the price data collection appropriate personnel with local knowledge of the service and experience in price data collection have to be on standby (Service Price Assessors).

### **General Recommendations on how to elaborate a methodology for a specific service**

Parallel methodologies have been developed for each of the eleven services. The added value of a tailor-made methodology is the degree of detail, providing specific solutions for specific problems. In order to test the adequacy and applicability of a methodology, actual data were collected for three of these services: car rental, (Internet) current accounts and mobile telephony (roaming) have served as the 'pilot' studies. The sample of eleven services used shows a wide variety of methodological complications.

Despite being a service-specific design process, there is a set of common elements encountered in the studies.

Given the variety of the services considered (ranging from services as diverse in nature as e.g. electricity supply and dental hygiene treatment), these elements are, by extension, relevant when studying/collecting prices for any consumer services.

The proposed general methodology consists of the following steps:

- Explore the content and nature of the service on the European market;
- Analyse and list the content components of the service;
- Establish an operational definition of the service that is feasible and relevant for EU price comparisons;
- Collect information on the EU market of the service;
- Analyse and list all relevant endogenous variables of the price of the service;
- Collect information on the price composition of the service;
- Standardise complex services;
- If necessary, standardise consumers into one or more "reference users". These are dedicated models of different consumers with well defined sets of characteristics and/or usage patterns.
- Design several dummy target tables. A dummy target table shows the different reference users and the price and service components for which prices need to be collected.

- Describe in detail which, when and how data should be collected to fill these tables:
  - a. Consider all possible data collection methods for the service: feasibility and cost-benefits analysis. More detailed research is needed if reference customers and/or sampling is needed.
  - b. Evaluate (reliability of) data sources.
  - c. In view of the existing service specifications and data sources: precisely delimitate service and price definition(s), and choose one or two price data collection methods. (Usually a second one is needed for validation purposes or as a complement to fill in missing data)
- Breakdown fieldwork as follows:
  - a. List all possible selling points
  - b. List all details of the services
  - c. Define operational sample and exact observation period
  - d. Try-out and feed-back
  - e. Make adjustments if necessary
  - f. Provide detailed instruction of price data collectors/mystery shoppers
  - g. Conduct fieldwork
  - h. Verification of data

## **Findings and recommendations related to the 11 specific services**

### *Cable and satellite TV*

- A few service providers - seldom more than 10 - are present per country. In the case of cable TV, these are usually regional monopolies. In the case of satellite TV, providers are often few large players with international presence across member states. It is thus feasible, to create an exhaustive list of service providers per country. The number of service providers may however increase in the future as a consequence of the convergence of platforms and internet or mobile phone operators providing TV connection. We expect markets to be highly concentrated. However, concentration is not only the result of a low number of service providers but of the presence of dominant players with large market shares what can vary per country.
- For TV providers, the quality and number of channels offered to the consumer varies notably across countries. The content of the programming itself may also vary according to local preferences.
- The complexity of the service is not high. However, due to the existence of packages that may differ

amongst countries, the price of the different service components often remains unknown.

- The price to be paid is known in advance (bill known beforehand) except for certain special features such as the per-view option.
- For the price monitoring exercise, full market coverage (including all TV providers) is feasible and advised. The sample should however be restricted to the most basic or common products as packages are often not comparable.
- A reference package plus a pre-determined list of price influencing variables such as contract length, payment method is essential.
- TV connection is always offered in specific programming packages. This is a caveat for service content comparison and in consequence, for price comparison as the price of the individual components is not known. Furthermore, as in the case of the number of service providers, complexity will increase in the future as a consequence of players offering TV, internet and telephony in bundles.
- Regarding data accessibility, tariffs are available on the internet. Besides, the limited number of players facilitates the task of getting the data directly from the providers.
- On the price collection method, a first scan on the Internet is advisable to get an overview on the different packages offered per provider and on which of these packages adjust best to the pre-defined reference packages. The data found on the Internet should be controlled for accuracy, completeness and timeliness with questionnaires sent to the TV operators.

#### *Car insurance*

- The most popular services are the ones that are simple and standardized.
- There are a large number of insurance companies. For the old 15 EU members only, there are 1,040 companies or an average of about 70 companies per country.
- Product variation is enormous due increased competition among insurance companies and intensified differentiation.
- Consumer profiles are needed as driver/owner criteria determine the price of the insurance.
- Criteria relating to the specific use of the vehicle and vehicle-related criteria determine prices. Some are primary and major, other secondary and of minor importance.
- Sending questionnaires to insurance companies is an effective way of data collection. An efficient approach is to ask the companies to fill out the questionnaires on the internet, on a protected website.

#### *Car rental*

- There are a few (4 or 5) global players that operate on a pan-European scale. However, each country

is populated within large number local companies whose prices are usually lower than those of the large companies and that are essential for the long term price monitoring activity. Because of the large number of national players, markets are not expected to be very concentrated.

- Available car models vary across countries and locations. The content of the compulsory basic insurance also differs reflecting differences in legislation and in the risk profile of local drivers.
- It is not difficult to separate the basic content of the services from additional components.
- The bill can be estimated in advance (e.g. it is possible to reserve and pay for the service via internet). However, this price is highly variable ex post depending on the kilometres driven, whether the car was delivered within the hours and at the location agreed, whether it is returned with a full tank, etc.
- The main international players should always be included in the sample list but adding the top ten national (or regional) players to the sample is indispensable.
- Consumer characteristics such as age may influence the price paid. Besides, some car models are not available to young drivers.
- The provision of car rental is usually made independently from other services (although you might find it tied within holiday packages or hotel stays).
- The prices for the large providers are easily found on the internet or directly from the rental companies that have public lists readily available. For the information on prices of the smaller players, direct contact with them is usually necessary to get complete and updated data.
- Internet is an excellent source for the international car rentals. For the smaller rental companies (telephone) surveys are needed either to complete the information provided in their websites or as the only source of data available.

*(Internet) Current account*

- Although the number of service providers maybe quite large in some countries (i.e. more than 20), largest players tend to dominate most of the market. Market concentration is quite high but varies across countries. In some countries such as Austria, Belgium or The Netherlands, the top 3 or 4 players have 80% of the market. In Poland, the 3 major banks have 50% and 60% of total retail deposits and retail credit respectively. In Italy, the 6 largest providers have 51% of the market while in Spain 15 main banking groups enjoy only 60% of the total market.<sup>2</sup>
- Packages offered and tariff structures change according to national preferences or habits and local business strategies by the relevant service providers.

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<sup>2</sup> See the EFMA site at [http://www.efma.com/retail\\_market.php4](http://www.efma.com/retail_market.php4)

- Due to the compounded nature of current account commissions, it is very difficult for consumers to compare prices across service providers, and even more across service providers in different countries.
- The bill can not be known in advance as it depends on the nature and total number of transactions performed by the customer during the year.
- It is advisable to include a number of service providers representative of a large part of the market. This numbers would vary per country (e.g. four or five players is enough in Austria or Belgium while the sample needs to be enlarged for Spain).
- Consumer profiles are relevant to have a proxy for the 'price as paid by consumers' and not mere data on tariffs and commissions.
- The use of packages where the basic current account service is tied to other products such as credit cards, credit lines, or even mortgages is widely extended.
- All the banks have a set of General Conditions for current accounts and related basic operations. National Central Banks impose the obligation of making all tariffs and commissions publicly available. These General Conditions are sometimes, but not always, available on the internet.
- Internet seems a good source to find information for the main price variables. The next step should be to approach banks and inquire about the prices of their basic services using a questionnaire among providers. The response rate would be increased by facilitating the responses if the researchers obtain the prices from the internet and have the respective service providers verify them.

#### *Dental hygiene treatment*

- It is in fact rather simple to isolate service, but because of differing regulation per country, product content differs.
- The number of providers is large. Prices are free in some countries while in other countries prices are determined by the government or insurance companies.
- The kind of treatment depends on the condition of the customers' teeth. A common price comparison should be based on time units, taking into account that we compare prices of treatments of persons with more or less the same profile.
- There are generally three ways of price determination: a fee per time unit, a fee per treatment and a fee per session. However, knowing the rates beforehand does not mean the end price is clear for the customer.
- For price data collection, existing dental hygiene associations can be contacted personally. Data collection can be straightforward by sending a questionnaire.
- Note that although there is a "price", the service is often covered or partly refunded by insurance.

### *Electricity*

- Although it is a rather simple service, when supply is separated from other activities the pricing is often complex.
- There are a large number of providers, but market development differs between countries because actual competition is only present in Great Britain and in the Nordic countries. The amount and character of suppliers differs per country.
- The number of service variants increases with the evolution of the liberalisation of the market and it is expected to rise in the future.
- It is useful to work with one or more user profiles. In some countries, social contracts and schemes are applied.
- Given a particular use pattern and volume used, tariff is a good predictor of the price paid by the consumer.
- The best way to collect electricity prices is by asking suppliers their tariffs, discounts, special prices, etc. This is the only method that guarantees that the prices will be correct. Because the number of service providers is limited, all suppliers can be included in the data collection.
- Taxes (VAT and environmental taxes) represent a great part of the price of electricity.

### *Internet connection at home*

- In many countries, a few 4/5 service providers have a combined share of more than 80% of the market. However, there are relatively many players in some countries such as in the UK and the Dutch market (10 or more). For these countries, it is more difficult to choose providers based on market shares since these market shares do not differ as sharply as in other countries. Market concentration differs across countries.
- From a consumer's perspective, the basic Internet connection services differentiate mainly on the speed of Internet access. Other sources of competition refer to the price of the modem - whether the modem is set up for free or the fee the consumer pays if this is not the case; the availability of free security measures such as anti-virus and anti-spam; and the number of free e-mail addresses and web space in Mbs. One main source of content differentiation across countries is expected to be related to the different development paces of the Internet technologies, which logically reflect on different price levels.
- Internet access enables consumers to browse the worldwide web, send and receive e-mails, as well as using several other digital services. Thus, the basic service can be easily defined. However, as in many other of our short list services studied, the existence of packages and temporary promotions makes price comparison difficult. Consumers can only choose from pre-defined packages and cannot buy the content features separately.

- The bill is known in advance at the time the subscription is made.
- For some countries, including the 4 or 5 major ISPs will be representative of 80% of the market. For other countries, the number of ISPs needed for such a market share can raise up to 10.
- Although the term "consumer profiles" has been used, these could actually be called "reference packages" as they refer more to package characteristics than to consumer characteristics. Actual consumer profiles or "reference consumer" tables may be available from Internet service providers (ISP's) – i.e. setting up an online questionnaire for ISP's and asking them to fill out the prices for several reference consumers.
- Internet access is becoming more and more linked with other telecommunication and media services (double and triple play) where it is offered in a package with television and telephone services. These three services often enter the household through the same access point/cable making it easy for the service providers to bundle them.
- Data on tariffs are available in all the ISPs' sites. Besides, the number of ISPs needed for the sample to be representative is limited and therefore, it is not too burdensome to contact them directly in order to get accurate and updated information.
- We estimate collecting prices via a questionnaire to ISPs as a more pragmatic best approach. The "reference consumer" tables have to be built before contacting the service providers for specific price information.

*Mobile phone calls (roaming included)*

- Prices per call depend on the package you buy, on the minute price, the length of the units (ticks), start fee, the length of the call. Monthly bill depends on what costs you are charged for on top of your bundle and on actual use.
- There are 60 mobile operators in the 15 EU countries and some 200 Mobile Virtual Network Operators.
- The mobile market is highly competitive and it is characterised by a very high level of promotional offers.
- The number of service variants is large.
- The service can be analysed on a call-by-call basis, or looking at the various packages that are on the market and selecting the most comparable ones.
- Service offers are often combined with the provision of free handsets.
- A price per standard volume of use may be calculated (as a proxy for ex ante bill predictability).
- A full sample coverage including all existing mobile operators does not seem necessary.
- Data are practically completely available through providers' websites. We suggest two methods of

data collection. The first one, sending a questionnaire to all mobile operators and mobile service providers in a pre-designed layout. The other, conducting desk research on the internet accompanied by ex post verification with the mobile operators.

