



**Economic and Social  
Council**

Distr.  
GENERAL

ECE/CES/GE.22/2008/6  
26 February 2008

Original: ENGLISH

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**ECONOMIC COMMISSION FOR EUROPE**

**CONFERENCE OF EUROPEAN STATISTICIANS**

Joint UNECE/ILO Meeting on Consumer Price Indices

Ninth meeting

Geneva, 8-9 May 2008

Item 7 of the provisional agenda

**FUTURE CHALLENGES AND THE ROLE OF THE JOINT CONSUMER PRICE  
INDICES MEETINGS**

A LOOK BACK AT THE FIRST THIRTY YEARS AND A LOOK FORWARD

Note by the Office for National Statistics, United Kingdom

Summary

This paper reviews the work undertaken in connection with the joint UNECE/ILO meetings on consumer price indices and provides some pointers for future agendas. It does this by reference to the range of the topics which have been discussed, the current practices in compiling consumer price indices, and the identification of the main outstanding issues. It also looks at practical issues relating to compliance with the International Labour Office resolution.

Keywords: consumer price indices, International Labour Office resolution, compilation practices, practical solutions, bias, harmonisation, unresolved issues, forward work programmes, country participation.

## I. INTRODUCTION

1. The first joint meeting of the ECE/ILO on consumer price indices took place in 1978 from an initiative led by the International Labour Office (ILO) to promulgate good practice in index compilation by sharing good practice and discussing mutual problems confronted by index compilers. There have been twelve meetings in total, with over 200 papers by representatives of about fifty-five organisations worldwide and by specialist consultants.
2. The meetings also have been an important forum for developing/transition countries to get involved with the international community on consumer price indices. Representatives from at least 20 countries which may be considered as developing or in transition have presented papers at one, or some, of the meetings and many others have participated without presenting a paper.

## II. TOPICS COVERED

3. Information relating to the inaugural joint meeting in 1978 is very sparse and it is only from the next meeting in 1981 that detailed records can be found. That said, the minutes for the first meeting have been located and our Consumer Price Indices (CPI) colleagues then were already grappling with some of the issues we are hotly debating today such as: the statistical requirements of a CPI being dependent on its use (with the implication that more than one measure is needed); domestic and national concepts of consumption (i.e. the treatment of foreign visitors); the pros and cons of using imputed rents for owner-occupier housing costs; whether personal insurance includes an element for the “feeling of security”. There was informed debate although, perhaps not surprisingly, very little in terms of solutions offered.
4. The papers presented at each of the previous meetings are listed at Annex A and make for an impressive listing. The more active participation in recent years by developing countries is a welcome trend and probably reflects, at least in some part, the increased statistical capacity of these countries.
5. More helpful for the purposes of the current paper, is table 1. This groups the papers by subject area. Whilst the categorisation of papers is broad-brush and does not take into account the relative importance of each topic in terms of discussion time it is nonetheless instructive. Overall it reveals a wide range of issues being discussed covering practically all areas of Consumer Price Index compilation.
6. Looking at the table in more detail some interesting points emerge:
  - (a) A significant proportion of the papers presented – accounting for more papers than any other topic - relate to individual countries reporting on ‘*national methodological changes*’. Papers explaining how (and why) countries have updated their CPI methodology have provided countries with a good opportunity to share with other index compilers best practice, detailed practical guidance and lessons learned together with any residual issues. This fulfils one of the purposes of the joint meetings.

