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FURTHER DEVELOPMENT OF THE POLISH CONSUMER PRICE STATISTICS*

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ABSTRACT

This paper summarises surveys on retail and consumer prices which used to be carried out by the official statistics in Poland and it describes also main aspects of the methodology of consumer price indices applied currently in the country. Respecting the long history of statistical surveys on prices paid by Polish households, it has to be said that the biggest step was made in the second part of the nineties when the EU harmonised methodology was gradually implemented in GUS. Then Poland joined several other European countries covered by harmonisation of consumer price measurement.

* This paper has been prepared by Mrs. Alina Gluchowska, Central Statistical Office of Poland, at the invitation of the Secretariat.

International methodology is developing constantly and therefore further improvement of consumer price statistics is needed. Development in this area of statistics in Poland should take advantage of recent international achievements of price statistics, such as the new EU legislation on HICP, the CPI Manual (ILO, 2003) and the 2003 ILO resolution on CPI. The paper illustrates progress made in the Polish CPI and indicates those aspects of it which need further improvement in the light of the newest international standards. The paper is an updated version of the article published in December 2004 edition of *Statistics In Transition*, Vol. 6, No 7.

I. INTRODUCTION

1. Changes in prices of goods and services purchased by the population for consumption are regarded as key statistical data and required by all kinds of users on both the macro- and microeconomic level as well as by individual consumers. This is a reason for increasing demand for high quality statistical data reflecting the economic and social conditions is a stimulating factor for methodological development in the field of price index calculation. Although consumer price survey has a long history in Poland, it can be pointed out that the development of consumer price measurement methodology became much faster starting from the late eighties.

2. The recommendations given in 1987, provided thorough grounds for methodological changes to be introduced by the Polish Central Statistical Office (CSO). During the following years the methodological principles of CPI measurement were improved, among others following the detailed instructions for CPI measurement given in the manual published at the initiative of ILO and edited by Turvey (1989).

3. The Polish CSO started to modernise retail price measurement in the early nineties, basing its concepts on both the international experience and domestic forum discussions (scientific conference organised in 1989 by the Polish Statistical Association, the Committee on Econometrics and Statistics at the Polish Academy of Sciences and CSO and in 1991 - an international seminar on price statistics with the participation of experts from USA (Bureau of Labor Statistics — BLS) and Eurostat.). The adjustment of Polish price statistics to international standards was carried out in close co-operation with international organisations, especially Eurostat.

4. The definition of an index depends on the purpose for which it is intended. In general, the consumer price index (CPI) is a measure of the changes over time in the prices of goods and services purchased by the population for consumption. However CPIs are used in practice for different purposes, in the great majority of countries they are treated as the main inflation measure. It is equally difficult to design directly a true cost of living index or to measure an ideal whole-economy inflation rate covering transactions in all the sectors of economy. Therefore, the CPI is considered as the closest to the measure of both price and cost of living changes. In Poland, the CPI is an indicator reflecting inflation in consumer prices as its methodology is based on the Eurostat HICP approach.

5. There is a strong connection between the definition and objective on the one side and the name of the index on the other. The term designating the index has changed in Poland over time.

In the first half of the twentieth century the term "cost of living indicator" was the most popular. However, after the Conference of European Statisticians in 1947 "consumer price index" was recognised as more adequate and the former name was gradually dropped. Nevertheless, in Poland up to the late eighties price indices for particular groups of households were referred to as "cost of living indices". Since 1991 the term "index of consumer goods and services" has been used. The term "consumer" was for the first time applied to goods and services purchased by the population so as to indicate that they were designated for consumption, and not for production or investment. Before 1991 two types of indicators were measured and published by the Polish CSO - the previously mentioned cost of living index and the retail price index. The first was calculated for different groups of households using household expenditure on consumer goods and services as the weighting system; the other for the total population using the retail sales structure as weights. After major changes in the price measurement methodology in 1991, data on household expenditure based on household budget surveys (HBS) have been used as the main but not the only source for designing the weighting systems for consumer price indices.