- Data collection by local research institutions is strongly advised with a central coordinating body.

#### *Personal loan*

- The service is the same for all EU countries, simple and straightforward.
- The retail banking market in each of the countries seems to be dominated by a small number of large groups. There are also niche players specialised in loans.
- The number of service variants (differentiation) is small.
- It is suggested to use consumer profiles as price depends on the characteristics of consumer (although it is a minor variable).
- The price of a personal loan is the interest rate you pay expressed as an 'Annual Percentage Rate' (APR) which is the cost of borrowing on a standard basis. It is easy to compare one APR with another.
- Selection of a sample of service provider is advised. 100 % market coverage not realistic.
- For price collection, we suggest cooperating with local consumer organisations or B2B companies that collect data from (banking) companies.

#### *Postal service*

- This is a fairly universal straightforward service. There are however differences in quality between the countries in terms of speed and reliability.
- There are only few service providers in the consumer market. Consumers cannot find many relevant alternatives for the national postal service.
- There are differences in the tariff structure between the European countries but as soon as the object to be send fits into an official definition of the service of the provider, there is only one tariff applicable.
- Prices are not influenced by specific "behavioural" characteristics of a consumer.
- Price of a sending is known beforehand (ex ante bill predictability).
- The prices can be easily obtained from the postal providers (given the small number of players involved) and they are available on the websites of these providers as well.
- As a peculiarity, it is worth mentioning that approximately 6-10% of the mail sent is to be considered as consumers' mail. This consumer mail consists for a large part of greeting cards.

### *Train transport.*

- In most EU countries the passenger transport service is still dominated by a single firm (at least, at the national level although different regional operators for shorter distances may coexist). The few exceptions are UK, Austria and Sweden with several passenger transport operators. Market concentration tends to be very high as the liberalisation process has just started. An ex-incumbent usually dominates the national routes while regional monopolies are very usual in shorter distances.
- Unlike other services analysed in the report where it was possible to define a common (basic) content of the service, we encountered a major difficulty in the case of train transport as different routes make the content of the service very heterogeneous. However, the route is intrinsic to the service content itself, and therefore, non-separable.
- Serious methodological difficulties for comparison derive from the heterogeneity of different routes, topography, passenger frequency, etc.
- The bill is known in advance from the moment the ticket is purchased.
- The number of service providers to be included in the sample is driven by the number of routes chosen for the long term monitoring. With exception of a few countries (such as UK or Sweden), routes are still monopolies (national, regional or local monopolies).
- Consumer profiles are needed as consumer characteristics such as age, occupation or the time and frequency of travel are important determinants of the price of the service (e.g. for discount cards).
- The provision of the service is made independently from other services (although it might eventually be found tied within holiday packages).
- Railway operators offer an on-line ticket information service (it is usually possible to book and purchase international tickets on-line, but this may not be the case for short distances within a country). Researchers obtain fares as "to be paid" by the reference consumer (exception made for the possibility of an additional charge when the ticket is bought at the counter. Buying the ticket on Internet or even at a ticket vendor machine at the train station may be cheaper).
- Because of the fact that the routes and reference consumer characteristics are predefined according to consumer profiles, price consulting activity on the rail operators' websites is expected to be quick and efficient as well as reliable. Contacting the railway companies with a questionnaire would add little value to the data collection as the Internet search should in principle yield perfectly reliable price information. Most websites are designed in such a way that is not necessary for the researcher to interpret fare tables. Filling out the data for the route, time, day, etc., the applicable fare appears on the screen. Still interviewing the service providers could clarify existing discount schemes. Further, the number of interviewees is small (often a single provider by route) and this significantly facilitates the task.

## 2. Introduction

Although services account for 70% of GDP in the European Union, the internal market for services has still not been completed. Consumers are not benefiting fully from the opportunities provided by the internal market and, as a result, cannot play their part in the market, despite representing a considerable proportion of demand.

The report from the Commission to the Council and the European Parliament on the state of the internal market for services<sup>3</sup> shows that the recipients of services, including consumers, are in fact the main victims of the shortcomings of the internal market for services. Consumers have problems accessing cross-border services, lack the confidence to buy services in other Member States, have problems obtaining information and can be made to pay a high price for the services they need. Consumers are therefore put in the position of being unable to generate innovation, promote diversity or encourage the continual improvement of the services on offer, in terms of both quality and price.

Although it is now clear that the internal market has had a definite impact on the consumer goods market by encouraging price convergence (this has been measured), it would seem that the same does not apply to the prices of services. Indeed, due to the complexity of some of them, the prices of consumer services are very difficult to collect and compare, which poses a considerable obstacle to monitoring the effects of the internal market on the prices of such services.

The Commission therefore wishes to launch a major data-gathering operation so that it is better able to understand and compare the prices offered to consumers in Europe and the factors which cause price differences.

As stated in the contract specifications, the aim of this study is twofold:

- mainly *“to ensure that the European Commission ultimately obtains data on prices which are relevant and statistically reliable” and,*
- secondly, *“to provide consumers with additional information. This will enable them to make more informed choices”<sup>4</sup>*

Within the terms of reference the two main tasks were formulated as follows:

- *“determine which consumer services would be most relevant to study and monitor in the long term” and,*

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3 COM (2002) 441 final, 30.07.2002.

4 Article I.1.1 of the service contract 17.010403/04/383235

- *“define a statistical methodology.”*

Regarding the first task, services which consumers can obtain outside their country's borders had to be given priority. Services which consumers can already access in the internal market as well as those which are still difficult to access for various reasons (technical, legal reasons, etc.) but which could be easier to access if the internal market functioned more effectively, had to be identified. The inclusion of (at least) the following service categories was required:

- public interest services (telecommunications, transport, energy, etc.),
- car and house insurance,
- banking services,
- cable and satellite television,
- Internet access,
- car hire services,
- tourism.

Regarding the second task, the methodology should “be capable of being used to collect prices as absolute values, on a regular and repeated basis, initially from the 15 EU Member States and subsequently from all the Member States after enlargement”.

### 3. Consumer services that are relevant to study and monitor in the long term

#### 3.1 The selection process from the “long list” to the “short list”

The output resulting from the *Orientation Phase* in this study is a long list of forty-nine services - i.e. a first listing of services of potential interest for the project, and a first draft of the selection criteria and the selection process to facilitate the path to a short list of consumer services as the specific object of study. The *Inventory Phase* outlines the selection process that led from the long list of services towards a short list of eleven services. This chapter is a summary of this process.

- The next section contains an overview of the selection process.
- In the second section the adjusted criteria are presented that reflect our own ideas and input from the expert group meeting.
- In the third section the final selection of services is presented.

#### 3.2 Process from “long list” to “short list”

The selection process was started in October 2004 by asking input from the European and national consumer organisations and the European consumer centres (ECC)<sup>5</sup>. On that basis a long list of 49 services was drawn up. The expert group<sup>6</sup> meeting in February suggested adjusting of the selection criteria. The process of iteratively matching these adjusted criteria led to a list of 22 services including those specifically mentioned in the call for tender. These services are relevant to study and monitor in the long term.








For the purpose of this study, a shorter list of 11 services was finally agreed on in June 2005 with the European Commission.

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5 In a survey it was asked to mention any services that these organisations deemed “promising”.

6 The external expert group included the following attendants: Alison Hopkins, (UK National Consumer Council ), Aurel Kenessey de Kenese (Statistics Netherlands), Bart van Ark (Professor at the University of Groningen, expert in the field of measuring productivity and explaining differences therein across countries), Bert Balk (Statistics Netherlands and Professor at the Rotterdam School of Management, Erasmus University Rotterdam), Max Reuter (Austria, Austrian consumer organisation VKI, consulting group to DG Internal Market for financial services), Paulus Konijn (Eurostat).

Figure 1 Step by step towards the short list

Step		Content	Result
0 	Starting point	Building a table, starting from <ul style="list-style-type: none"> <li>• the contract,</li> <li>• the European Consumer Centres</li> <li>• the consumer organisations,</li> <li>• the generally accepted classifications.</li> </ul>	A long list of 49 services
1 	Quick scan	Using information and knowledge at hand.  The research focuses on finding specific and measurable services with actual and realistic data availability.	A quick scan of 49 services the selection criteria are applied to the 49 services.
2 	Review criteria	Reviewing the criteria of step 0 by using the input of the expert group meeting. E.g. the criterion "share in household consumption" should be skipped because it does not account for services that are developing or may be promising in the (near) future.	Adjusted list of criteria.
3 	First elimination	Building a table by means of the quick scan (step 1), using the adjusted list of criteria on a service by service basis. The input of the expert group with respect to content is also used.	A table of 22 services, relevant to study and monitor in the long term
4 	Explanation	Providing a short argumentation by service by each of the core group members.	The pros and cons derived from choosing a short list of the services to study now.
5 	Second elimination: the ultimate selection	Building a proposed short list using the suggestions from the key informants in the expert group meeting, the results from the questionnaire (ECCs and consumer organisations) and the expertise of our core group researchers. Again, the analysis is conducted service by service on the interim list.	A table of 8-10 services, presented as the proposed short list.  At the meeting with the European Commission in June 2005 agreement on the final list of 11 services.
6 	Study in detail	Study in depth of the services on the short list. For each service a best method will be suggested.	

The final short list is a balanced selection which takes into account:

- The diversity of types of service;
- The diversity towards methodology;
- The complexity with regards to price composition and structure.

Figure 2 From the long list to the short list



## The 'quick scan' process

All 49 services were assessed using information at hand. This quick scan has been performed using the template below.

Figure 3 Service selection criteria used in the 'quick scan'

Nr: COICOP code*: COICOP description:		
Long list of specific services as paid for by consumer:		
Selection Criteria		
<b>Share in household consumption (EU average)</b>	If known, share in HICP:	
	Otherwise, share in national CPIs:	
<b>Transparency of price</b>	Extent of price transparency on the market for consumers:	<p>Not transparent for several reasons:</p> <ol style="list-style-type: none"> <li>At the moment of transaction it is uncertain what the quality of the service is</li> <li>Payment for this service by the consumer depends on many (kinds of) variables: <ul style="list-style-type: none"> <li>worth of the connected object</li> <li>characteristics of consumers: e.g. (...)</li> <li>variants offered: e.g. (...)</li> <li>options to choose by consumer: e.g. (...)</li> <li>contract characteristics: e.g. e.g. right of complaints and arbitration</li> <li>way of payment</li> <li>season or time of day: e.g. (...)</li> <li>point in time of transaction: e.g. (...)</li> </ul> </li> <li>Number of possible choices is high and partly obscure</li> <li>Often combined offer of services and products</li> <li>High volume of temporary promotions</li> <li>Transparent in the detailed information on cost-components</li> </ol>
<b>Tradability of service</b>	<ul style="list-style-type: none"> <li>Technical possibility for production cross-border</li> <li>Regulation and legislative barriers</li> <li>Apparent or plausible need of consumers</li> </ul>	
<b>Homogeneity of service</b>	<ul style="list-style-type: none"> <li>In place, suited for geographical comparisons</li> <li>In time, suited for time series purposes</li> </ul>	<ul style="list-style-type: none"> <li>- Homogeneous / Quite homogenous / so-so / Quite heterogeneous / Heterogeneous, because: (...)</li> <li>- Homogeneous / Quite homogenous / so-so / Quite heterogeneous / Heterogeneous, because: (...)</li> </ul>
<b>B2C / B2B</b>	The ratio of the consumption by consumers to consumption by business	
<b>Input from consumers-interest</b>	<ul style="list-style-type: none"> <li>By EC informants.</li> <li>By Euroguichets</li> <li>By Consumer Organizations</li> </ul>	<ul style="list-style-type: none"> <li>Y / N</li> <li>Y / N</li> <li>Y / N</li> </ul>
<b>Contract</b>	Service was mentioned in contract or in kick-off-meeting	Y / N
<b>Knowledge base</b>	Availability of data, information, research and studies on prices of the service in EU countries	Ready knowledge at this moment of selection (...)
<b>Non-market economy</b>	Importance of grey/black circuit (C2C, informal economy, help in kind)	

\* COICOP code: Classification of Individual Consumption according to Purpose, classification tool for statistical purposes. E.g. COICOP code 07 refers to Transport, and COICOP code 08 refers to communication including the postal services and telephone and telefax services.

