STATISTIKOS DEPARTAMENTAS

Statistics Lithuania

PRICE COLLECTION PROCEDURE AND ITS DEVELOPMENT IN LITHUANIA

UNECE/ILO Meeting on Consumer Price Indices

(Geneva, 8–9 May 2008)

Nadiezda Alejeva
Head of Price Statistics Division
Statistics Lithuania
Phone: +370 5 236 4707
Fax: +370 5 236 4791
E-mail: nadiezda.alejeva@stat.gov.lt

PRICE COLLECTION PROCEDURE AND ITS DEVELOPMENT IN LITHUANIA

SUMMARY

The purpose of this paper is to present the existing procedure for the collection of the price data for consumer goods and services, its development and basics of the assurance of the data quality in Statistics Lithuania. The paper gives general idea on the data collection process developed by Statistics Lithuania in the light of EU requirements for the compilation of Harmonised Index of Consumer Prices (HICP).

One part of the paper concerns the organisation of work and the price collection procedure, describes the role of central and local staff in the process as well as the price data sources, approaches and techniques used for the data collection at the local and central levels. The last years are a period of considerable transformation in price collection process. Developments carried out by Statistics Lithuania in recent years are described in another part of the paper. Introduction of a new tool for the data collection and implementation of new requirements as regards the temporal coverage of price collection in the HICP in the light of new Council Regulation (EC) No 701/2006 of 25 April 2006 in the Lithuanian practice is presented in detail. Some aspects of selection of representative products and outlets where prices should be collected, the data quality issue are also touched.

INTRODUCTION

The compilation of the national Consumer Price Index (CPI) and HICP consists of collecting and processing the price and expenditure data according to specified concepts, definitions and methods to be used in practice. The price data collected for consumer goods and services is the basis for the compilation of both indicators. The presence of the honest and complete price data is a key factor to produce relevant and reliable national CPI and HICP. Both indicators are based on the actual prices of consumer goods and services available for purchase in the economic territory of Lithuania and which households use for the purpose of directly satisfying their consumer needs. Care has been taken to ensure that prices obtained are actual transaction prices and are collected systematically at regular intervals. Prices used in the CPI and HICP compilation are the prices for the products the consumer actually pays at the time of purchase, including any taxes less subsidies on the products, after deductions for discounts, excluding interest or service charges added under credit arrangements.

Monthly observation of changes in prices for selected consumer goods and services in selected outlets has been carried out in Lithuania since July 1989. A permanent survey of retail prices for 650 non-food products was started in the capital of Lithuania, Vilnius. Since the second half of 1990, the price survey was extended to three more cities. Price collectors registered retail prices each month visiting the selected outlets. The onset of the price liberalisation required to include food products and services in the survey and to expand it in terms of geography. Since January 1991, besides non-food products, prices for 350 food products and 100 services were registered in 7 cities and 9 medium and small towns. The geographic coverage was extended once again since January 1997. Thereafter, retail prices were collected in 19 territorial units.

The work on the optimization of the sample of territorial units was carried out in 2002–2004. The specialists on price statistics and sampling methods carried out pilot calculations to evaluate the influence of the number of territorial units sampled as well as the number of prices registered on the CPI meaning. The sampling errors and confidence intervals of prices were calculated. The results showed that the exclusion of 2–3 small territorial units had no significant influence on the total CPI. After the presentation and discussion of the results at the session of the Methodological Commission of Statistics Lithuania, a decision was made to reduce the sample of territorial units from 19 to 18 from 2006.

Since 1997, Statistics Lithuania has implemented the Classification of Individual Consumption by Purpose (COICOP) in the production environment of CPI and HICP. The new classification made considerable impact on the 'basket' of representative goods and services, its list and composition. Annexe 1 presents distribution of representative consumer goods and services by divisions of the COICOP.

After restoring independence, Lithuania experienced essential political and economic reforms. Transition from the centralised and planned economy to a market economy, liberalisation of prices demanded to change the methodology of CPI compilation in order to have a reliable indicator of inflation. This also had big impact on the consumer price data collection procedure, its forms and techniques in consideration of real conditions and possibilities.

The price collection procedure was gradually developed and adjusted, taking into account changes of economic circumstances and consumer market in the country, changes of the concept of the CPI and requirements for the price data, the latest technological innovations. The implementation of major requirements for the basic information needed for the compilation of the HICP was a big challenge for Statistics Lithuania and significantly affected the price collection procedure. It was improved in order to achieve the compliance with comparability requirements and the quality of the HICP.

ORGANISATION OF WORK

Statistics Lithuania compiles and releases various kinds of price indices and is responsible for the implementation of the 'acquis communautaire' in the area of price statistics. The Central Statistical Office carries out the production of both national CPI and HICP and organises the procedure for the collection of price data. There are 10 central staffs' members working on the CPI and HICP as well as 31 local staff members (price collectors) in 5 Regional Statistical Offices. The responsibilities of the central and the local staff are different.

Responsibilities of the central staff

The central staff yearly works out the timetable for the collection and transmission of the primary data on prices for consumer goods and services for price collectors. The timetable is incorporated into the annual Statistical Work Programme for Regional Statistical Offices.