- (b) The opportunity taken to share best practice or issues of mutual interest is reinforced by countries presenting papers under the label of ‘general national examples’, that is, papers which raise *specific country issues* or perhaps introduce the group to that country’s CPI methodology and its uses. It has also allowed countries to seek advice from their peers on issues that they are facing.
- (c) Countries are confronting but still appear to be grappling with basic conceptual issues and the associated challenges of practical measurement. For instance, there have been a number of papers on *cost-of-living indices* and a consensus is emerging on their position in a *family of indices* but few countries compile these on a regular basis and there is limited evidence that progress has been made by countries to systematically review the coherence and fit-for-purpose of the indices they publish. Thus work has focussed on improving indices currently compiled rather than reviewing the range of indices published.
- (d) *Quality management* of the CPI compilation process has also captured the attention of countries attending the joint meetings, reflecting, perhaps, the growing importance of the CPI and its higher profile plus an awareness of the reputation consequences of publishing an incorrect figure and the impact on users.
- (e) Other, more specific, topics that have been widely discussed include:
  - (i) *Owner Occupier Housing*. This includes how owner occupier housing is currently covered in the CPI and the issues which arise, and where it is not included, possible ways of introducing it. This reflects both the increasing importance of home-ownership in many countries and the inherent problems confronted by the international CPI community in agreeing a conceptual approach and in meeting the challenges of finding a suitable practical methodology. Access to relevant data also seems to be a barrier to making practical progress.
  - (ii) *Quality change, including hedonics*. This covers discussions both on what is meant by quality change, particularly in the context of services, and on how to take it into account in practice. An examination of past papers indicates that there is a diverse range of views and practices and there is very little evidence of a systematic approach. For example, there is no agreement on the detailed application of hedonics either in theory or in practice and attempts to prioritise the application of explicit quality adjustment in a CPI have been of only limited success. Very limited progress has been made in adjusting for quality change in services
  - (iii) *Services*. The measurement of services continues to be a challenge not just in the context of housing. For instance, in more recent years discussions have taken place on the treatment and measurement of prices relating to financial services.
  - (iv) The potential uses of *scanner data* either to improve the quality of the CPI or to increase the efficiency of compilation. Papers relating to scanner data provide evidence both of the potential of this data and its adoption in practice. Experiences to date suggest that the benefits of using this data directly in index construction are finely balanced against data handling and data cleaning issues and limited access and coverage. But scanner data has been proven useful for benchmarking CPIs and for improving sample selection and design.

- (i) A more general review of sampling including outlets as well as products, particularly in the context of both *outlet and product substitution bias and sampling efficiency*. The Boskin Report<sup>1</sup> has led to a growing awareness of the potential for the former to make an index unfit for purpose. Budget constraints, set against the increasing costs of price collection, have led to the latter.

### III. ACHIEVEMENTS

7. In providing the opportunity for CPI compilers to debate the subject areas outlined above, the joint ECE/ILO meetings have contributed to countries adopting international best practices in key areas of CPI compilation. This is evident from some of the methodological improvements to their CPIs that countries have reported to the meeting and in papers in subsequent meetings reporting similar and in some cases better improvements.

8. The meetings have also been active in raising conceptual and methodological issues for carrying forward in other forums, most particularly the Ottawa Group on Price Indexes. The close working relationship with this group, facilitated by an overlap in membership and more formal contact through the Inter-Secretariat Working Group on Consumer Price Indices, has been particularly productive and this can be seen in common themes (although clearly with different focuses) appearing in respective agendas. The contribution from the knowledge accumulated from the development by Eurostat of the Harmonised Index of Consumer Prices (HICP) - both directly from papers offered by Eurostat or indirectly from active attendance by CPI compilers from the member states of the European Union should not be overlooked.

9. It can also be noted that it was a recommendation emerging from the joint meeting of the ECE/ILO on Consumer Price Indices held 1997 that led to the commissioning of the ILO Manual on Consumer Price Indices. The resolution concerning consumer price indices, adopted by the Seventeenth International Conference of Labour Statisticians, 2003, also benefited from the input of a number of active attendees of the joint meetings.

### IV. THE CURRENT STATE OF INDEX COMPILATION AND A LOOK AHEAD: IMPLICATIONS FOR FUTURE WORK

10. Surveying the CPI methodologies used by National Statistical Institutes through the available metadata, it can be observed that limited progress has been made in adopting a common approach to CPI compilation. In some cases this is despite reaching a consensus on what should be done in theory. By way of example, of thirty six countries surveyed:

- (a) At least ten still do not include owner-occupier housing costs in their domestic measure of inflation and where these costs are included many countries use rental

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<sup>1</sup> Final Report of the Commission to Study the Consumer Price Index. U.S. Senate, Committee on Finance (Washington DC: U.S. Government Printing Office).

equivalence, some the acquisition or user cost<sup>2</sup> approach. Arguably this is the most important and difficult outstanding issue confronted by compilers of CPIs. There is no consensus on the way forward.