## Reviewing the selection criteria

An adjustment of the criteria was discussed with the external expert group before assessing whether a service should be selected for an “intermediate list” of services<sup>7</sup>. The final choice of the criteria was based on our experience with price data collection on services, from existing research literature and from the input of the expert group meeting.

With respect to the study’s ultimate goal, the core group and the external experts shared the opinion that the final short list should have the greatest possible diversity in types of service. As a result, the adjusted final set with the most relevant criteria is presented below.

### *“(Potentially) Important”*

A strict application of the “share in household consumption” criterion does not account for services that are developing or may be promising in the (near) future. E.g. an Internet savings account was not “important” at that moment, but it is likely to be important in the future. Additionally, there are promising services that have some importance, but are not yet measured by (all) statistical offices. So the criterion to a more subjective indicator was redefined: “Is the service or will the service be important?” – i.e. represent a (possible) large share in the household budget. This concept has been used as a first tentative discriminator.

### *Homogeneity*

Homogeneity across locations/countries is the criterion that determines whether data collection should go through in the first place. Lack of homogeneity hampers comparability and price comparisons become useless. Homogeneity over time is only needed when time series are to be used. Services that are not sufficiently homogeneous at first glance have been skipped during the quick scan.

The aim has been to end up with a list that would ideally include a good mix of different services. Certain service categories are highly regulated and regulatory conditions are determined by their nature (e.g. the voltage of electricity).

Other services, like mobile phone and package holidays lack homogeneity because the priced entities are in fact packages of service components.

Another kind of services lack homogeneity because of difference of legislation, that can – in principle -be modified. For example, mortgages are difficult to compare. Institutional and market structure conditions affect mortgages to a great extent, and these vary largely across Member States<sup>8</sup>. Although it would be

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7 This intermediate list consisted of 22 services to be further worked out towards a proposed short list.

8 The EC Commission has recently commissioned a study on cross-border mortgage market integration which is under elaboration.

theoretically interesting to compare the prices of mortgages offered by foreign banks in different jurisdictions, the actual number of observations is very limited - there are not many foreign players offering mortgages in another country. Also comparability is very problematic – even in case of a foreign service provider, the mortgage would be subject to domestic regulation and therefore, the service category may differ considerably from that provided by this foreign player in his own home country.

### *Transparency*

Services may be homogeneous on a regional basis, but their (price/product) composition may be so complex that a price comparison is hardly reliable. Very complex services with a non-transparent (price) composition have for that reason been left out of the proposed list. An example of such service is package holidays. Even services that at first glance seem to have a transparent price or to be of a homogeneous nature might be not so transparent or homogeneous after an in-depth evaluation.

The notion of “price as paid by the consumer” for services needs some remarks. As a service is often not well-delineated, the concept of the “price of a service” can be quite vague. Often, a price is known but the exact service(s) one gets in return is unclear. On the other hand a service may be exactly defined, but the exact price is unclear.

Both criteria - transparency and homogeneity - were deemed as secondary (i.e. after “important”).

### *Tradability*

The concept of tradability refers to two phenomena:

- a) Consumers doing cross-border shopping (either by the customer actually travelling across the border or by purchasing at a distance from a provider abroad),
- b) Service providers opening a selling point abroad.

Both modalities (relating to the distinction between direct and indirect effects of internal market integration<sup>9</sup>) are to be taken into account. It is desirable to include not only information on services that can be delivered to a consumer independently of his location but also prices of services for which the consumer (or the provider) may cross the border to acquire (or sell) it another Member State.

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<sup>9</sup> The ‘indirect effects’ of internal market refers to the process by which, given the authorities eliminate regulatory barriers and obstacles, market players ‘naturally’ tend to enter other national markets wherever they can have a competitive advantage or are able to just compete in equal basis with national market players and get a share of the market. Theoretically, as a consequence of increased competition, prices will converge downwards. The consumer is buying domestically while the service provider is conducting a cross-border activity.

### *Appeal*

Appeal refers to being of interest and of relevance on the long term for stakeholders, being policymakers and consumers. The input from European Consumer Centers and from the national consumer organisations was used again to assess the services on this point. The appeal for policymaking was based on intuition of the researchers and professional informants

### *Knowledge base*

Without pretending to have a complete overview, an assessment has been made of each service in the long list the usability and availability of data, information, research and studies on prices of that service in EU countries. Furthermore our own experience and that of other consumer organisations has served as a base.

### **Elimination process**

In several phases the list was shortened further. Thereby trying to achieve diversity in methods of price collection and in types of services was of importance.

## **3.3 The short list of services to be studied in depth**

As it was not realistic to study in detail each service of the final list for the purpose of this study focused on methodology, it was decided with the Commission to work more specifically on 11 representative services.

Figure 4 Short list of services

Services of public Interest	1. electricity 2. letters and parcels 3. mobile phone calls
Car and house insurance	4. car insurance
Banking services	5. personal loan 6. current account
Cable and satellite television	7. cable and satellite television
Internet access	8. Internet connection at home
Car rental services	9. car rental
Tourism	10. train transport between cities
Others	11. treatment by a dental hygienist

Each of these services was explored and studied in the summer of 2005. The findings are reported in Annex 3. Three of the services – **roaming** (within mobile telephony), **current accounts** and **car rental** - were chosen for a more in-depth study (presented in Annex 4).

## 4. Define a general methodology to collect prices of services

### 4.1 Common issues encountered

The main question is: to what extent is it possible to develop a general methodology to collect and compare prices of services to consumers in the EU? The conclusion of the conference of experts dedicated to this goal (Zandvoort 2005) was that such a methodology must be built bottom-up, in an intellectual “case-by-case” struggle. One by one, the best way to collect and compare prices for each service must be found. This difficulty was experienced in a series of studies on very different services. This sample of services shows a wide variety of methodological complications. In this chapter the common elements that were identified in these empirical studies are collected. These common elements form building blocks for the construction of the general methodology.

#### Common elements

The elements described in this section were encountered in the short list studies. Given the variety of the services considered (ranging from services as diverse in nature as e.g. electricity supply and dental hygiene treatment), these elements are relevant when studying/collecting prices for consumer services. This knowledge is often essential for the collection and comparison of prices for services “as paid for by the consumer”.

#### *Heterogeneity of service components*

The definition of content of the service – as a single priced item - has proven to be not sufficiently homogenous across different countries. The total and combination of the components of the content of the service often differ resulting in the lack of one (individually priced) identical service item that can be found all over Europe. Sometimes, the heterogeneity issue arises even between different service providers within the same country. Postal services are, within the list of eleven services short studies, the exception to the heterogeneity issue. These services have a long history of international collaboration on the standardization.

In this approach homogeneity is achieved by systematic breakdown of the service into its smallest components. This method is essentially different from the method that statistical offices use.

It is in accordance with the objectives of this study to favour homogeneity over representativity<sup>10</sup>. To this end, the components of all services were successfully unravelled and listed. The diversity found in

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<sup>10</sup> “A service is representative ‘if in country A, its price level is close to the average for all products within the basic heading. Usually the purchases of the product will account for a significant proportion of the total purchases of all products covered by the basic heading’ (Eurostat – OECD PPP Methodological Manual). Building a basket equally representative - equi-representativity - of consumption across countries is one of the most

Europe seems a recurring and dominant characteristic. This characteristic is a severe – although not unavoidable - burden for any comparison of prices as well as quality.

### *Price composition does not always reflect service composition*

In all cases considered in the short list studies, two different listings of components have been reported, a list with content elements and a list with price components. It appears that the price components of a service do not at always coincide with the content components of the services. Service (content) components may be priced as such or not, i.e. they may be part of the basic price of the service. Price components may be attached to the providing of certain service content component(s) or not, i.e. they may come at a charge that does add value to the intrinsic content of the service. For instance, in the case of current accounts, the provision of periodic statements of account by the financial institution to its clients is a service component; it is an extra to the service which adds a value for the consumer. These statements of account may be priced separately (e.g. at a cost of 'x' euro cents per statement) or not (if included in the price of the basic service). Then, the provision of statements of account is, in all cases, a service component while it may or not be a price component. The "maintenance charge" charged to current account holders is a price component that does, however, not qualify as part of the service content as it does not add a new component to the content of the service.

The overlap between both lists varies by service but is always incomplete. In other words, the price a consumer pays does depend on other things than the mere content of the service.

An international price comparison of a service that is based on the comparison of price components might look quite robust at first sight, but it can easily and unintentionally conceal differences of the service.

### *The common denominator*

After listing the content elements and the price components, an European common content denominator of the service has to be derived. By comparing and adopting the composition of the listings of the contents of the service and the price components, the researchers should establish the smallest sub-set(s) of service components that can be used for price comparisons in the EU. These basic components are conceivable as the prototype of the service or as a Europe-based standard service.

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arduous tasks when using the index approach. However, as this study is aiming to the collection of data on comparable services, it may well be that the tightly defined service in one country is hardly consumed in another. Still there is an attempt to find services that are relevant for (or representing) consumption patterns across the EU.

### *Definition of the service*

Single components and simple services appear to be a rare phenomenon. Researchers usually encountered more complex services with different contents across countries. The components cannot always be bought separately. Besides, collecting and adding prices of the components of the service does not necessarily provide the researcher with the prices “as paid by the consumer”.

The need to give a definition of the service that is suitable for international price comparisons require the use of ‘standardised use’ and ‘standardised user’ (see below).

### *Dominant role of the customer*

In the context of prices for services, the consumer’s role is very important. The price a consumer pays for a service may depend heavily on the consumer himself, on his personal characteristics like age, gender, domicile, driving experience, etc. Consumer characteristics may influence the price directly (e.g. discounts available to students or to senior citizens) or indirectly through the usage habits and preferences (e.g. youngsters are expected to travel by train first class less often than adults. However, in this case it is the class and not the age which influences the price paid).

The price to be paid by the consumer for many services cannot be simply calculated, unless precise values on these consumer parameters are assumed. As mentioned *supra*, the total of the separate price components of the service does not always equal the actual price paid. The use of dedicated consumer profiles – as is common practice in price surveys and studies carried-out by statistical offices, other public agencies and private consultants - has proven to be not only inevitable, but also very useful for the objective of this study, i.e. to develop a methodology to collect prices “as paid for by the consumer”. The profiles do differ for different services. (In general, they should seek to represent the most common consumption patterns seen in the market, covering a range in terms of consumption (volume) and quality.)

### *Dominant role of the usage pattern (quantity bought)*

Services like supplying electricity and mobile telephony both have high unit price components. In these services the number of units used by the customers can vary extremely. Every consumer (and every day/season) has his own unique usage pattern. This variety in use, in conjunction with a high unit price, inevitably leads to treating the number of units used as a parameter in any price comparison. It is common practice in these cases to compare the unit price. A second solution is to compare price paid for standardised amounts of consumption. Using standard consumption amounts is required in cases in which the final price paid for the service is the total of a fixed price component and a variable (quantity dependant) price component. Taking for example the case of post-paid mobile telephony, the “price as paid by the consumer” consists of the monthly subscription and the amount of minutes used. The price per unit would be the result of the total amount paid (including subscription fee) divided by

the number of minutes used. As the minutes of use increase, the price per minute decreases because the proportional part of the subscription tariff as part of the cost of each minute decreases.<sup>11</sup> Elements of usage patterns common to different services might be frequency of use, period/time of use, duration per use or quality chosen.