The set of the representative goods and services with definitions is prepared centrally and the same set of goods and services is used for all territorial units where prices are registered by price collectors. Statistics Lithuania follows a sampling procedure which is referred to as 'purposive' or 'representative'. Price changes must be measured in a dynamic economy. Therefore, to reach adequate representation of currently available goods and services at the consumer market and household monetary consumption expenditure, the central staff caries out review and update of the

‘basket’ annually. To identify newly significant goods and services, the central staff observes market developments and assesses their observations together with information supplied by price collectors. In addition, information from the Household Budget Survey (HBS), periodicals, review newspapers and television advertisements, exhibitions is used.

The central staff is partially involved in the price collection process. Prices and tariffs that are regulated by the central government or the national regulator as well as market prices for some complicated goods and services are collected by the central staff. Prices which are the same across the entire country are collected centrally. The Internet also provides an opportunity for the centralised price collection.

The central staff carries out the secondary verification of the primary data received from price collectors and appropriate adjustments and imputations in cases of changes in quality and missing prices, deals with the preparation of the weightings system and performs the calculation of the CPI and HICP. Preparation of the summary tables and press releases as well as other publications, dissemination of statistical information and transmission to Eurostat are the functions of the central staff.

Methodological documents describing the methods used at the various stages of compiling the CPI and HICP and different price sub-indices are elaborated by the central staff. The consumer price survey is carried out under the methodological guidance of the central staff establishing a work plan, timetables and the functions of price collectors including the detailed rules for price collection. The computer software in hand-held computers for the entering and verification of the primary data on prices is maintained by the central staff. Training of local staff and inspection of their work is regularly carried out by the central staff.

Responsibilities of the local staff

Statistics Lithuania uses a two-stage purposive sample design to select geographical units and outlets where a price survey shall be carried out. First, territorial units are selected according to their geographical location, by the number of inhabitants and saturation of the market. Then, in each selected territorial unit, price collectors have to select the outlets where prices of consumer goods and services will be collected. The representative outlets are selected according to agreed criteria from local registers maintained by Regional Statistical Offices and are chosen to properly represent the existing trade and service network. The outlets are selected according to their turnover, floor space and number of customers, specialisation, geographical location and form of ownership. Large enterprises having high turnover and wide assortment of goods are selected with certainty. In total, 8–10 outlets have to be selected in cities (leading to 8–10 price quotes for each product), 6–8 outlets – in medium towns (6–8 price quotes for each product) and 4–6 outlets – in small towns (4–6 price quotes for each product). One outlet has to be selected in the rural area to collect prices for food products, alcohol beverages and tobacco by each territorial unit which is coincided with County Centre. Price collectors have to create a list of selected outlets indicating the full name, address and telephone number of each outlet and details of its characteristics and provide it to the Central Statistical Office. Every year, price collectors are asked to update the sample of outlets: to include new outlets in the survey, to exclude outlets that have become unpopular. Price collectors systematically review the list of selected outlets. The sampling of outlets is renewed each year by 5 per cent, on average.

Specific varieties of the representative products within agreed definitions are selected by price collectors. They have to select the most popular and frequently bought variety in the outlet and

mark additional characteristics (e.g. colour, composition, producer, model, etc.) for ease of identification. A crucial point is ‘an attention to details’.

Price collectors register prices through monthly visits to selected outlets. The prices collected are entered into hand-held computers or recorded in an appropriate paper questionnaire. Price collectors have to cooperate with shopkeepers or their assistants, to explore the reasons of significant changes in prices and to provide them to the central staff. The primary data of prices are entered and first verification is made by price collectors after initial entry into hand-held computers. They are responsible for the precision of the primary data on prices. Price collectors send the data as well as information about the details on changes in characteristics of goods and services, evaluations of price change due to the quality change (done together with shopkeepers or their assistants), explanations of the reasons on significant price changes to the Central Statistical Office to an agreed timetable.

Price collectors have to follow the market development and to inform timely the central staff on changes of enterprises selling goods or services as well as the coming of new goods and services into the market.

ORGANISATION OF THE PRICE COLLECTION PROCEDURE

Price data collection approach

Both price collectors and the central staff have been involved in the price collection process. The approach used for the price collection depends on its effectiveness. A decision whether prices have to be collected centrally or by the local staff is made considering different factors.

Goods that are technically complicated and their evolution is very dynamic (e.g. cars, data processing equipment) require additional knowledge and information on characteristics, as issue of quality change evaluation appears quite frequently. Treatment of quality changes and application of appropriate quality adjustment method is a function of the central staff. To make a correct decision, it is necessary to know quality adjustment standard procedures, to cooperate with producers and experts in the area of product development, to derive information for evaluation of the impact of changes in technical characteristics on the price rate. Considering these, prices for technically demanding goods are collected by the central staff.

There are goods (e.g. electricity, gas) and services (e.g. telecommunication services, package holidays) for which special sub-indices are calculated. Since there are procedural differences in the calculation of sub-indices for such goods and services as well as more detail basic information (e.g. differentiated tariff prices according to characteristics of consumers, the level, the structure, the timing of the consumption, etc.) is required, a decision was made for those goods and services to collect prices and other basic information centrally. CPI and HICP sub-indices involving tariff prices are, in practice, obtained centrally and based on tariff prices and their underlying consumption patterns provided by suppliers.

Prices administrated by the central government or the national regulator and prices that are the same across the entire country are collected by the central staff.

Market prices of consumer goods and services mostly are collected at the local level by price collectors. They also collect prices administrated by the local government.

Annexe 2 presents information about the share of prices collected by the central and the local staff.

Choice of the price collection approach also depends on the data sources.