6. The CPI is commonly referred to as the inflation rate, especially when measured over a 12-month period. It should be remembered, however, that this is a simplification, because this indicator is just one of several possible inflation measures. Inflation is understood as a simultaneous, persistent increase in the general level of prices. It might affect all the economic spheres of the country.

7. The adoption of common terminology in price statistics, and its implementation in statistical practice at the international level, is one of the conditions of achieving international comparability. The basic terminology of price measurement is contained among others in the EU legislation on HICP (2001), and material prepared after the meeting of the expert group appointed by ILO in 2001 and in the ILO Manual (2003). The Polish CSO uses this terminology and makes it more familiar to the data users publishing it in its statistical Internet glossary.

II. SAMPLING

8. Price surveys on consumer goods and services are conducted on the basis of a sample which covers price survey areas, outlets and representative items. The virtues of random sampling are well known; though it has to be said there are practical difficulties for its implementation in the CPI. But it is not possible in practice to include in a survey all existing products and outlets. For these reasons surveys based on purposively chosen samples are the most common cases. This might lead however to bias resulting from subjective choices, and attempts should be made to gradually implement random sampling methods for price surveys. In the Polish CSO, focusing more on the other crucial CPI methodology aspects, no such trials have been undertaken. A prerequisite for this work is the existence of good quality (updated) registers at each stage of sampling, namely, price collection areas and outlets. Dynamic development of the market and the retailing structure in Poland is also a serious obstacle.

9. Rapid changes in the Polish economy, in particular the structure and volume of supplies together with sharp upward price movements, which began in 1989, required a radical increase in the sample for retail price surveys. The list of goods and services for which retail prices were collected for the CPI needs was at that time expanded from 1,200 to about 1,500. The number of

areas surveyed was increased to 307 (as compared with about 120 previously). In the following years the sample size was determined by the CPI accuracy requirements conditioned by such factors as: measurements for all socio-economic groups of households (since 1994), classification changes (in 1999) and data breakdown according to the new administrative division of the country (16 voivodships since 2000).

10. In 2005 prices of about 1800 consumer goods and services were collected in 308 survey areas. The criteria used to determine the number of price collection areas in a given voivodship included the locations and density of retail outlets relative to the size of the local population, as well as sales values and volumes.

11. The number of representative goods and services, price survey collection areas and frequency of collection have an effect on the number of prices observed during a month, which for Poland amounts to about 0.5 million.

12. The sample size is not always dependent on the territory of the country and the differences may result from the level of detail in describing the representative items. The Polish CPI sample seems to be quite large in comparison with other country CPIs.

13. As the inflation rate remains at a low level during recent years and may be expected to be stable also in the future, this is the right moment to review the sample for the Polish CPI. When considering rationalisation of the sample size aimed at a reduction, it should be remembered that the sample needs to be large enough to provide, for example reliable regional indices and accurate product average prices for those users who require them.

14. Rationalisation of the sample size started in 2006 from the number of price collection areas. Currently prices are collected in 207 survey areas. This reduction has been preceded by number of simulations ensuring that it was not going to affect the total index more than 0.1% y/y.

III. FREQUENCY AND TIMING OF PRICE COLLECTION

15. Following international recommendations prices should be collected once a month but there are no regulations limiting more frequent observations, especially when prices of certain products might change frequently and significantly during a month or when it is in accordance with users' requirements and there are no financial obstacles.

16. The ILO and EU guidelines (till recently) have not specified the day of the month for price collection. On the other hand, there is a requirement to prevent systematic skipping of price reductions and promotions on many products, because this could affect the survey results.

17. In Poland, starting from 2004, prices are collected once a month, except for vegetables and fruit for which prices are collected three times a month. The schedule for price collection is made by regional statistical offices. In the "Rules of retail price collection" issued by the CSO for price collectors (2002 edition updated) it is pointed out that the dates of observation for a given group of goods in a given area should be carefully chosen to avoid e.g. a concentration of collection at the beginning of the month and then at the end of the following month.