### *The reference customer*

Using dedicated consumer profiles by service, or reference customers, has the advantage that total service prices can be calculated. At the same time, disadvantages arise.

1. A specific reference customer may not be representative for the actual consumers and consumption patterns. The number of possibilities in the consumer-related price components can be so large that only a handful of real consumers fit the description set for the reference customer. Being practical and realistic is the solution here.

Of course, ideally, the reference customer would be a single hypothetical customer that can represent the majority of real customers. A single 'model customer', 'average customer' or 'median customer' is preferable. However, designing the average customer requires a separate and thorough study for each service. For instance, the determination of the average of the gender variable for the calculation of car insurance prices is not feasible and it leads to the need of having two reference customers (a male and a female reference customer). Determination of the model European car out of more than 10,000 different car types (for calculation of insurance prices) should be possible and a potential solution would be outdated in a couple of weeks. The solution here is to choose a limited number of reference consumers that cover most of the research population. Common elements of reference consumers might be age, profession or taste and preferences.

### *Primary and secondary components*

The methodology distinguishes between primary and secondary components. Obviously, the primary content elements and the primary price components need to be included in the definition of the service and are intrinsic to the service itself. For example, in the context of car rental, the primary component is the car model, as the car is intrinsic to the service. Secondary components could for example be child seats or snow chains, which are not necessary for a car rental service to be provided.

Secondary components cannot be always ignored. In the present comparisons they can appear as footnotes, or exemptions. However, in future comparisons these secondary components might reappear as primary elements because they have evolved into common practice. The same can

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<sup>11</sup> The number of minutes in the denominator increases at a higher rate than the total price paid in the numerator.

happen in reverse: primary components can become obsolete. New components can come into being. This is inherent to the changes in technology, the quality, the market or the consumer preferences.

Researchers will have to monitor the components of a service on a continuous or periodic basis and decide on the common denominator and the Europe-based standard service.

In price comparisons over time, a fast technical evolution of the components of a service can be a reason to not continue price collection (copy shops, launderettes, Internet cafés, telephone shops, etc.).

### *Market research and analysis are indispensable*

The studies show that specific aspects of the market were considered relevant for the design of the best way to collect prices. Namely, the most important market aspects seem to be:

- The number of suppliers: this influences the choice between data collection through a sample or from the whole population (market coverage).
- The level of competition: temporary and promotional prices are too volatile to be collected on a regular basis.
- Growing markets: the reference consumer, the targeted service providers and the data collection modality may vary.
- Innovative markets: content and quality of the service are unstable. The methodology stays valid but not the definition of the services.
- Market shares of the service providers: in order to be able to weigh and average the prices of the different suppliers this information must be collected
- Aspects of distribution, like
  - Is the service selectively distributed or is it generally available?
  - Level of affiliation in distribution; horizontal integration.
  - To what extent do regional differences exist?

### *Types of data*

Several types of data are relevant for the design of the dedicated method. The role that each type of data plays in the methodology is very different. The most efficient and reliable way to collect the data will vary for each service.

### *Price data*

- Raw data: values of the price components
- Information and knowledge on the price composition of a specific service.

### *Intermediate data*

- Definitions of standardised services,
- Definitions of consumer profiles (reference consumers,
- Calculated prices of (complex) services.

### *Market information*

- Data sets on consumption patterns from representative consumer surveys.
- Aggregated data on market shares, sales, etc. to identify targeted service providers.
- Lists of suppliers, selling locations.

### *Natural limitations in comparing services*

- Unmeasurable features of the service content: certain features such as the condition of the fleet of a car rental company or the reliability of the electricity supply are non-quantifiable characteristics of the service content. Quantitative indicators such as the average age of the car fleet or the number and duration of electricity blackouts in the year can be used instead.
- Services relate to local consumption patterns, consumer preferences and habits. Cultural factors, etc. can cause differences in the provision and consumption of a service across countries. This means that identical services can exist in one country, but not in another.
- Uneven degree of service development in different countries: the degree of technical, cultural and economic development influences the service content and/or the service price. (e.g., dental hygiene).
- Regulations that affect the quality of services do differ in the different countries.

### *General difficulties for price comparison*

Apart from the above-mentioned elements that are typical for services, there are some well-known difficulties for price data collection for prices of goods. They also apply to services. Common elements are:

- Promotions and special offers: The researcher has to decide what prices are to be collected: "normal" prices or promotional prices, or both. In a market with a high level of promotional activity, prices are very volatile. The timing of the data collection is crucial; some markets have special periods of heavy promotion. Promotional prices need a more frequent update. Also the content of

the service may temporarily change with promotional offers. So awareness of promotions is essential in comparison of prices.

- Packages and bundles contain several products for one price. There is not one single way to split the package price into several product prices.
- Seasonal/daily/hourly price variations have to be taken into consideration when deciding on the monitoring periodicity and momentum. On top of that, seasonality and time schedule of the pricing may vary across countries (e.g. peak hour tariffs for train transport may be from 5 pm to 7 pm in one country or a route and from 6 pm to 9 pm in another).

### *Price data collection methods*

There are several methods and sources for price data collection in fieldwork.

Some of these methods are by nature not suited for services. Scanner data will not be found in the service industry. Shop visits to collect prices from price tags are also not very logical in the service industry. There may be some exceptions (e.g. a haircut, or dry cleaning).

The most "successful" methods are listed below:

- Internet: periodical delivery of price lists,
- Internet: own research browsing on the websites of the service providers,
- Internet: purchase from existing price search engines,
- Panels (retailers, member panel, Internet panel),
- Shop visits,
- Catalogues and price lists,
- Mystery shopping,
- Collecting receipts, bills,
- Screened informants,
- Calling shops,
- Scanning advertisements,
- Mailbox (phone and Internet),
- Scanner data.

The method chosen in the end depends on the one hand on the service that data is being collecting for, and on the other hand on efficiency considerations. Making personal visits to outlets (sometimes under cover) is considered a good tool to check the accuracy of the other collection methods. The use of Internet research, for example, is more appropriate to find price data for Internet banking services

than for taxi services.

### Sampling

Instead of collecting all data, often a sample is adequate. Usually the choice for researching by a sample is by far more efficient than a population research<sup>12</sup>. If all prices need to be published to inform consumers or competitors-, a complete market-covering price data collection is needed.

However, a complete market-covering data collection is often not feasible in terms of costs and time. Of the services selected for this study there was only one service where complete market-covering data collection among providers could be achieved and was useful. Only in the case of roaming it appeared feasible to collect all prices of this standardised service in the EU. But even then data collection for all possible connections was impossible, and one had to decide on a sample from those connections, or define a typical one for which data were gathered.

As far as sampling is adequate or inevitable, the principal elements of sample designing are well known: getting the right sample frame, choice of probability or non-probability sampling, of sample size, and of validation procedure. As long as the purpose of the research is not completely clear, it is too early to design samples. Often, in a single research project the researcher has to perform a sampling procedure more than once.

Nevertheless, there are issues on the use of samples in the domain of price publication that warrant special attention:

- To publish *prices that are in fact paid* by the consumer all promotional and seasonal price changes should be taken into account. To avoid the need to repeat the data collection frequently, the promotional prices are by definition excluded from the market-covering data collection.
- To present the *highest and lowest price*, take all suppliers in the data collection, When looking at the market for roaming this is a feasible task because there is a limited number of suppliers. But would anyone be willing to pay for price data from a half million of hair-dressers?
- To publish names and addresses where it is possible to find *the lowest price*, all providers must be included in the sample.
- To calculate the *going price* for the service as a reference to the consumer, knowledge is needed of the nature and structure of the market, before being able to design a sample. Knowledge of potential regional differences in price, differing profit margins, etc.
- To make a *comparison of price levels* of distribution channels, all channels must be sufficiently represented in the sample.

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<sup>12</sup> E.g. to know the average price of the electricity for households the research of a random sample of 1000 bills is much more efficient than collecting all (50,000, 000 million) bills.

One of the conclusions that can be drawn from this is that the kind of price information to be published will influence the design of the sample.

### *Stimulating response to questionnaires*

The use of questionnaires to collect price data from service providers is not widespread. The greater part of the knowledge body is dedicated to questionnaires that are addressed to natural persons like consumers and clients.

As far as questionnaires are used for price data collection the proper respondents are not persons but legal bodies like business units, firms, companies.

For these unusual respondents the professionally used measures to stimulate response need some adaptation.

Below the most promising measures are listed in order of relevance:

- Use trusted persons, names, parties to recommend the research
- Accentuate the importance of the research
- The first aim is to get the name of a contact person (plus back-up name)
- Make it very easy for the respondent to represent his organisation
- Announce the questionnaire some weeks in advance
- Design the questionnaire design very carefully (clarity, layout)
- Plan a repeated approach
- Show willingness to pay the respondent for time lost

### *Taxes and subsidies*

The purpose of this study is to collect prices “as paid by the consumer” or market price<sup>13</sup>. Bills paid by consumers include VAT components (all consumer bills are VAT inclusive), other indirect taxes (such as the “green energy tax”) and subsidies or additional price components depending on characteristics of consumers (age, income, region etc). For example students pay lower entrance fees in museums; premiums for car insurance depend on claims in previous years.

When gathering data, the researcher must ensure that indirect taxes such as VAT and other price components are included in the price information provided. VAT is of special importance because in

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<sup>13</sup> The amount of money a willing buyer pays to acquire a good or service from a willing seller. The actual price for a transaction agreed on by the transactors. The net price inclusive of all discounts, surcharges and rebates applied to the transaction. From the seller's point of view the market price is the basic price; from the buyer's point of view the market price is the purchaser's price. Also referred to as “transaction price”.

many cases it is disclosed as a separate component of the price. Its inclusion is, however, fairly easy to check, especially in the case of services that can be purchased on line when the buyer has to authorise the credit card payment to the full amount.

### *Cost elements*

This study showed there is a general approach with which every price data collection may be started. The general component is more or less fixed in time and money for all services. The dedicated component, where the data collection activities take place, can only be planned and budgeted when the first common part is finished. Generally spoken, the dedicated component is different for different services. Besides, the dedicated component demands the largest expenditure in terms of time and money.

So, a cost breakdown can be presented in spending categories, but it is not possible to quantify the categories. Below the activities of future large scale data collecting by the EC are stated. A further step would be to forecast the amounts needed, but that would lack validity.