Price data sources and collection techniques

In practice, the price data of 837 representative consumer goods and services in 18 territorial units covering about 3800 selected trade and service outlets are collected each month. There are different sources used to obtain the primary data.

Registration of prices carried out by price collectors through visiting the selected outlets of different ownership forms is the main source of the data. Large, medium and small trade enterprises, specialised, combined, and big stores, markets stalls and enterprises providing services are included in the sample. Such outlet categories as mail order and Internet shopping are not included at present. No detailed information on the market share of the latter is available but they are not considered significant. Price collectors use hand-held computers for the price collection. Each month, they transmit about 59200 price quotations to the central database.

The source of the data for those goods and services the prices of which are determined or influenced by the central or local government including the national regulator or where the price concerned is a part of a tariff is legal acts: government decrees, regulations and orders, decisions of the national regulator, etc. The price data are collected from official records by the central staff and price collectors. Price collectors have to send the copies of legal acts issued by local authorities. A part of administered prices is also obtained from the Internet.

In recent years, the Internet has been widely used as a source of the price data by the central and local staff. Big retail chains, many trade and service outlets have own websites, where prices on sold goods and provided services are published. The Internet improved the efficiency of the price collection. However, it is necessary to have in mind that websites may not be updated in time and the price collector might take the price despite the fact that this price is not already valid. This is the disadvantage of this source.

Catalogues and price lists are used to derive prices for some goods and services. These sources of price data are practical for goods (e.g. furniture, major household appliances) that outlets sell by order and some services as their price changes are less frequent. However, checks should be made from time to time to ascertain whether goods and services in question are indeed sold and prices are in fact observed.

Some relatively small number of price quotations is collected from advertisements (e.g. housing rent in private sector) or by telephone inquiries (e.g. fuel, dry-cleaning services), electronic questionnaires (e.g. air transport services) and paper reports (e.g. insurance services).

In Annexe 3, information is given on what sources and techniques are used to collect price data for certain product groups.

Up to the October 2006, for local price collection, a questionnaire-based survey was carried out. A special unified questionnaire has been prepared for the data collection. This questionnaire was repeatedly modified taking into account the suggestions received from price collectors, with a view to make it more tailored for their needs. The last version of the questionnaire was approved by the order of the Director General of Statistics Lithuania in November 2006. The questionnaire has been designed for the twelve months and has to be filled in by price collectors each month for each

selected outlet. It comprises three parts. In the fist part, a price collector presents information about himself and the outlet where he/she registers prices, marks additional characteristics for the selected variety of products, indicates reasons of price changes as well as changes in characteristics. The second part of the questionnaire gives information about the price survey's legal base, purpose, coverage and introduces the articles of the Law on Statistics regarding the confidentiality of individual statistical data, obligation to provide statistical data and penalties in case of rejection to provide data. The explanations on how to fill in the questionnaire and recommendations how to deal with some problems are given in the third part. However, this questionnaire has been narrowly used, as Statistics Lithuania moved from a paper-based price collection to the one based on using hand-held computers. Price collectors use the questionnaire to collect prices only for goods in open markets, for services and pharmaceuticals.

INTRODUCTION OF HAND-HELD COMPUTERS IN PRICE COLLECTION PROCESS

Since October 2006, a new tool – a hand-held computer – was introduced in the fieldwork. Statistics Lithuania had started considering this innovation in 2005. Research on models of hand-held computers, their functionality and software available in the country, prices and maintenance cost was carried out. It was decided to introduce a hand-held computer 'Hewlett Packard Pocket PC h 5500 series' with 'm-partner' system. The specialised tailor-made software was designed and installed into hand-held computers. A phased approach to the introduction of the new tool in the price collection process was adopted. In 2005, the first training was organised for price collectors on how to use hand-held computers collecting consumer prices and how to use the computer software. After that, two pilot consumer price surveys were carried out using the new tool. In 2006, after the second training of price collectors and evaluation of their knowledge in using hand-held computers, the third pilot survey was carried out. The aim of the pilot surveys was to evaluate all advantages and disadvantages of the new tool and software used in it as well as to measure the time required for price collection using hand-held computers. Having this in mind, a special questionnaire was designed and distributed to price collectors after each pilot price survey. Price collectors filled in the questionnaire and provided Statistics Lithuania with necessary information for the improvement of computer software as well as organisation of consumer price survey using the new tool.

Price collectors' resistance to the new technology appeared at the beginning of moving to hand-held computers. To minimise this problem, practical training at the early stage of the transition process, regular meetings with price collectors and practical assistance in the fieldwork was provided to price collectors. Finally, price collectors welcomed the innovation and currently do not want to move back to the paper questionnaire-based survey. The shift from a paper questionnaire to hand-held computers enhances the image of price collectors as perceived by retailers. Price collectors equipped with the latest technology present a better image to the public.

It is necessary to mention the advantages of using hand-held computers. The manual tasks have been reduced and transcription of data from a paper questionnaire into a personal computer errors have been eliminated. There are some other positive aspects: interactive data validation, increased mobility and flexibility for price collectors, reduction in paper and printing costs.