18. In accordance with the ILO recommendations, a fixed interval should be kept between month to month price collections. The spread of observations over time in different price collection areas provides information about average monthly prices. The ILO Manual says that price collection days (and sometimes times) should be set in advance. This is followed in Poland, but given that the price collection timetable is currently rather fortuitous, it would be advisable to establish a more fixed frame of price collection for the country — especially when the sample reduction is considered.

19. Using international recommendations in this area, schedules might be drawn up for different price survey areas or for particular type of products, for example, food — the first week of the month, housing — the second week, clothing — the third week, other goods and services — the fourth week. Such a scheme should take careful account of, for example frequency of changes in prices which usually are introduced for particular group of products. Although this is as simple as arbitrary, it would introduce a degree of consistency and order into the survey. EU legislation, expected soon, on this issue has changed recently. In accordance with the newly the EU law (to be introduced from 2008) prices must be collected across a one working week period, or near, the middle of the calendar month to which the index pertains. Moreover, where products are known to typically show sharp and irregular price changes within the same month, price collection shall take place over a period of more than one working week. This rule shall apply in particular to the products such as energy products and fresh food (e.g. fruit and vegetables).

IV. PRICE COLLECTION TECHNIQUES

20. In most countries price measurement is carried out by price collectors, but only in some of them (like Poland) are they full-time employees of statistical offices. Statistical offices sometimes commission this task to specialised agencies. Various methods and techniques of data collection are applied, depending on the type of prices and data sources.

21. For prices fixed administratively, price lists and administrative decisions issued on the national scale are used as the source. In such situations the information on prices is collected centrally. Another type of central collection is the use of catalogues published by large retailers. Telephone and fax are also used centrally for certain items, particularly services.

22. Internet started to be used as a source of information on price changes in Poland from 2006.

23. The most common technique of data collection remains the questionnaire in paper form, though more and more countries are providing their price collectors with portable computers, whose main advantages are improving comfort of work, shortening the time of price collection and helping to avoid errors due to simultaneous automatic data checking. The Polish CSO also introduced portable computers for price collection in 2005.

V. PRICE AND QUALITY CHANGE

24. The treatment of quality change as one of the factors influencing the price survey results has been discussed for many years, but with a greater intensity since 1996 after the publication of the Boskin report. Experts are not united in their opinions on the range of corrections to be made with regard to quality change, but most admit that it is a very important methodological aspect. There are more and more publications available, describing new methods of quality adjustment. The two types often indicated are implicit and explicit adjustments.

25. The Polish CSO has been using mostly implicit methods so far, however, work is continued to develop quality adjustments appropriate for particular groups of goods and services. Among the quality adjustment methods considered are those most frequently suggested by international bodies:

- (a) overall or class mean imputation;
- (b) overlap or bridged overlap;
- (c) link-to-show-no-change;
- (d) essentially equivalent substitution;
- (e) judgmental methods;
- (f) quantity adjustment;
- (g) differences in production costs or option costs;
- (h) hedonics.

26. However, considering that some of the above methods have been much criticised during international meetings and conferences (the method chosen might affect the survey results) it would be important for international harmonisation to have the permissible methods determined and to design guidelines for their practical use. Adaptable international standards in this area have not been developed so far.

VI. FORMULA AND WEIGHTING SYSTEM

27. At the level below the elementary aggregate, geometric means of price relatives are applied in Poland (Jevons price index type). At higher levels of aggregation, for practical reasons the modified Laspeyres index formula is adopted in Poland. According to this formula the system of weights is taken from the base period and not the survey period. The base period for the Polish CPI, both for weights and prices, is the previous year. In HICP measurement the EU regulations allow the use of weights based on the annual structure of household consumer expenditure relating to a period not earlier than 7 years before the current year, but updated every year with new groups of goods and services if they are purchased by consumers in sufficient quantity. Taking into account continuing changes in household consumption patterns and development of the market, Poland updates the weights annually both for CPI and HICP measurement.