Activities of future large scale data collecting:

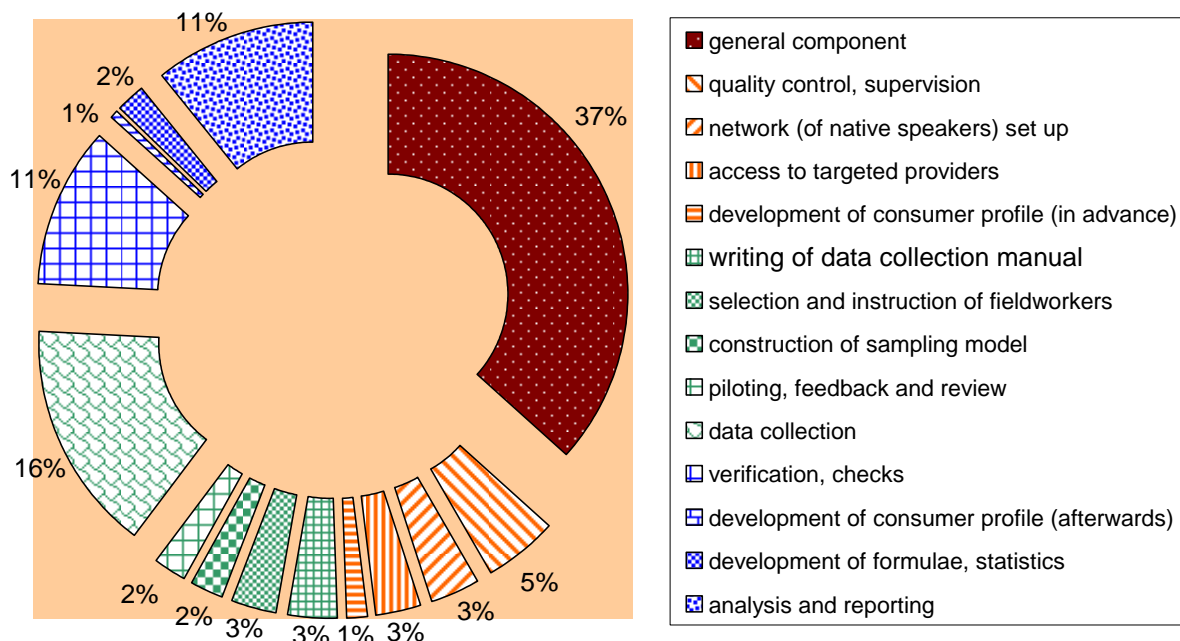
1. *General Component*
2. *Dedicated Components*
  - 2.1. *Organisational*
    - 2.1.1. quality control, supervision
    - 2.1.2. network (of native speakers) set up
    - 2.1.3. access to targeted providers
    - 2.1.4. development of consumer profile (in advance)
  - 2.2. *Data collection*
    - 2.2.1. writing of data collection manual
    - 2.2.2. selection and instruction of fieldworkers
    - 2.2.3. construction of sampling design
    - 2.2.4. piloting, feedback and review
    - 2.2.5. data collection
    - 2.2.6. verification, checks
  - 2.3. *Data processing*
    - 2.3.1. development of consumer profile (afterwards)
    - 2.3.2. development of formulae, statistics
    - 2.3.3. analysis and reporting

Collecting quotes for a major price data collection operation from market research bureaus is not feasible,

just because of the fact that the price for the research activities depends heavily on the tasks formulated in advance.

As second best, without any pretension of being prospective, averages can be given in retrospective. This has forecasting validity with a strong reservation that future researches will be extended versions of the researches as presented in Annex 3.

Figure 5 Average time spent on general, organisational, data collection and data processing activities



### Rules of statistical confidentiality

The rules of statistical confidentiality should be applied when samples are drawn out of a population-frame and when statistical tests are performed in analysing data. In this study the focus is not on these activities because the use of samples is not generally advised and because statistical tests are performed in a later phase of research.

To advance robustness of the data and confidentiality of all statistical aggregations based on it, it is advised to have verification activities build into all price data collection procedures. In general two independent data sources are needed.

## *Publication of prices*

### *Verifying prices*

It is always possible that incorrect prices are collected. Most common sources are special offers, outdated temporary offers, unequal prices on website and published price lists, administrative mistakes, unclear pricing.

Therefore, verification is an indispensable part of the process. Consumer organisations have institutionalised the verification of the price data. Whether verification is needed is decided after a quick assessment of the sources of the data. Published price lists generally do not need verification. The question that arises is whether Internet prices are published price lists. Here the researcher must be alert on the date the data were refreshed/updated the last time. Prices written down in shops do not always need to be verified. To avoid observation mistakes double or triple checking may be needed. Plausibility checks and statistical control for outliers and spread of data are always needed.

Price data received directly from service providers or chain stores are checked by mystery guests (samples).

If the names of chains of selling points are mentioned, the best option is to verify collected data with the headquarters<sup>14</sup> it is necessary to use a twofold method: one to collect the data and one to verify the data. In this study the data have been collected by Internet searches and –if possible- verified by an independent method. In the pilot on roaming this was accomplished fully: all providers in the market were asked to verify the data collected.

### *Market coverage*

No provider likes to be on the wrong side of the list. Smaller providers with low prices do not like to be neglected if the publications cover only providers with the largest market share. It depends on how the market is built up whether it is possible to collect data from all selling points and to present an exhaustive collection. A market with only five providers, operating nationwide will be more survivable than a market with maybe hundreds of individual companies, all of them having their own prices<sup>15</sup>.

### *Mentioning selling points or companies with many selling points*

Several aspects influence the decision whether to mention the name of a single selling point or the name of a 'chain' of selling points. Besides the nature of the service, these aspects are: the price discretion by selling point, the kind of price to publish and the number of observations the data collector is willing to make. A closer look at these aspects is stated below.

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14 Although there are other options for verification of data, given the time and effort consuming nature of those options, verifying with the headquarters has been chosen as the best option.

15 Recently all roaming tariffs were published on a website of the EC.

- Price discretion by selling point
  - Is the market built up from many independent entrepreneurs (e.g. painting business) or can chains of selling points be identified (e.g. travel agencies, hypermarkets)? In the first case the name of the independent company needs to be mentioned because prices will not be the same, in the last case, the chain's name can be used. But not before checked for the following:
    - Do different providers/selling points that operate under the same chain name have identical prices or do the prices differ between these providers? If the selling points operating under the same name use different prices, the separate selling points must be mentioned and treated as if they were all different companies.

- Kind of price to publish

The kind of price to publish in price-name combinations makes a difference. Most common are:

- An exact price,
- A price range,
- Price level between chains of providers.

Please note that any incorrectness will be signaled very quickly if an exact price or a highest price or a lowest price is published. The other kinds of prices result from a statistical analysis of a number of prices. This offers the opportunity to neglect outliers. In general the statistical treatment of data cannot be verified by external parties. Even if a chain is the source of (price) data, it will not often have the capacity to verify the statistics produced.

- Number of observations

The number of observations the data collector is willing to make does not only reduce the chance of mistakes but also determines in what way names can be mentioned (the name of individual selling points or names of chains of providers).

- If just the price of service S in one selling point P needs to be mentioned, one single observation is enough;
- If it is chosen to mention the price of service S for provider Y and provider Z, then the prices of service S for the two providers needs to be collected. In most cases the prices can be found on their websites. If the service is not provided through selling points, these are the only prices that can be collected. But if there are different selling points, it is preferable to visit these as well to check if they use different prices.
- If the selling points use identical prices, a few observations will do to find the correct price. If the prices are not identical or if there is doubt as to which price is the right price, further verification is the only way;

- If the selling points do not work with identical prices but use discretionary prices, mentioning the provider will be difficult because there is no price that applies to all selling points.
- To determine the price level of provider Y and provider Z, prices must be collected for the different services they offer, representing all their services. Most of these services need to be offered by Y and Z. In essence, this procedure is similar to comparing price levels of countries.

### *Usability and necessity of price data for policy purposes*

Huge amounts of raw factual data are the ingredients for thorough quantitative analyses. An important use can be discerned in the potential use of the price data that will be collected in the future. Price data can *contribute to policy making and policy assessment*.

This application of price data will meet the needs for analyses of ideas in the policy making process, like orientation, exploration, hypothesis testing and so on. Eventually publications will contain anonymous statistical information like:

- Average prices of services by service / by country / by capita / by customer;
- Price levels of services that serve the same function (cable versus satellite, mobile versus home-based telephony);
- Price trends: diverging or converging;
- Purchase power parities (PPP) or consumer price indexes (CPI);
- Price comparison (cross-border, city versus country) of identical services with different suppliers.

In this study, general usefulness of method was given preference over the efficiency of data collection. However, the more focused the data collection is, the more efficient the method can be. The choice for maximal discretion on the future purposes of the data use implies that enormous amounts of data must be collected. Many resources are needed to meet this high aspiration level.

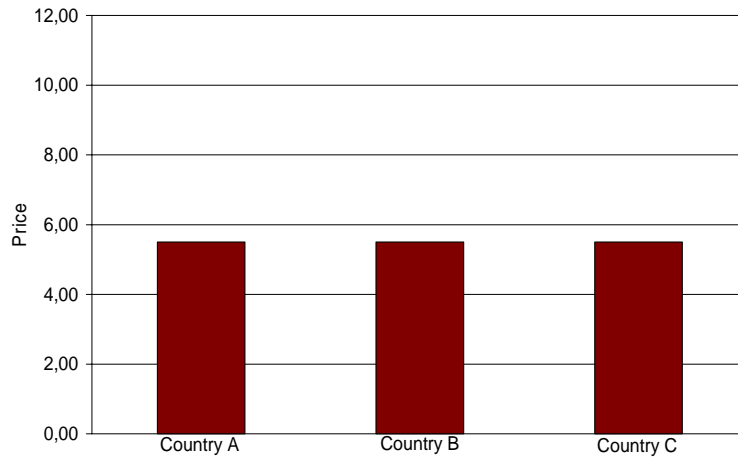
In the application of this method in short studies and pilots (see appendices 2 and 3) an operational target of the data collection had to be chosen by the researchers. This target is visible in the way in which results are presented. By service attractive target tables were designed, to present the data in a way that seemed meaningful.

It goes without saying that the same data could be presented in many other ways. No attempts were made to present the collected data exclusively in some aggregated form like averages, ranges or price levels.

Given that the primary purpose of the data is to facilitate policy analyses, even more effort and money can be saved if the purposes of these analyses are more specified. A short look on a very simplified data set can enlighten this point. Suppose a comparison of average prices of a specific service is wanted because

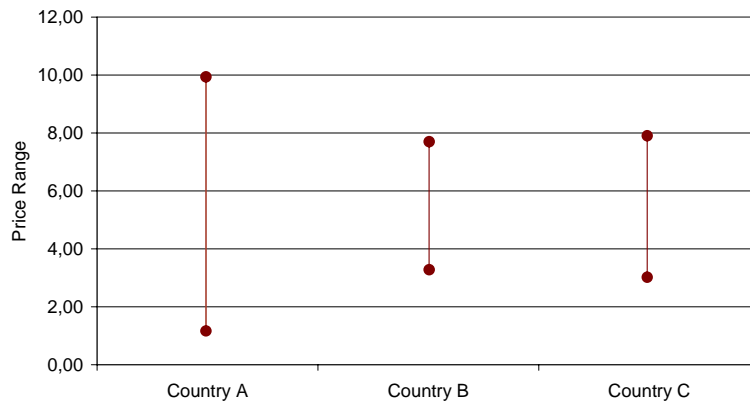
there is a suspicion that there is no price difference between three countries. The first graph shows that in three countries (A, B and C) the averages are the exactly the same.

Figure 6 Average price level of one service in 3 countries



If the policy maker is satisfied with this result, only a small random sample of all prices is needed. But imagine now a second policy maker, who asks for the price ranges. The second graph shows the analysis needed to define the highest and lowest prices. Now a sample of prices is not enough and all prices must be collected.

Figure 7 Range of lowest highest prices of one service in 3 countries



The policy maker can see that the situation in country A is very different from the other two countries: the

market is very different because the highest prices are higher than elsewhere and the lowest prices are lower than elsewhere. But now a third policy maker comes in and states that he knows that in country C competition is absent. A further analysis is needed. And much larger samples are needed because the distribution of the data must be studied. Graph 3 shows the result, a plot of all prices.