Different functions have been programmed into hand-held computer's software. The software has a user-friendly menu and helps price collectors with the management of their collection programme and route. There is a facility to organize convenient route and timetable of the price collection for the price collector; to create a separate template for each outlet; to carry out the quality checks of initial data showing the warning messages while collecting and entering price data. When 'errors'

are detected during the collection itself, the price collector is immediately forced either to correct the data or to accept providing some explanation. This saves the collector from having to re-visit the outlet at a later date and helps reduce the time lag between data collection and the transmission of validated data to the Central Statistical Office. The software provides facilities of sorting of selected goods and services; recalculation of the price of the measurement unit observed into the price of the measurement unit required; to use different classifications while collecting prices and entering product's description (e.g. countries' classification); protection from missing or duplication of the product or outlet; to use codes for the identification of an product or outlet; to display history of price quotes for each product; to transmit the entered price data to the central database.

The software contains information of outlets selected for the consumer price survey (code, name, address, type and contacts); visits to outlets (date of the visit, price collection starting time and its duration, time used to move from one outlet to another); products selected for the price survey: general descriptions of the representative product including the measurement unit required, variety selected for price collection, country of origin, producer, brand, specific characteristics, measurement unit observed, reasons of the price change and some other comments.

The 'm-partner' system creates a possibility of better verification of the primary price data also in the Central Statistical Office. It is possible to sort and filter data; to group the outlets according to the routes of price collection; to sort all the data by price collectors, territorial units, outlets, etc. as well as to create reports containing different information. All the tables created in the 'm-partner' system can be transformed to Microsoft Excel tables and further analyzed. The central staff can identify the data collected by every price collector and control the price collectors' visits to the outlets. There is a facility to sum up the time spent in the outlets and spent on moving from one outlet to another; to calculate the average duration of a visit; to sum up the number of visits, etc. This enables to estimate the workload of the local staff.

The move to the new tool had required a considerable financial investment: purchasing costs, costs of developing tailor-made software and training costs of price collectors. In addition to investment costs, there are costs related to the use of hand-held computers: maintenance costs (these costs are relatively insignificant), risk of theft, damage. Eighteenth-month experience of use of hand-held computers in the price collection process showed the disadvantages of the tool: it is not easy to read under different conditions of lighting, insufficient battery life (it is important that the use time of hand-held computer be at least 8 hours), too small screen, quite small keyboard (a special pen is used), capacity is limited, replaceability problem in case of illness or holiday of the price collector, fast obsolescence of hand-held computer model. As concerns the battery, a solution was found; price collectors were equipped with an additional battery and this enabled easily changing the battery during the price collection. To eliminate the risk of the sudden data loss, it was recommended to the Regional Statistical Offices to purchase 'SD memory cards' which have enough capacity to store information.

REORGANIZATION OF THE RICE DATA COLLECTION PROCEDURE

An important phase of the development of the price collection procedure occurred in 2007. It was encouraged by a necessity to implement the provisions of Council Regulation (EC) No 701/2006 of 25 April 2006 laying down detailed rules for the implementation of Regulation (EC) No 2494/95 as regards the temporal coverage of price collection in the HICP. According to the new Council Regulation, price collection has to take place across at least one working week period at, or near, the middle of the calendar month to which the index pertains; where products are known to typically show sharp and irregular price changes within the same month, price collection has to take

place over a period of more than one working week. This rule has to be applied in particular to the following products: energy products and fresh food, such as fruit and vegetables. The provisions of this Regulation had to be implemented in December 2007 at the latest and take effect with the index for January 2008.

To reach full compliance with Council Regulation, Statistics Lithuania planned certain development of the existing price collection procedure, which could ensure that minimum standards for price collection period are implemented. The new procedure was established in December 2007.

Local price collection is conducted by 31 price collectors in 18 territorial units. Until the reorganisation, retail prices of consumer goods and services were collected monthly during three weeks in Lithuania. The prices for food, non-alcoholic and alcoholic beverages and tobacco were collected during the 16th–20th days of the reporting month. For clothing and footwear, they were collected during the 10th–14th days, for the rest non-food products – during the 6th–9th days and for services – during the 3rd–5th days of the reporting month. Prices for fuels were collected thrice a month – on the 10th, 20th and 30th day, for seasonal fruit and vegetables – weekly (each Wednesday). Price collectors could register prices for different products in large outlets. With a view to keep the timetable of price collection and according to the mentioned price collection procedure, price collectors had to visit some large outlets several times during the reference month. The working days of price collection in each month might defer from the mentioned above due to free days or holidays.

While implementing requirements, as regards the temporal coverage of the price collection, and in order to ensure that the new requirements for price collection are kept properly, the new data collection and transmission rules of retail prices on consumer goods and services were prepared for price collectors. Having a purpose to reduce the difficulties in the understanding of the new price collection rules by price collectors, they had to be taught on how to conduct the price survey according to the Council Regulation. Therefore, the training of price collectors was organised in the premises of Statistics Lithuania in Vilnius in December 2007.

According to the new procedure, the timetable of the price data collection in selected outlets is scheduled separately for each territorial unit. Fixed days for the price collection per each outlet are set in the timetables. In September, price collectors have to provide to the Central Statistical Office their proposals as regards the timetable of price collection in next year. In November, the final version of the timetable is approved by the Central Statistical Office.

Collection of the price data for all consumer goods and services covers first full three working weeks of the month. A sample of outlets is evenly distributed over three weeks. The price collector spreads outlets over the days of the week and agrees with the central staff. The central staff supervises that the outlet types are spread evenly, that each week outlets of big retail chains, medium and small size, open markets are visited by price collectors.