28. When designing the weighting system it is necessary to pay particular attention to certain kinds of products, such as seasonal goods and services, insurances, second-hand goods, consumers' expenditure abroad, expenditure of institutional households, interest, own consumption as well as housing-related expenditure (on purchase, reconstruction and decoration

of houses and flats). According to the ILO resolution it is an optional decision of national statistical offices whether to include these items in the CPI or not. The current EU regulations on HICP are stricter. Following them, out of the groups of products mentioned above the following should be included in the index: seasonal goods and services, non-life insurance (it is recommended to take the mean value from the last three years for weights), second-hand goods (in particular cars sold by companies), foreigners' expenditure within the country and expenditure of institutional households. The Polish CSO introduced these rules for HICP. In case of CPI the latter two are not included. The items to be excluded are: households' expenditure abroad, interest on credit and own consumption.

29. Methodological work carried out recently by Eurostat has been aimed at including in HICP the expenditure on purchasing and building dwellings. These items would be treated similarly to other durable goods, such as cars. The Polish CSO participated in the pilot survey on this topic. As proposed by Eurostat, the price index for owner occupied housing would be in the first stage calculated as an index accompanying the HICP. In some countries such expenditure is included in the national CPI, though methods applied for index calculation vary. In Poland, until 1998, the CPI included the so-called "cost of acquisition of a flat", which was excluded from the national CPI when HICPs began to be calculated. The new methodology in Poland for the owner occupied housing price survey has to be developed and introduced following any forthcoming the EU regulation, though according to the definition adopted by the national accounts and household budget surveys, the purchase of a flat or a house is not treated as consumer expenditure.

30. International recommendations stipulate that another source of data for the weighting system for CPI, in addition to household budget surveys (HBS), is provided by the national accounts statistics. So far HBS is treated in the Polish CSO as the basic source of data for the weighting system construction. Additionally, some information from the national accounts and trade statistics is used. HICP methodology is based on the concept of "Household final monetary consumption expenditure". Current international trends in statistics also point to the possibility of using national accounts statistics as the main source of data at the higher levels of aggregation and HBS results at the lower levels. This approach is considered in Poland as likely to be followed not only in respect to the HICP but also to the CPI.

31. As for seasonal goods, statistical practice allows the use of both variable weights (depending on monthly consumption), i.e. the so-called Rothwell method (used in Poland since 1992) and fixed annual weights. There are different opinions on the application of these methods. Both kinds of weights — fixed and variable — have advantages and disadvantages, and as a result of the lack of uniform international recommendations both methods are accepted, even though they are likely to produce differing results. This issue needs more consideration.

VII. COVERAGE OF CONSUMER PRICE INDICES

32. The various types of CPI calculated should be determined by the requirements of statistical data users and the objective of CPI measurement. In general, European (EU) and other international (UN ECE, ILO) recommendations concerning the geographic, demographic and product coverage of CPIs are convergent, but some differences can be found in the detail.

33. As for the geographic coverage, CPIs fulfilling the conceptual criteria of an inflation measure should cover the goods and services accessible on the territory of the country, satisfying the consumer needs of the population of that country (domestic concept). This means in particular that the sample includes both domestic products and imported ones sold in domestic trading outlets, with the exclusion of citizens' expenditure abroad. The CPI measured by the Polish CSO fulfils these criteria.

34. In accordance with the EU regulations HICP measurement requires taking into account foreigners' expenditure (excluding business expenditure) made on the economic territory of the country. Therefore, the Polish CSO has made estimates, based on the data available, i.e. from the pre-border survey carried out until recently and from the national accounts. However, the data are not available in the proper aggregation or in sufficient detail. This question should be carefully examined in the near future, particularly regarding the possibility of obtaining data from other potential sources such as tourist companies. It is supposed, however, that in Poland the share of foreigners' expenditure in the total expenditure of households is not as significant yet as in many EU countries, where the tourist inflow is much greater. The weighting system used for the Polish national CPI does not take account of the estimated expenditure of foreigners, mainly because this index is used for the indexation of pensions and retirement payments in the country as well as the deflation of other domestic economic data. But more attention should be paid in the Polish CSO to the inclusion of foreign tourists and residents whose numbers seem likely to increase in the future.

35. In accordance with the international standards concerning geographic coverage, the CPI should be representative of the whole country, though its breakdown by region is not required. The decision on this question is taken individually by national statistical offices with respect to country size, the needs of data users and funding available. The Polish regulations oblige the CSO to present a CPI by voivodship every quarter, while the HICP is determined as a national index only, without territorial breakdown.