Figure 8 All 10 prices in Country A

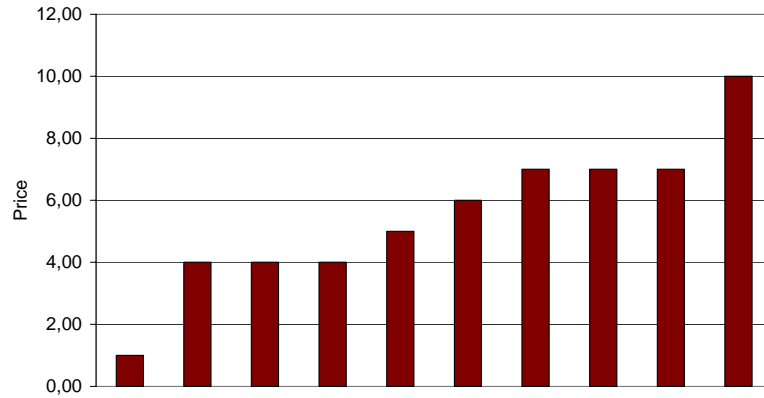


Figure 9 All 10 prices in Country B

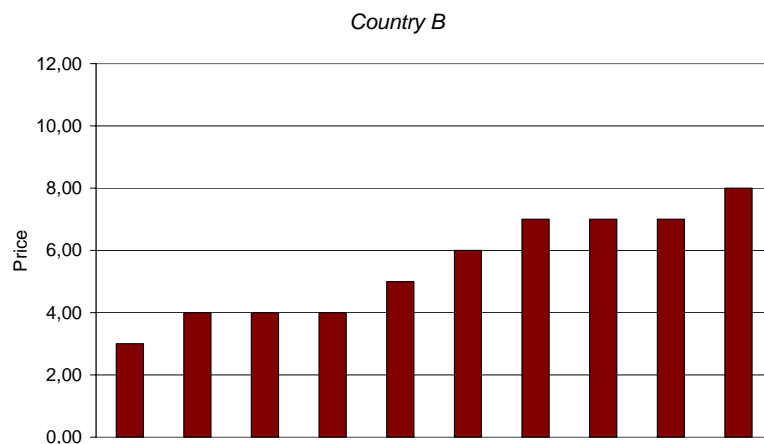
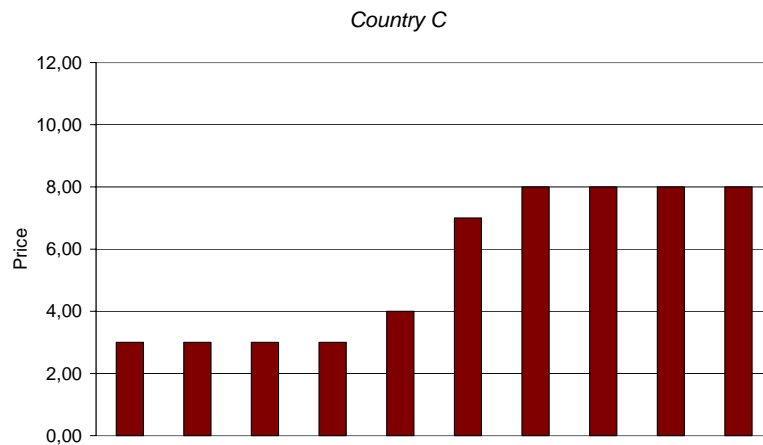


Figure 10 All 10 prices in Country C



Contrary to the expectations it is now clear that country A is not deviant, but country C is. In country C the service is sold both in a lower and in a higher segment. Now realise that these three policy analyses demand three different data sets.

### Common approach in the process

A general strategy for attacking any service was designed on the basis of experience with empirical price studies in the research group. This strategy was implemented by the researchers in short studies and pilot surveys on eleven different services. Their results are reported in the short studies and pilots in Annexes 3 and 4.

In all cases this strategy proved successful so it may be considered the general approach to be followed in future surveys on the prices of services in Europe.

The general approach can be summarised as a set of instructions that comes to:

- Explore the content and nature of the service on the European market;
- Analyse and list the content components of the service;
- Establish an operational definition of the service that is feasible and relevant for EU price comparisons;
- Collect information on the EU market of the service;

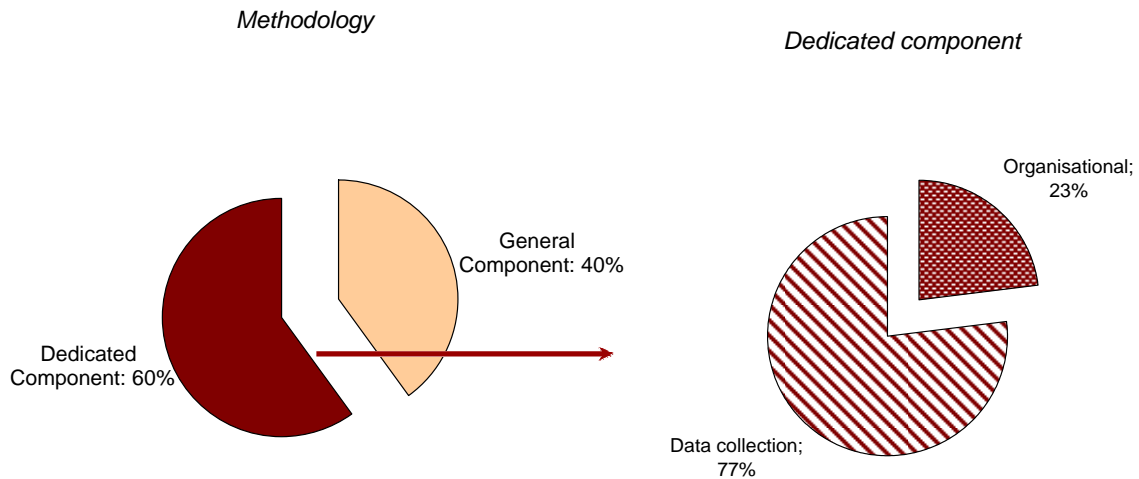
- Analyse and list all relevant endogenous variables of the price of the service;
- Collect information on the price composition of the service;
- Standardise complex services;
- If necessary, standardise consumers into one or more “reference users”. These are dedicated models of different consumers with well defined set of characteristics and/or usage pattern.
- Design several dummy target tables. (see Glossary)
- Describe in detail which, when and how data are to be collected to fill these tables;
  - a. Consideration of all possible data collection methods for the service: feasibility and cost-benefits analysis. Dedicated “sub-research” is needed if reference customers and/or sampling is needed.
  - b. Evaluation of (reliability of) data sources.
  - c. In view of the existing service specifications and data sources: precise delimitation of service and price definition(s), and choice of one or two (for validation or complementary) price data collection methods.
- Breakdown fieldwork as follows:
  - a. List all possible selling points,
  - b. List all details of the services,
  - c. Define operational sample and exact observation period,
  - d. Try-out and feed-back,
  - e. Adjustments if necessary,
  - f. Detailed instruction of price data collectors/mystery shoppers,
  - g. Fieldwork,
  - h. Verification of data.

## 4.2 Methodology for collecting the prices of services: the practical approach

It is of importance for the European Commission to know how much of the methodology is of general application for price data collection for consumer services and how much of it needs be developed on an *ad hoc* basis. After having worked with eleven – very diverse - consumer services, a general rough estimate of the shares of both parts in the general as well as in the dedicated aspects is presented below.

The dedicated component has been estimated to represent 60% of the methodology in terms of time and costs. Note that these are the estimates for the first-time application of the methodology. The follow-up process will of course differ from these estimations.

Figure 11 Components of the methodology



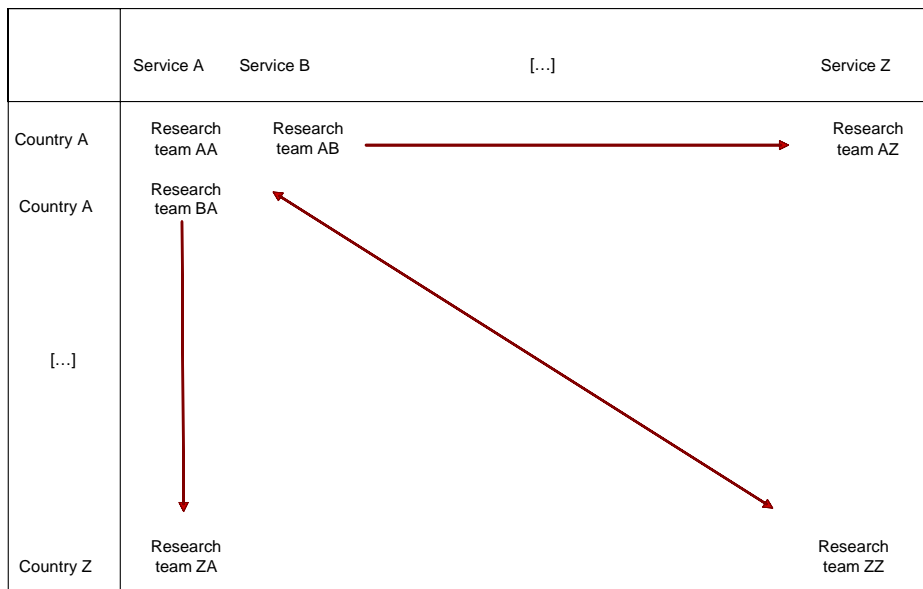
The general component – estimated at 250 hours per service - consists of:

- Setting-up of an ad hoc expert group, in which knowledge of the local and or European market and knowledge of data collection methods in general are present.
- Conducting a rough market survey.
- A “short list study”. (See Annex 3).
- Specification of the service that data needs to be collected for; do not be general, be precise. E.g. “tourism” or “transportation” are broad categories and not the service a consumer is buying. “A city break” or “transport between two foreign cities” is the service.
- Deciding on the purpose of the data set in advance. Before starting up a large scale price data collection it must be known which kind of analysis will be performed on them.
- Deciding on centralised or decentralised local data collection.
- Deciding whether consumer profiles have to be defined before data collection is started, as is the case with car insurance. Or whether consumer profiles are needed afterwards to be able to make comprehensive comparisons.

The organisational part of the dedicated component consists of:

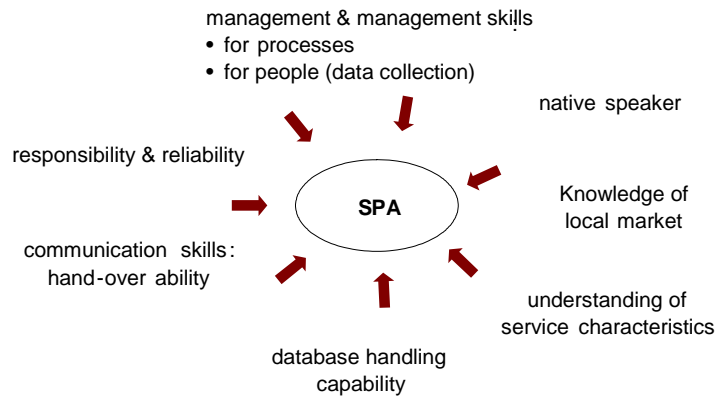
- Put in place a quality control layer managing and supervising the price data collection by individual researchers by service and by country. Future Europe-wide surveys need staff with knowledge of all customs habits and languages. Based on our experience, the knowledge of languages is essential. Additionally, often not only industry knowledge, but also an understanding of the local market for the industry is needed to accurately account for the nuances of a certain service in a certain country.
- Set up a network of native speakers. Language is an important barrier, both in the preliminary analysis of the market, in the data collection stage and in the interpretation stage. But furthermore, mere knowledge of the language is not enough. A thorough knowledge of historical circumstances and local peculiarities is crucial. Only local researchers can feel and understand the idiosyncrasy of the market. Experience shows that native speakers outperform non-native speakers in the research activity.
- The European Consumer Centres (ECC's) can contribute to the research in the pre data-gathering operations. Persons with native knowledge of local culture, circumstances and habits are essential. During and after the data gathering operations this knowledge is practical as 'standby'. The ECC's are not properly equipped to manage and/or execute a large scale fieldwork operation. When they are involved in a (centrally managed) fieldwork operation, safeguards are needed for a commitment, in timing, in quality, etc. of the operation.

Figure 12 Network of researchers



- Select the profile of the “Service Price Assessors” (SPAs). The SPAs will manage and monitor the activity of the data collectors. Data collectors need only an understandable and univocal set of instructions.

Figure 13 The Service Price Assessors



- Ensure access to targeted service providers. The use of publicly available information (such as internet or price lists) is a primary and exploratory research tool. However, for accuracy and completeness of the price data, interviewing the providers is often indispensable. Besides, in some cases providers can also (and are willing to) provide information on the relevant consumer profiles, which can provide a better insight into the functioning of the market and significantly facilitate the research task.
- Keep updated data collection manual to enable hand-over ability.
- Organise piloting, feedback and review.