Price collectors have to collect prices according to the agreed timetable. Small deviations from the dates foreseen in the timetable are allowed but only due to serious reasons (e.g. damage of a hand-held computer, traffic problem, perturbation in the outlet' work, etc.). In such cases, the price data have to be collected on the next working day. The central staff has to be informed either by e-mail or fax on the reasons of the change in the timetable.

The price collection is started on the 3rd working day of the month. The price collection continues 14 working days. Every 5 days (4 days in the case of the 3rd price collection period) one-third of all

price quotations is collected. Every price collection period covers goods and services belonging to all divisions of the COICOP.

Outlets selected for the consumer price survey are visited once a month. Prices of all representative products' varieties, selected in the particular outlet have to be collected during the visit (e.g. prices of food, non-alcoholic and alcoholic beverages, tobacco, cosmetics, abstergents and some other goods have to be collected in supermarket). More time is needed to collect prices in large outlets. Therefore, price collection in these outlets may last two days.

Prices for fuels and seasonal food products are collected additionally during the 15th–19th working days of the month. For additional collection of prices for seasonal products, an extra number of outlets is selected. In cities, 4 outlets, in medium and small towns – 2 outlets are selected. 2 or 1 additional filling-stations are selected in every territorial unit to collect prices on fuels. Prices in these outlets are not collected during the first three working weeks (the main price collection period).

Old and new timetables of price data collection are presented in Annexe 4.

Price collectors have to transmit the collected data on prices to the central database, i.e. to synchronize them having connected to the 'm-partner' server at their workplace on the day when the data collection takes place. If the data were not transmitted, the transmission must take place by 10 a.m. of the next working day.

The processing of the primary price data has been also reorganised in the Central Statistical Office. The technical task for the development of software was prepared in order to modify the currently used software. The software has been adapted to the new price collection procedure.

The effect of the reorganization of the price collection procedure will be analysed. This action is foreseen for the second half-year 2008. However, there are already observable advantages of the new procedure. More frequent provision of price data to the Central Statistical Office enable the central staff to start the preliminary analysis of the data after first observation week. The central staff has more time for the data verification and editing. It is visible that the use of the working time by price collectors as well as the quality of the primary price data will be improved.

The first evaluation of the new price collection procedure has been also done by price collectors. They were addressed to express their opinion filing in a special questionnaire. 29 price collectors provided their opinion. 2 price collectors are newly employed and could not compare the new and the previously used price collection procedures. Changes in the price collection procedure for the better were indicated by 19 price collectors out of 29 (66%), no changes – 6 (21%) and for the worse – 4 (14%). As advantages, price collectors mentioned the reduction of time used to move from one outlet to another; increasing time for price collection and investigation of consumer goods and services market (e.g. newly appeared outlets, goods in outlets); there is no need to visit the same outlet several times over the month; evenly distributed outlets and time for the price collection; conveniently organized price collection routes.

Disadvantages were also pointed out by price collectors. Some price collectors evaluated as inconvenient the daily transmission of the price data to the Central Statistical Office. Some of them think that the timetable is too intense and noted that the price collection in large outlets is very tiring.

The main gain of the reorganisation is that the compliance with Council Regulation as regards the temporal coverage of price collection in the HICP has been reached and main provisions have been implemented. Implementation of new Council Regulation was carried out in the framework of a Grant agreement with the European Commission (Eurostat).

BASICS TO THE ASSURANCE OF THE DATA QUALITY

Training of price collectors

The quality of price data is the crucial determinant ensuring the accuracy and reliability of CPI and HICP indicators. 97 per cent of price quotations used for the compilation of both indicators are collected and transmitted each month by price collectors. The experience is indispensable to select the outlets where prices for consumer goods and services should be collected as well as for making an appropriate choice of specific varieties of representative products within the agreed definitions. Price collectors face the comparability problem when replace the variety that has disappeared by a new representative one. The judicious monitoring of the product in order to obtain the evolution of prices of an 'equivalent product' is needed. Price collectors have to differentiate the features of goods, which exert an impact on the price rates and to evaluate this impact. When an outlet closes down or changes its profile, price collectors also face some problems. Every time they have to clarify the duration of the shutdown and of its causes, then they have to decide independently how to treat the situation. In all cases, the responsibility for taken decisions to a greater extent falls on the price collectors.

In order to ensure the adequate quality of price data, the experiences as well as some certain features of price collectors are critical. The special skills level is needed for collecting data and it should be established. In order to collect accurate data, price collectors must know and follow the data collection rules, as well as during the collection of the data they should understand how to apply different and sometimes complicated rules in practice. Price collectors must also be decisive for solving problematic situations such as missing prices, substitutions. Price collectors are required to have a comprehensive knowledge of the data collection process, be computer literate.

Considering the key role that price collectors play in the data collection process, it is very important to have qualified and well-trained employees for collecting the data of good quality. Considerable attention is given to price collectors' training at Statistics Lithuania. It is obvious that the training should cover all aspects of the data collection process as well as how the collected data contribute to the final product – CPI and HICP. Price collectors must have a better understanding of the overall process of production of the national CPI and HICP objectives and how important their contribution is to the process. Two- or three-day meetings have been organized for price collectors yearly since 2000. The comprehensive programme is designed taking into account price collectors' wishes and questions of the day. There are some topics, on which price collectors are instructed every year: the requirements posed for the primary data on prices, the techniques that can be used for the registration of prices, the selection and replacement of outlets and varieties of goods, an updated list of representative products, common and frequently occurring mistakes. Novelties in the CPI calculation are also presented to price collectors during the meetings. Besides these topics, certain special subjects are chosen and experts are invited to assist and to explain the chosen subject thoroughly (e.g. how to identify the quality differences of fabrics used to manufacture the clothing; sharing experience on the organisation of price collection in Finland). Due to the introduction of hand-held computers in the fieldwork, a special topic on the problems of the use of the new tool is included in the programme of meetings.