36. Following international recommendations concerning demographic coverage, the CPI should cover all types of household, regardless of their economic status. However, the updated resolution of ILO (2003) is more liberal than EU regulations (2001), in its statement that for practical reasons (such as difficulties in reliable data collection) or because of financial problems the expenditure of certain types of households, e.g. very rich or very poor ones or those living in certain regions of the country could be excluded from the weighting system. It is however necessary to inform the data users about it. The Polish CPI takes into account all types of households regardless of their economic status.

37. Since January 2003 the Polish HICP in accordance with the regulations has included the estimates of institutional households' expenditure based on national accounts data. However, considering the fact that these figures are not at the necessary level of detail, this issue requires further study and improvement of the estimation method. CPI for domestic needs does not include institutional households.

38. EU regulations do not require HICPs for particular types of household. However, the ILO resolution indicates that CPIs are produced for particular population groups if such data are needed in a country. From 1993 to 2005 the Polish CPIs were published for seven groups of

households: employees and employees-farmers (combined), employees, employees-farmers, farmers, the self-employed, retirees and pensioners, and households maintained from non-earned sources. In addition, from 1998 separate indices are calculated for retirees and for pensioners. Due to changes in HBS survey, since 2006 there are five groups of household, i.e. without employees and employees-farmers (combined) and employees-farmers. These indices reflect price variations on consumer goods and services purchased by particular socio-economic groups.

39. In accordance with the recommendations concerning product coverage, CPIs should include goods and services purchased by households in monetary transactions in order to satisfy their consumers' needs (excluding investments and production). This indicates that the so-called own consumption (e.g. products from own garden or farm) as well as goods and services received as gifts or donations or part of consumption provided by the state is not taken into account by the Polish CSO.

40. Most countries, including Poland, take into account only those prices which are paid in legal transactions. This is the reason why such products as narcotics are not included in the Polish CPI. However, it is recommended to take into account hidden economy transactions, if possible. The indices calculated by the Polish CSO include e.g. the prices of lessons given by private tutors. It would be worthwhile to review the range of hidden economy transactions (using the national accounts definition) to identify the groups of products the prices of which should and could be observed.

41. The prices collected for CPI measurement include all kinds of indirect taxes, and perhaps also some direct ones if they represent actual consumer expenditure. However, intensive work is carried out within the EU, including Poland, with the aim of having worked out methodological rules for calculating consumer price indices with constant tax rate.

42. The Polish survey covers all types of prices including those set administratively, referred to as official and controlled prices. The scope and definition of these prices vary from country to country. National variations in financial and budgetary systems, also different tax systems, may bring as a result a lack of harmonisation in this area.

43. The survey includes the prices paid in trading outlets (usually non-negotiable), also those agreed between the seller and the buyer (e.g. on the market place). The index should cover, in the appropriate proportions, the goods and services purchased in different kinds of trading outlets (mentioned in the first part of the paper). The data for this purpose should basically be derived from trade statistics. The trade statistics properly developed seems a significant factor for the future of many statistical surveys (not only for price measurement purposes). Trading outlets include both small "corner" shops usually selling everyday products, and also specialised ones with a narrow range of products as well as large supermarkets, department stores, pharmacies, petrol stations etc. Price collectors record prices not only in average standard outlets, but also in luxury shops, trademark shops and fixed markets. These rules are implemented by the Polish CSO, though the choice of trading outlets is left to regional statistical offices which not only have access to local trading reporting but also have gained empirical knowledge about the local market.

44. In case of the prices of goods and services subsidised by the state, the index should account for that part of price which is actually paid by the consumer. The Polish CSO follows

these rules, for example in the case of medicine prices (partially subsidised by the state). Similarly, the CPI includes prices reduced due to promotions, post-seasonal price reductions etc.

VIII. CLASSIFICATION

45. In 1999 the Polish CSO adopted uniform classification standards, starting to use the Classification of Individual Consumption according to Purpose (COICOP) as recommended by international organisations. It was applied earlier (1997) for HBS. Eurostat adapted COICOP to HICP purposes and this version is known as COICOP/HICP.