The data collection in the dedicated component consists of:

- Conduct preliminary market research for an insight into the structure of the market and the content of the service.
- Use consumer profiles in a practical way. Profiles need not be representative for the average European consumer – whose existence can also be questioned as it would be an artificial construction given the different consumption patterns across countries. The profiles used are set to include the service components defined as part of the basic content of the service.
- Develop an aggregation scheme (formulae, statistics) to enable practical interpretation of the prices

gathered.

- Decide on the degree of sampling in cases where full market coverage is not realistic.
- Decide on the frequency of data collection. SAP should also keep in mind that the data collection methodology itself might need to be periodically updated.

### 4.3 Methodology for collecting the prices of services: revisiting the theoretical approach

In an early stage, the search for a general methodology aimed at a universal description of types of services<sup>16</sup>. The aspiration was to establish, for each type, an optimal method for collecting prices. However in our expert meeting in the winter of 2005, this theoretical (top down) approach was put aside. Instead, a bottom-up approach was chosen and a series of practical studies were conducted. Although this change of approach has proven to be justified, the general theoretical approach is addressed in this section.

In this paragraph a number of dimensions<sup>17</sup> (characteristics) of services that have consequences for the price-data collection-method are identified. They are used to sort out the manifold services that were initially taken into consideration in this study.

*Textbox 1: Dimensions in a typology of services*

#### **Dimensions in a typology of services**

The sorting out of services must result into subgroups with more or less the same characteristics with respect to the way prices should be collected. To get there, the essential distinctions must be identified and eventually a typology can be constructed.

Having finalized the practical studies, we look back at the originally designed typology and its dimensions. The dimensions of the original typology turned out to be very useful for structuring the price data collection method.

Here we present the revised dimensions. Some dimensions are of major importance, and others appeared to be secondary. Some new dimensions can be discerned. For every dimension the general consequences for price-data collection are printed bold.

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<sup>16</sup> A typology can be constructed from two or even more viewpoints, so the result is a 'property space', where every point of view is a dimension and every cell is a kind of services. This is a mind mapping exercise. Each cell in the property space can be described and labelled but in a typology it is not necessary to make the subdivision complete and consistent. This is a difference with a classification. In a typology some cells may overlap and some cells may be neglected, if this is necessary and helpful.

<sup>17</sup> See work documents of the conference in February 2005.

Dimension: levels of complexity of service

Simple (highly) standardised services

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Complex service, high degree of product differentiation

The more simple or standardized a service is, the easier price-components can be collected. The all inclusive holiday is a standardized service, even for various accommodations. All components may be chosen the same for the purpose of comparing the offers of service providers. There is however one major component, the flight itinerary, that differs with the place the consumer is departing from. Price-components of complex services like car insurance can be collected but **the amount of data** is huge and often excessive.

Although roaming (considered on a call by call basis) turned out to have a complex price composition, the data collection could be completed thanks to the small number of providers.

Dimension: connections to other goods or services

Independent services

Tied services

Combined service/service or service/product transactions. Either bundled or package. N.B. Sometimes the services connected to price components in the bill of the package can also be bought independent and thus fall also into another group.

Independent services, services that can act by themselves, are more easy to compare and thus price data collection is more feasible. Cable service is by nature a combined service package. The consumer does not hire a cable connection for the sake of being connected. The services that come with the cable connection that are worthy. Nowadays the service is being more and more offered in combination with new services like internet and telephone services. And thus, to be able to collect prices of combined services like cable services, one has to **limit the scope of the service**.

Dimension: uniqueness of service

Custom made service (e.g. tax consultancy and dentists service) and unique services, also in this dimension most of the Joint services.

Industrial services: mass made identical services like many "information services" like news papers and software and simple insurance's

Custom made services were left out of the practical studies. These are services where the content is determined in interaction between customer and service provider. The price the consumer has to pay is influenced by that interaction.

A taxi trip could be considered more or less custom made, but in that service we have a known per unit tariff and a clear relation between tariff and price of the trip. Dental hygienic services appeared to be custom made in most countries. The precise content of this services and the price paid in the end depends on the characteristics of the consumer. The bill depends on the treatment that the dentist suggests to the customer. In these cases a **referent customer is needed** to standardize the content of the service in relation to the customer.

Dimension: bill predictability (ex ante)

The bill is known beforehand (given a specific service definition): (insurance, hair cut)

The bill is not known beforehand because of unpredictable price components, units (taxi trip)

For some services we only know the unit tariffs and the way the bill is calculated from that tariff. Only if we can define a standard kind of trip (for a taxi ride) that is the same in all countries, the costs of the trips may be calculated. The only way out is to **treat tariff as a proxy for price** paid by the consumer.

Dimension: negotiability of price components

One or more price components are negotiable  
Bill and price components are not negotiable

Negotiability of the price does correlate with (often local) habits and customs. It is less manifest than promotional prices but it has the same effect on the **validity of stated prices**. You cannot be sure about the stated price until a transaction is realised. In the case of a package holiday or rent for a holiday accommodation, the consumer may negotiate on the components of the package, and leaving some parts out or having them replaced.

Dimension: continuousness of service

Incidental services  
Continue services with initial, periodical and other price components.

Some services are by nature continuous. This is the case for all services where there is a subscription with a periodical payment, cable connection, gas and electricity, mobile telephony (but not in the prepaid case), etc. In most instances the price is independent of use and use is often billed separately. In this case a price comparison can be made on the content of the service, irrespective of use. This was done in the case of mobile telephony.

Package holiday is considered an incidental service. There are no initial costs, periodical costs and costs that depend on use (apart from a possible car in the package). Public transport can be found on both ends of this dimension: the one-way ticket for an incidental trip and the same service within the flat fee ticket per month.

The **time schedule for collecting data** for continuous services has to be robust for the fact that some price components are valid for a year and other price components change by the day.

Dimension: levels of fluctuation of price components

Services with frequently changing prices (mobile telephony)  
---  
Services with seldom changing prices (dental treatment)

This dimension is of importance for the sampling design. If prices depend on time of year, on time of day, the timing of the data collection is essential. One would not compare the off season prices in one country with high seasons' prices in another. The holiday market is known for seasonal price fluctuations, but in the telecom market we also find prices that depend on the time of the day. This may also be the case for taxi trips, for electricity supply and for train transport.

In a volatile market, the **time sampling** deserves much attention.

Dimension: accessibility of price data

Services with easy accessible, published prices (car insurance, mobile telephony)  
---  
Services with no published prices at all (taxi trips)

Access to prices through the internet or published price lists make quick preparatory studies possible. A major finding of the practical data collection work was that internet access to prices has reached a sufficient high level. **Internet appeared to be a good primary source** for data collection on most services. For unpublished prices or prices with low credibility on internet, more traditional methods of data collection must be used as primary source. The way the business is organized plays an important role in access to data.

These dimensions have theoretical and practical significance. For theoretical purposes, they can eventually be building blocks in a general typology. In the mean time, they are practical in the setup of a price collection because they channel the thinking in the right directions.

Usually services can be analysed along most dimensions. Future experience with service-price data collection will show whether the dimensions above need additions.

## 5. Application to eleven services

The breakdown of time in the accompanying table is based on the work done in the short list studies and pilots. In most of the elements a wide range of variables must be taken into account. The work was carried out on a centralised basis and with short lead times. No mystery shopping was done and no decentralised data collection was conducted. In a decentralised approach, with the experiences derived from the questionnaire to ECCs, support time will at least double. The same holds for the time needed to instruct the data collectors. Also verification and other checks will take more effort and time.

It is concluded that collecting quotes for a major price data collection operation from market research bureaus is not feasible in this stadium. The cost of the future fieldwork depends heavily on detailed premises for the research formulated in advance. Estimation of costs in this paragraph is based on the experience with the short studies and their implicit premises.

Given the approach taken in the studies for eleven services, the table below may be drawn up. The table presented serves as a starting point, when considering starting a data collection operation in one of the service sectors. In this table the time spent in these studies was extrapolated towards a study as if it had taken place in the 25 EU countries.

As may be seen from the table, for some studies certain elements are not included because they are not needed. For other studies, certain elements take considerably more time. An example of two extremes may bring some light into this issue:

- For car insurance data from 25 countries will have to be collected. Six profiles have been developed in advance. It has been estimated that for market coverage of around 60%, approaching (on average) 5 companies in each country would be appropriate. This means a total of 750 offerings Europe-wide. If mystery shopping is chosen as the data collection method, it is realistic to estimate a quarter of an hour needed by profile and by company. Data collection will then take ca. 200 hours. Instruction and guidance time for the shoppers will have to be taken into account; quality control and supervision will roughly take an extra 200 hours. Thorough verification will be needed. If sending a questionnaire to insurance companies is chosen as the method, only half that time will be needed for data collection and quality control. In both cases it is estimated that the time necessary for processing and analysing the data (including the development of formulae and calculation schemes) to be at roughly at half an hour by offer. This means a total of 350 to 400 hours.
- On the other extreme, postal services, where data collection can be centralised and data analysis, is simple and straightforward. Data collection time will take approximately 100 hours, while analysis and reporting is estimated at 60 hours. In this case, a network of native speakers may not be necessary, provided the providers involved can handle a questionnaire in English. In this case a consumer profile is not a prerequisite to be able to compare prices.

In some cases the work done in the general component of the study led to the conclusion that a centralised approach was realistic and most efficient. This was the case with postal services and dental hygienic services.

The table is constructed given the choices made in the general component. For postal services a standard 20 grams letter was chosen beforehand. A more complex service or more services targeted will have an impact on cost estimate.

It was also decided that in the mobile telephony market, a 100% market coverage was feasible, but for car insurance and car rental it was decided to focus on a reduced sample. Note that deciding on the sample size influences the time spent in the dedicated part. The hours presented in the table reflect the approach in the eleven studies.

For a dental hygienist, a “simple” service, it was considered not necessary to construct a reference consumer or consumer profile beforehand. Based on the knowledge from the rough market overview it was clear that tariffs are related to time, in this case a rate per quarter or half an hour is most common. The specific treatment is stated in the time needed. So in this case it is quite logical to collect data on all treatments and to decide on the reference consumer afterwards.