Every year, a one-day zonal seminar is organised for the price collectors in one of 5 Regional Statistical Offices. The purpose of the seminar is to discuss practical issues of the price collection process as well as specific questions raised by price collectors and to advice on the proper solutions. The number of participants is restricted to the price collectors of this office. Therefore, price collectors feel free and open, fruitful discussion takes place at the seminar.

Another form of the training price collectors is visiting of territorial units. Since 2005, short technical assistance missions of the central staff are accomplished quarterly. The regular check of the primary data provided by price collectors has been carried out in one territorial unit per quarter. The main aim of these visits is to check the correctness of the collected data, to evaluate the real situation in the fieldwork and to reveal shortcomings in the work of price collectors. The practical assistance is provided during such visits.

A Manual for price collectors has been prepared by the Central Statistical Office. It covers the following issues: a short review of the CPI history; the aim of the consumer price survey; legal acts; main definitions; the role of price collectors and the central staff in the consumer price survey; the selection of outlets and specific varieties of representative products; procedures to be followed during the visits to the outlets (e.g. introduction to a shopkeeper, presentation of identity card); the price collection timetable; price collection techniques; filling in of a paper questionnaire; treatment of missing prices; evaluation of quality changes; treatment of price reductions; treatment of seasonal products. The Manual provides price collectors with requirements and recommendations as regards the price collection procedure.

Price collectors are equipped with an 'm-partner' system Users Manual which contains detailed guidelines on how to work in the system: to start and finish the work; to select the outlet; to enter, review, verify, edit and transmit the data; to create, review and edit routes and templates; to review the data collected during the visit, etc.

Price collectors also learn a lot from the central staff at the stage of data validation. The central staff assists price collectors in the right decision-making, informs about the mistakes made and discusses their nature. Price collectors and central staff communicate by telephone and email on different issues.

Checks against errors and mistakes

Monthly checks against errors and mistakes in price information are carried out by both the central and the local staff. Some checking functions have been installed in the hand-held computer software. Price collectors have access to the central database and can check the transmitted data. A price is identified for checking if the change in price from the previous month is more than 10%.

Some procedures concerning the improvement of the data verification have been implemented in software over a number of years. The central staff carries out the verification of the data received using the data control software designed for the monthly checks against errors and mistakes. There is information on prices relating to reporting and previous months, ratios of prices and causes of price changes, indicated by price collectors, for all price quotations in each outlet, covering all goods and services and territorial units shown in the control sheets. The period of the last change of the price observed, the lowest and the highest prices are also shown in the control sheets. Errors and suspicious entries are marked by certain symbols. The central staff clarifies all uncertainties with the price collectors via the telephone or email. Particular attention is paid to quality changes and prices that do not change for a very long time. In some cases, the suspicious price changes are

checked by reference back to the outlet. Prices may also be checked with domestic producers and suppliers of goods and services where these suspicions remain. In general, the prices reported by price collectors are accepted. Extreme prices and price changes are checked very carefully. Price collectors should provide explanations and reasons on the individual price observation if unusual price changes are obtained. The final corrections, adjustments and rejections of reported prices are done by the central staff and entered into the control sheets after clarifications.

The CPI software contains systematic controls to ensure that the correct price data are accessed for the calculation of the latest CPI and HICP. Sub-indices are generated and sorted according to the rate of the monthly change and any outliers are further checked by the central staff. The central staff also systematically casts an eye on the figures to identify any unusual price movements based on their knowledge of the retail sector. The preliminary index results of the national CPI and HICP are then discussed. Prices are crosschecked against the Producer Price Index and information received from other institutions, such as changes in excise and import duty, together with soft information such as reports of unusual seasonal price variations due to adverse weather conditions.

CONCLUSION

Statistics Lithuania has adapted the quality management system standard ISO 9001:2000 in 2007. Therefore, providing users with relevant and reliable statistical information is one of the priorities in the framework of the Strategy of Statistics Lithuania for 2008–2012. Further measures on the improvement of the price collection procedure taking into consideration new methodological requirements for HICP, changes in information technologies, other innovation are foreseen.

New software to better manage the analysis of the primary data at the central level is foreseen to design and implement during the 2008–2012 strategic period. It will reduce the time load of the central staff to be spent on the data verification and editing and simplify the process of the production of aggregated statistical information as well as information for the production of quality reports.