46. In Poland, as in many other countries, the same classification is used for the national CPI. COICOP/HICP consists of 12 divisions (two-digit levels), 39 classes (three-digit levels) and 93 groups (four-digit levels). Work is continued in the EU which aims to have further breakdown below the COICOP groups, but in practice it depends on the availability of statistical data at an appropriate level of detail. Further levels of division (five-, six- and seven-digit ones) are applied by the Polish CSO. A more detailed breakdown depends on the nature of a given group of products i.e. assortment and price differentiation.

IX. DATA VALIDATION

47. The literature on price statistics gives a classification of possible errors which may affect CPIs. In addition, the ILO resolution reminds price statisticians of certain aspects of the survey which can become the source of errors. They include such factors as incorrect selection of representative goods and services to be surveyed, mistakes in price recording, disregarding quality changes, lack of sample updating with new goods and services, inappropriate calculation formula. These errors can be avoided by applying strict methodological principles, observing them carefully and checking the data.

48. The Polish system of price statistics has a tradition of data validation (also automatic with the use of special software) at several stages of the survey: preparation and price recording in regional statistical offices (also with the use of portable computers) and while index calculation in the CSO.

49. Following international standards, expert committees are appointed in many countries, involving researchers, statisticians and main users of price data, such as trade unions, central bank, ministry of finance etc. The task of such a group is to formulate, analyse and accept the methodological principles. In Poland a similar role is played by the Statistical Council, the Scientific Council of Economic and Statistical Research Establishment, and the Programme and Methodological Commission. However, no special committee has been appointed for consumer price statistics.

X. CPI TYPES, THEIR PURPOSES, DATA USERS AND PUBLICATION DATES

50. There are three basic functions to be performed by consumer price indices: as a deflator, in economic and market analysis and for indexation. In order to comply with them according to the public statistics programme the following types of indices are produced by the Polish CSO:

- (a) Price indices of consumer goods and services (CPI):
 - (i) as overall CPI and by the aggregates required by users — computed annually since 1950 and monthly and quarterly since 1982. The scope of indices is defined by the analytical and deflation requirements of the data users: both internal (mainly national accountants) and external (Ministry of Finance, Central Bank, IMF, ILO, World Bank, OECD etc.) The indices are also used for indexation purposes in accordance with national legislation;
 - (ii) for particular socio-economic groups (as mentioned earlier in this paper). These indices are produced monthly, quarterly and annually. They are published as an overall CPI for each of socio-economic groups and for aggregated product groups. These indices are used for indexation and deflation purposes too;
 - (iii) by region — since 2000 a CPI is published quarterly and annually for each voivodship and for aggregated product groups. Such data are used for indexation purposes in accordance with the legislation mostly on building cost estimation.
- (b) Harmonised indices of consumer prices (HICP) — calculated since 1997 and transmitted by CSO to Eurostat in accordance with unified methodology, to be used for the evaluation of the economy and price stability, especially as for the compliance with the inflation criterion of Maastricht Treaty;
- (c) Core inflation indices — prepared by the Central Bank of Poland for monetary policy purposes with the use of detailed data from the CSO consumer price survey.

All the above price indices are calculated as Laspeyres-type indicators. The only one computed annually according to the Paasche formula is for the deflation purposes of national accounts statistics.

51. CPIs should be published and made available to users in the shortest possible time in accordance with international standards. The most frequently adopted deadline is about 2 weeks after the reference month. The Polish CSO observes this rule. In 2003 the dates of national CPI announcement were speeded up (on average by 1-2 days) in order to adapt them to the schedule of data transmission to Eurostat and the release time of HICP data by the European Commission. National CPIs are announced as final data (except for January because of the change of the weighting system), while the HICP can be revised, i.e. it can be changed retrospectively following the introduction of methodological changes in the scope of index, etc.

52. Further acceleration the deadlines of CPIs announcing, if necessary, can be considered only in terms of shortening the period of price collection.