Figure 14 Estimate of capacity (in hours) needed for each service

	<i>car insurance</i>	<i>personal loan (initial costs, interest)</i>	<i>current account</i>	<i>car rental</i>	<i>mobile phone calls</i>	<i>roaming</i>	<i>internet connection at home</i>	<i>cable and satellite television</i>	<i>energy (gas and electricity)</i>	<i>train transport</i>	<i>parcels, letters</i>	<i>dental, oral hygiene</i>
<b>General Component</b>	350	250	250	250	200	200	250	250	250	250	250	250
<b>Dedicated Component</b>	790	392	392	512	424	424	340	384	320	484	280	440
<b>Organizational</b>												
Quality control, Supervision	40	40	40	40	40	40	4	40	40	40		40
Network (of native speakers) set up	40	40	40	40	8	8	8	8		40		40
Access to targeted providers	16	8	8	40	16	16	16	16	40	16	40	24
development of consumer profile (in advance)	16	8	8	16			16	16		16		24
<b>Data collection</b>												
writing of data collection manual	16	16	16	24	16	16	16	24	40	40	40	
selection and instruction of field workers		40	40	40	8	8	40	40		40		
construction of sampling model	16	16	16	40	16	16	16	16		16		
piloting, feedback and review	16	16	16	16	16	16	16	16		40		16
data collection	200	80	80	120	120	120	80	80	100	80	100	120
verification, checks	80	80	80	80	80	80	80	80	40	80	40	80
<b>Data processing</b>												
development of consumer profile (afterwards)					8	8						40
development of formula's, statistics	50	8	8	16	16	16	8	8		16		16
analysis and reporting	300	40	40	40	80	80	40	40	60	60	60	40
<b>Total</b>	<b>1140</b>	<b>642</b>	<b>642</b>	<b>762</b>	<b>624</b>	<b>624</b>	<b>590</b>	<b>634</b>	<b>570</b>	<b>734</b>	<b>530</b>	<b>690</b>
<i>General component</i>	31%	39%	39%	33%	32%	32%	42%	39%	44%	34%	47%	36%
<i>Organizational</i>	10%	15%	15%	18%	10%	10%	7%	13%	14%	15%	8%	19%
<i>Data collection</i>	29%	39%	39%	42%	41%	41%	42%	40%	32%	40%	34%	31%
<i>Data processing</i>	31%	7%	7%	7%	17%	17%	8%	8%	11%	10%	11%	14%

# Glossary

Aggregate <sup>1</sup>	<i>A set of transactions relating to a specified flow of goods and services in a given period, such as the total purchases made by resident households of consumer goods and services or the total expenditure by government on collective services or the total value of gross fixed capital formation. The term "aggregate" is also used to mean the value of the specified set of transactions.</i>
Aggregation <sup>1</sup>	<i>The procedure of computing PPPs above the basic heading level. The process of weighting, summing and averaging basic heading PPPs to obtain PPPs for each level of aggregation up to and including GDP.</i>
Basket <sup>1</sup>	<i>A term often used for the common list of well-defined goods and services from which countries participating in a comparison make a selection of products to price for the purpose of compiling PPPs. Also referred to as "product list" and "item list".</i>
Comparability <sup>1</sup>	<i>The requirement that countries price products that are identical or, if not identical, equivalent. Products are said to be comparable if they have identical or equivalent physical and economic characteristics – that is, if they have the same or similar technical parameters and price determining properties. In this context, equivalence or similarity between products is defined as meeting the same needs with equal efficiency so that purchasers are indifferent between them and are not prepared to pay more for one than for the other. The pricing of comparable products ensures that the differences in prices between countries for a product reflect "pure" price differences and are not affected by differences in quality. If the requirement is not respected, differences in quality will be mistaken for price differences leading to an underestimation or overestimation of price levels and a corresponding overestimation and underestimation of volume levels.</i>
Consumer profiles	<i>Model of a consumer with a well defined set of human characteristics. In this study, consumer profiles have been used for the data collection and/or calculation of the total bill for a certain service when that service has several price components.</i>
CPI Index	<i>The Consumer Price Index (CPI) is a measure of the average change in prices over time in a market for a basket of goods and services.</i>
Data Collector	<i>Person who conducts the price survey using a variety of methods to gather the prices of the services, such as Internet surveys or 'mystery shopping' phone calls (see mystery shopping). Distributing of questionnaires would also refer to the duties of the data collector. Data collectors reports to the SPA (see SPA) who oversees the data collection process.</i>
Equi-representativity <sup>1</sup>	<i>The property whereby the composition of the item list for a basic heading is such that each country is able to price the same number of representative items which is commensurate with the heterogeneity of products and price levels covered by the basic heading and its expenditure on the basic heading. See "representativity".</i>
Euroquichets	<i>European Consumer Centres. These centres can answer all types of practical questions, to consumers such as what you need to know if you decide to buy a car when you are abroad or if you want to bring a claim against a furniture manufacturer in a country other than your own. They can also take action in disputes by trying to bring about an amicable agreement.</i>
Goods <sup>1</sup>	<i>Physical objects for which a demand exists, over which ownership rights can be established and whose ownership can be transferred from one institutional unit to another by engaging in transactions on the market. They are in demand because they may be used to satisfy the needs or wants of households or the community or used to produce other goods or services.</i>
Homogeneity	<i>It refers to a similar composition of the service, of the same type or uniform in structure independently of place or time.</i>
Market price <sup>1</sup>	<i>The amount of money a willing buyer pays to acquire a good or service from a willing seller. The actual price for a transaction agreed on by the transactors. The net price inclusive of all discounts, surcharges and rebates applied to the transaction. From the seller's point of view the market price is the basic price; from the buyer's point of view the market price is the purchaser's price. Also referred to as "transaction price".</i>

Long list	<i>Initial list of 49 services of potential relevance for the Commission to monitor in the long run. General services areas included were financial services, insurance, tourism, information society and services of general interest.</i>
Panel	<i>A representative sample of individuals or professionals regularly surveyed on identical variables</i>
Price components	<i>The lowest level of raw price data and priced units (e.g. price per taxi kilometre) as opposed to the price the consumer has to pay or the total amount of the bill.</i>
Primary component	<i>Primary components can be divided into primary service components and primary price components. Primary service component refers to that service component, that if it were excluded, the consumer could not purchase or make use of any service connected to the primary service component (e.g. kWh in electricity service). Similarly, primary price component refers to that price component, that if it were excluded, the producer would not provide the service to the consumer. Primary content elements and the primary price components need be included in the definition of the service and are intrinsic to the service itself thus they will also be relevant in price comparison studies.</i>
Product specification <sup>1</sup>	<i>A description or list of the characteristics that can be used to identify a product selected for pricing. Its purpose is to ensure that countries price comparable items. A product specification can be either brand and model specific - that is, a specification in which a particular brand and model, or a cluster of comparable brands (and possibly models), is stipulated - or generic - that is, a specification where only the relevant price determining and technical characteristics are given and no brand, or cluster of brands, is designated.</i>
Population	<i>A research population is a set of entities object of research and from which statistical inferences are to be drawn. Instead of researching on whole the population, samples taken from the population are studied. The entities can be of all kinds, such as values on a variable (e.g. prices of a certain service), individuals (e.g. customers of a certain service), selling points (where one can buy a certain service) or points in time (time in which a service is purchased or provided).</i>
ppp <sup>1</sup>	<i>Purchasing power parity. "Spatial deflators and currency converters, which eliminate the effects of the differences in price levels between countries, thus allowing volume comparisons of GDP components and comparisons of price levels." PPPs are calculated in three stages: first for individual products, then for groups of products or basic headings and, finally, for groups of basic headings or aggregates. The PPPs for basic headings are unweighted averages of the PPPs for individual products. The PPPs for aggregates are weighted averages of the PPPs for basic headings. The weights used are the expenditures on the basic headings. PPPs at all stages are price relatives. They show how many units of currency A need to be spent in country A to obtain the same volume of a product or a basic heading or an aggregate that X units of currency B purchase in country B. In the case of a single product, the "same volume" means "identical volume". But in the case of the complex assortment of goods and services that make up an aggregate such as GDP, the "same volume" does not mean an "identical basket of goods and services".</i>  <i>The composition of the basket will vary between countries but each basket will provide equivalent satisfaction or utility. Also referred to as a "parity".</i>
(Price) Quotes	<i>The price stated by a provider for a given service at a given moment or time period. This price may be in a (published) price list or in a tailor-made offer on request</i>
Probability sampling	<i>Method for drawing a sample from a population such that all possible samples have a known and specified probability of being drawn.</i>
Reference user (or consumer)	<i>Dedicated model of a consumer with a well defined set of characteristics and/or usage pattern. In this study, reference consumers have been used for the data collection and/or calculation of the price of a certain service as paid by consumers.</i>

Representativity <sup>1</sup>	<p><i>A concept that relates to individual products within the same basic heading and to the product list for a basic heading. Representativity of a product within a basic heading is defined in terms of a specific country. A product is either representative or unrepresentative of the price level in country A for a given basic heading irrespective of the relative importance of the basic heading with respect to other basic headings. It is representative if, in country A, the price level of the product is close to the average for all products within the basic heading. Usually, though not necessarily, the purchases of the product will account for a significant proportion of the total purchases of all products covered by the basic heading. If not, the product will at least be sold in sufficient quantities for its price level to be typical for the basic heading. Representativity of the product list for a basic heading is defined in terms of all countries participating in the comparison.</i></p> <p><i>The product list should be equally representative of all participating countries. In general, representative products have lower price levels than unrepresentative products. Therefore, if the product list for the basic heading is not equally representative of all participating countries, the price levels for the basic heading will be overestimated for countries pricing a smaller number of representative products and underestimated for countries pricing a larger number of representative products. This does not mean that all countries should have the same number of representative products for each basic heading providing this is taken into account when calculating PPPs for the basic heading. But it does mean that each country should be able to price that number of representative products which is commensurate with the heterogeneity of products covered by the basic heading and its expenditure on the basic heading.</i></p>
Sample	<i>A subset of the population. Elements are selected intentionally as a representation of the population being studied.</i>
Sampling design	<i>The method for choosing a sample, such that the sample is representative for the population on some designated characteristics.</i>
Screened informants	<i>Informants that have been scrutinised for their independency (of the data source).</i>
Secondary component	<p><i>Secondary components can be divided into secondary service components and secondary price components. They refer to those service and price components which are not intrinsic to the definition of the service. (E.g., in car rental, a child seat in the car would be secondary service component). The price paid for secondary service components is secondary price component. (See also primary components).</i></p> <p><i>The division into primary and secondary components is also dependent on place and time. E.g. with electricity, secondary components are the ones concerning the length of contract, paying method, etc. Free choice between energy at fixed or at variable prices is not common in all countries, but customers have to make a choice in some countries. Therefore, in this 2005 comparative study, this service component was treated as secondary, although it is primary in some countries. In the future the situation may have changed and the best method might be to treat this free choice as a primary component</i></p>
Services <sup>1</sup>	<i>A concept that relates to individual products within the same basic heading and to the product list for a basic heading. Representativity of a product within a basic heading is defined in terms of a specific country. A product is either representative or unrepresentative of the price level in country A for a given basic heading irrespective of the relative importance of the basic heading with respect to other basic headings. It is representative if, in country A, the price level of the product is close to the average for all products within the basic heading. Usually, though not necessarily, the purchases of the product will account for a significant proportion of the total purchases of all products covered by the basic heading. If not, the product will at least be sold in sufficient quantities for its price level to be typical for the basic heading. Representativity of the product list for a basic heading is defined in terms of all countries participating in the comparison.</i>
Service components	<i>Refers to the different content aspects of a final consumer service. This is best illustrated with an example. Banks provide current accounts to clients. The main service in question is the basic provision of a current account. However, holder of a current account can perform such actions as depositing money on his/her account, withdrawing money and issuing cheques. These are all service components. Service components can be priced or not priced.</i>
Shortlist	<i>List of 11 services used to conduct the development of the methodology.</i>
SPA	<i>"Service Price Assessor." SPA refers to the person with knowledge of the specific market and local circumstances, who manages and monitors the data collectors in the respective country. Data collectors need only an understandable and univocal set of instructions, therefore the role of the SPA is of managerial nature. Some of the attributes of the SPA must be good communication skills and data handling capabilities.</i>

Transaction price <sup>1</sup>	See "Market price".
Typology	<i>In this study: a systematic division of services in kinds, based on properties that indicate the most preferred method of price-data collection.</i>
Usage profile	<i>A well defined and quantified pattern of use of a certain service. In this study, usage profiles have been used for the data collection and/or calculation of the total bill for a certain service when that service has several price components.</i>
Validation Procedure	<i>All internal and external checks and controls to assure that a specific research method measures what it claims to measure.</i>
Validity	<i>The degree to which a specific research method measures what it claims to measure.</i>

<sup>1</sup> Source: Eurostat, OECD PPP Methodological Manual (2005)

*Country abbreviations*

AT	Austria
BE	Belgium
CY	Cyprus
CZ	Czech Republic
DE	Germany
DK	Denmark
EE	Estonia
ES	Spain
FI	Finland
FR	France
GR	Greece
HU	Hungary
IE	Ireland
IT	Italy
LT	Lithuania
LU	Luxembourg
LV	Latvia
MT	Malta
NL	The Netherlands
PL	Poland
PT	Portugal
SE	Sweden
SI	Slovenia
SK	Slovak Republic
UK	United Kingdom