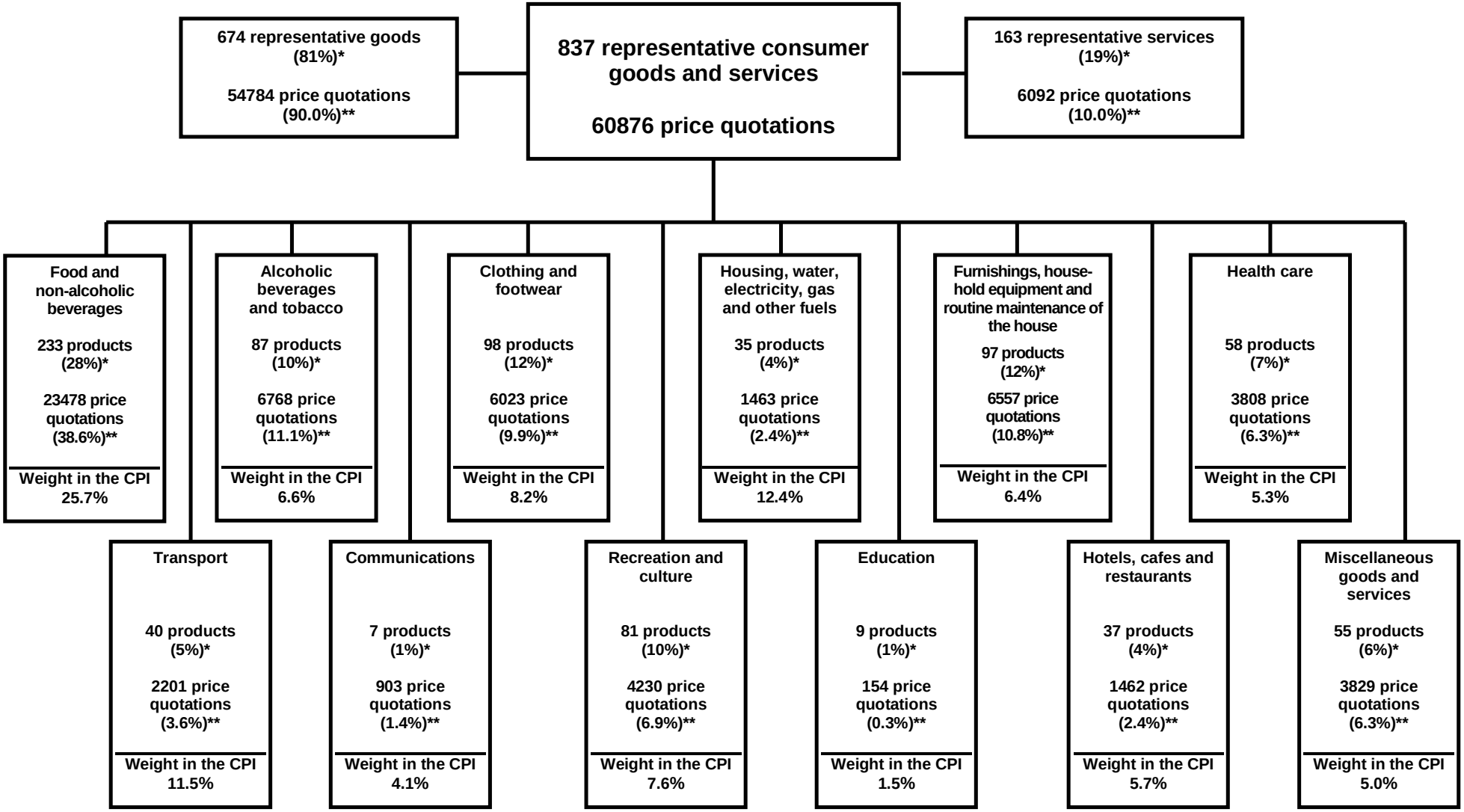
Acquisition of new hand-held computers for the price collection process is discussed. Research of better model of hand-held computer for price collection purpose in terms of capacity and ergonomics is carried out.

Further optimisation work is carried out by Statistics Lithuania. Calculation of variation coefficients for each representative product has been introduced. Based on variation coefficients, the number of price quotations can be optimized, i.e. the number of price quotations for a particular product can be redistributed over territorial units. This number can be reduced in territorial units with a lower value of the variation coefficient and shall be increased in territorial units with a higher value. The number of prices required within each elementary aggregate which will provide HICP of sufficient reliability will be optimised.

The potential benefit of the use of ‘scanner data’ from supermarkets is being considered by Statistics Lithuania. Scanner data may provide a useful basis for selecting new representative products and identifying those which are no longer representative, elaboration of CPI weighting.