XI. CONCLUSIONS

53. Polish consumer price statistics, though evaluated by international institutions and main users as being of good quality, should be further developed. There is an obligation to implement efficiently the successive EU laws considering Polish membership of the EU, which oblige to treat compliance with Eurostat methodological requirements as a priority. However, methodological and organisational modifications of this survey for domestic needs should be implemented carefully, respecting the recommendations of the other international organisations (e.g. UN, OECD, ILO or IMF) to which Poland belongs.

54. In view of EU membership it seems reasonable to adopt the Eurostat HICP methodology also for the Polish national CPI, with a few reservations mentioned before. Improvements in price statistics methodology will depend partially on further CPI harmonisation in the member countries. The concept of constructing a “family” of price indices based on HICP methodology would in practice mean adopting HICP as an official inflation measure and HICP methodology for the other consumer price indices produced by statistical offices for national needs. Possible measures to be taken would be aimed at increasing further the comparability of consumer price indices on the international scale.

55. The economic aspect of the survey is of importance here. Having in mind careful management of resources it seems to be justified to apply in future some of the methodological principles, namely those relating to sample selection and price recording, as common for both surveys. The differences should concern some other aspects: system of weights, coverage, product scope, aggregation and data publication. The methodology should be formulated so as to meet the needs of the main users of data.

REFERENCES

- ALLEN R. G. D., (1975), *Index numbers in theory and practice*, Aldine Publishing Company, Chicago.
- ASTIN J., (1999), *The European Union Harmonised Indices of Consumer Prices (HICP)*, Statistical Journal of the United Nations ECE, 16.
- AT WHAT PRICE? Conceptualizing and measuring cost-of-living and price indexes*, (2001) The National Academy of Science, National Academy Press, Washington DC.
- BOSKIN M.J., DULBERGER E., GORDON R., GRILICHES Z., JORGENSEN D., (1996), *Toward a More Accurate Measure of The Cost of Living*, Final Report to the US Senate Finance Committee, Government Printing Office, Washington, D.C.
- CZAJKA B., NOWAK L., (1991), *Metodologia Obliczania Wskaznikow Cen Konsumpcyjnych* (Methodology of consumer price indices calculation), "Wiadomosci Statystyczne" vol. 2, Warsaw.
- EUROSTAT (2001), *Compendium of HICP*, Reference documents, Commission of the European Communities, Eurostat.
- GLUCHOWSKA A., (2002), *Metody hedoniczne w statystyce cen* (Hedonics methods in price statistics), "Wiadomosci Statystyczne" vol. 2, Warsaw.
- GLUCHOWSKA A., TUREK D., (1993), *Ceny artykułow żywnościowych* (Prices of food), "Wiadomosci Statystyczne" vol. 10, Warsaw.
- GUS (1985), *Zasady metodyczne statystyki cen detalicznych i kosztów utrzymania* (Methodological rules for retail price statistics and cost of living statistics), *Zeszyty metodyczne*, vol. 54, Warsaw.
- GUS (1990), *Statystyczne metody badania cen* (Statistical methods of a price survey), (1990), "BWS", vol. 38, Warsaw.
- GUS (2002), *Zasady notowania cen detalicznych. wskazowki dla ankietow Urzedow Statystycznych*. (Rules of retail price collection. Guidelines for price collectors in regional statistical offices), Warsaw.
- HILL P., (1999), *Inflation, the Cost of Living and the Domain of a Consumer Price Index*, the Joint ECE/ILO Meeting on Consumer Prices, Geneva.
- ILO (2001), *Consumer Price Indices*, Meeting of Experts on Labour Statistics, Geneva.
- ILO (2003), *Consumer Price Indices*, ILO Manual, www.ilo.org.
- ILO (2003), *Resolution Concerning Consumer Price Indices*, Seventeenth International Conference of Labour Statisticians, ILO, Geneva, www.ilo.org.
- KORDOS J., (1988), *Badanie indeksow cen konsumpcyjnych w Polsce w swietle zalecen miedzynarodowych* (Consumer price survey in Poland in the light of international recommendations), "Wiadomosci Statystyczne" vol. 7, Warsaw.
- KORDOS J., (1990), *O dokladnosci i precyzji indeksow cen konsumpcyjnych* (Accuracy and precision of consumer price indices), "Wiadomosci Statystyczne" vol. 5, Warsaw.
- KORDOS J., CZAJKA B., (1987), *Consumer Price Indices in Poland*, Journal of the United Nations ECE, vol. 5.
- KORDOS J., DUBLANKA I., (1982), *Metody badania cen towarow i uslug konsumpcyjnych w latach 1975-1982* (Methods for surveying consumer prices of goods and services in years of 1975—1982, "Wiadomosci Statystyczne" vol. 12, Warsaw.