Annexe 1

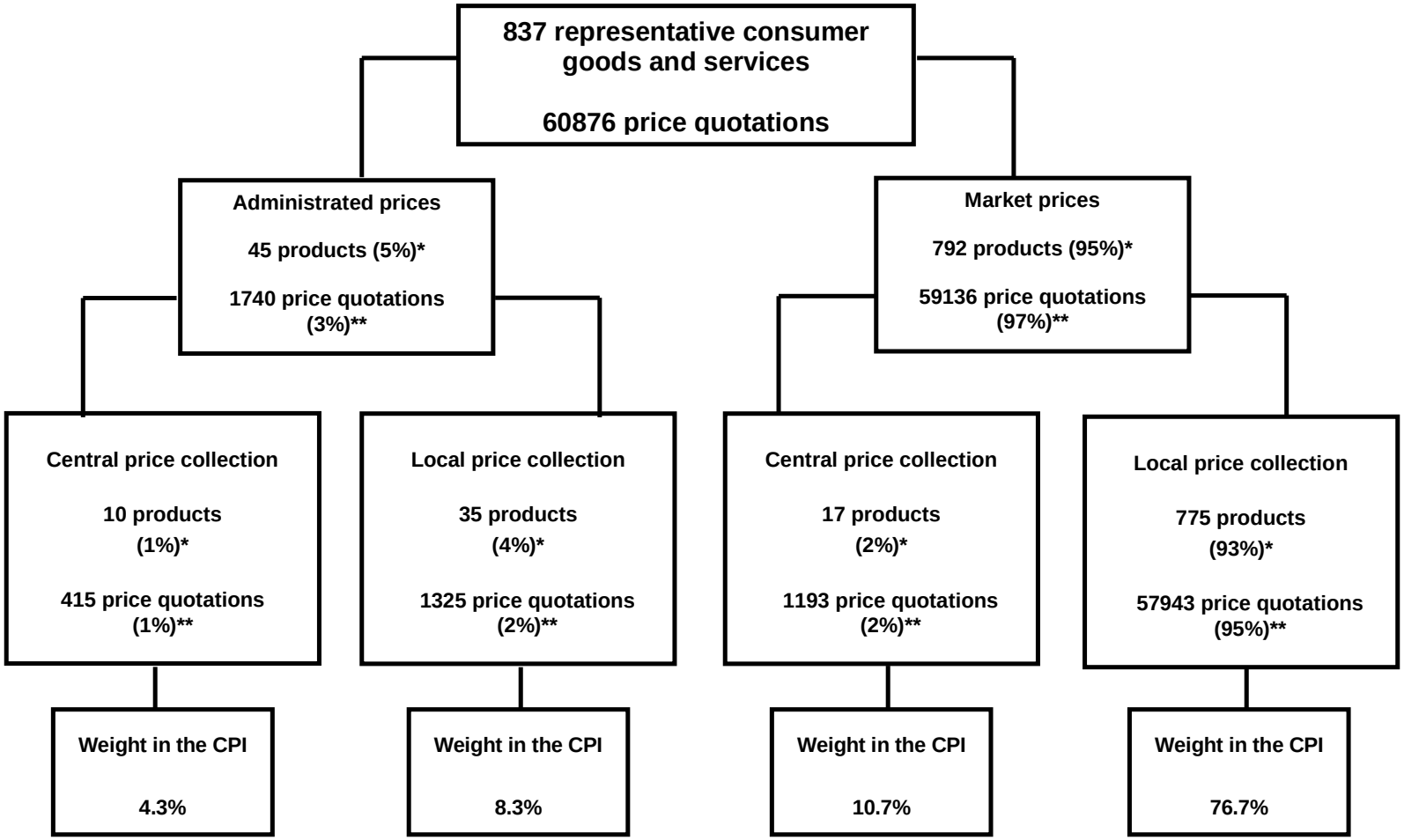
COVERAGE OF REPRESENTATIVE CONSUMER GOODS AND SERVICES (MARCH 2008)



* Share in the total number of representative products.
** Share in the total number of price quotations.

Annexe 2

PRICE COLLECTION BY THE CENTRAL AND THE LOCAL STAFF (MARCH 2008)



* Share in the total number of representative products.
** Share in the total number of price quotations.

Annexe 3

PRICE DATA SOURCES AND COLLECTION TECHNIQUES

	Data sources and collection techniques	Product groups
Local price collection	Registration through visiting the outlets	Consumer goods and services
	Legal acts	Cold and hot water Centralised heat Rents in public housing Refuse collection Sewerage collection Elevator operation Fees for the maintenance of the dwelling Car parking fee Local automobile transport services Local waterway transport services Some services for pets Some educational services (e.g. pre-primary education) Some social services (e.g. provided at home for disabled or elderly persons) Meals in a pre-school establishment
	Internet	Goods (e.g. household equipment and goods for routine maintenance of the house) Services (e.g. provided by cinemas, theatres, museums, restaurants)
	Catalogues, Pricelists	Furniture Major household appliances Equipment for the reception, recording and reproduction of sound and pictures Photographic and cinematographic equipment
	Advertisements	Housing rent in private sector Services of repair of the dwelling
	Telephone inquiries	Fuel Some services (e.g. dry-cleaning)
Central price collection	Legal acts	Electricity Natural gas Some hospital services Vehicles technical inspection Local railway transport services Interurban bus services Postal services Some educational services Notary services
	Internet	Data processing equipment Cars Sanatoria services Telecommunications services Package holidays Financial services
	Electronic questionnaires, Paper report	Air transport services Insurance services

Annexe 4

TIMETABLE OF THE OLD PRICE COLLECTION PROCEDURE

Monday		**6**	**13**	**20**	**27**
Tuesday		**7**	**14**	**21**	**28**
Wednesday	**1**	**8**	**15**	**22**	**29**
Thursday	**2**	**9**	**16**	**23**	**30**
Friday	**3**	**10**	**17**	**24**	
Saturday	**4**	**11**	**18**	**25**	
Sunday	**5**	**12**	**19**	**26**	

Services and other non-food products

Clothing and footwear

Food and non-alcoholic beverages and alcoholic beverages and tobacco

Seasonal food products

Fuels

TIMETABLE OF THE NEW PRICE COLLECTION PROCEDURE

Monday		**6**	**13**	**20**	**27**
Tuesday		**7**	**14**	**21**	**28**
Wednesday	**1**	**8**	**15**	**22**	**29**
Thursday	**2**	**9**	**16**	**23**	**30**
Friday	**3**	**10**	**17**	**24**	
Saturday	**4**	**11**	**18**	**25**	
Sunday	**5**	**12**	**19**	**26**	

Main price collection

Additional price collection for fuels and seasonal food-products