- KORDOS J., KOWALSKI G., (1983), *Program badan cen towarow i uslug konsumpcyjnych w warunkach silnej nierownowagi rynkowej* (A program of surveying consumer prices of goods and services in a highly unstable market), "Wiadomosci Statystyczne" vol. 1, Warsaw.
- KUBICZEK F., (1990), *Statystyka cen detalicznych we Francji* (Retail price survey in France), "Wiadomosci Statystyczne" No 9, Warsaw.
- LUSZNIEWICZ A., (1984), *Indeksy Kosztów Utrzymania, Teoria i Praktyka* (Cost of living indices. Theory and practice), Panstwowe Wydawnictwo Ekonomiczne, Warsaw.
- NOWAK L., (1992), *Organizacja badania i metody gromadzenia informacji o poziomach cen towarow i uslug konsumpcyjnych* (Organisation of the survey and methods of price collection on consumer prices of goods and services), "Wiadomosci Statystyczne" vol. 2, Warsaw.
- OKOLSKI M., TIMOFIEJUK I., (1981), *Statystyka ekonomiczna. Elementy teorii* (Economic statistics. Elements of Theory), Panstwowe Wydawnictwo Ekonomiczne, Warsaw.
- ROMANIUK K., (1976), *Indeksy dynamiki zjawisk ekonomicznych* (Indices of dynamics of economic phenomena), Panstwowe Wydawnictwo Ekonomiczne, Warsaw.
- ROSC Report by IMF, (2003), www.imf.org.
- SMILOWSKA T., (2001), *Proba uwzglednienia jakosci w badaniu cen* (An attempt at introducing quality change in the price survey), "Wiadomosci Statystyczne", vol. 5, Warsaw.
- SMILOWSKA T., CYNKIER A., (2002), *Metody uwzglednienia jakosci w badaniu cen* (Methods of introducing quality change in the price survey), "Wiadomosci Statystyczne", vol. 8, Warsaw.
- TOCZYNSKI T., (1987), *Ceny urzedowe, regulowane i umowne. Tendencje zmian w latach 1985—1986* (Prices: administrated, regulated and contracted. Trends in years 1985—1986), "Wiadomosci Statystyczne", vol. 10, Warsaw.
- TOCZYNSKI T., (1989), *Badanie cen detalicznych. Rozwiazania obecne i propozycje modyfikacji*. (Retail price survey. Current solutions and proposals for modifications), "Wiadomosci Statystyczne", vol. 10, Warsaw.
- TUREK D., (1992), *Metodologia obliczania wskaźnikow cen konsumpcyjnych i niekonsumpcyjnych* (Methodology of calculations of consumer and non-consumer price indices), "Wiadomosci Statystyczne", vol. 2, Warsaw.
- TUREK D., (1995), *Przegląd praktycznych rozwiązań stosowanych w badaniu cen konsumpcyjnych w Polsce* (A review of the practices introduced in the consumer price survey in Poland), "BWS", vol. 44, Warsaw.
- TUREK D., GLUCHOWSKA A., (1995), *Jak Sie Liczy Ceny?* (How prices are calculated?), Statystyka Polski — dodatek do dziennika "Rzeczpospolita" No 1(71), Poland.
- TURVEY R., (1989), et al. *Consumer Price Indices*, An ILO Manual, Geneva.
- UNITED NATIONS (2000), *Classification of Individual Consumption According to Purpose*, United Nations, New York.