- (b) On country coverage, eleven collect prices only for urban areas. It cannot be deduced whether this reflects a resource issue or the geographical and retailing characteristics of the countries concerned.
- (c) Price collection reference periods vary from one day to one month.

11. The differences in practical application by National Statistical Institutes not only impacts on comparability and generally how useful the CPI is in meeting user needs but also can mean an unfavourable comparison when benchmarked against the 2003 CPI Resolution. For instance, paragraph 13 of the resolution states that “the CPI should conceptually cover all types of consumer goods and services of significance to the reference population”, which clearly includes owner-occupier housing costs. But at least ten countries do not do this, and currently it is not included in Eurostat’s HICP. A more prescriptive resolution would encourage greater harmonisation (and best practice) but may not be realistic in the short-term but greater compliance with the current resolution should be a realistic goal, as would be following more closely the spirit of the resolution. For instance, paragraph 6 of the resolution states that “Given that the CPI may be used for many purposes, it is unlikely that one index can perform equally satisfactorily in all applications. It may therefore be appropriate to construct a number of alternative price indices for specific purposes”. In reality a significant number of National Statistics Institutes still publish only one “all purpose” consumer price index, which as a result is compromised.

12. The adoption by National Statistical Institutes of a more systematic approach to index development with a statement of longer-term strategic aims would help facilitate this together with continued close working with the Ottawa Group on Price Indexes to resolve and provide advice on methodological issues.

## V. CONCLUSIONS

13. The joint meetings of the ECE/ILO on consumer price indices have provided a valuable forum for discussion of practical issues on index compilation and for the sharing of solutions. The close working with the Ottawa Group on Price Indexes has added further value. But a review of countries’ CPIs indicates that many countries fall short of following best practice in constructing their CPIs and in some instances this leaves them non-compliant with the ILO Resolution on Consumer Price Indices, in spirit if not in law. The implication for future working is as follows:

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<sup>2</sup> Opposing arguments have been put forward for the use, payments and acquisitions approaches. This has resulted in a limited coverage of owner-occupier housing costs in CPIs, for instance it is not as yet included in the European HICP, and where it is included this has often been by way of a compromise in terms of the conceptual consistency of the index. For example, in the UK the Retail Prices Index includes mortgage interest payments, which can be viewed as important from the perspective of income related-uses of the RPI even though the index can be seen as acquisition-based in most other expenditure areas.

- (a) Work should be undertaken to identify those methodological issues which have potentially the biggest impact on the quality of the index- firstly in terms of bias and secondly in terms of precision.
- (b) Where this leads to non-compliance with the ILO resolution, in spirit if not in law, this should be noted.
- (c) Priority should be given to the treatment of owner-occupier housing costs and its inclusion in a CPI. This includes guidance on concepts and practical recommendations on the compilation of house price indices.
- (d) Harmonisation should be seen as an important issue, particularly with increased globalisation and free markets.
- (e) Important methodological issues, where practical index construction issues act as a barrier to implementation and cannot be resolved, should be referred back to the Ottawa Group for advice.
- (f) Where the conceptual principles cannot be put into operation for practical reasons which are unlikely to be resolved, the Ottawa Group should be approached to provide guidance on alternative solutions.
- (g) This process should be used to inform future programmes.
- (h) To carry through these recommendations detailed and more systematic feedback should be sort from National Statistics Institutes on their CPIs and the problems they face.

Table 1. Topics Discussed (1978 – 2006)

| Topic                              | Count | % |
|------------------------------------|-------|---|
| National Methodological Changes    | 17    | 8 |
| Housing                            | 14    | 7 |
| Quality Change                     | 14    | 7 |
| General National Examples          | 11    | 5 |
| Sampling                           | 10    | 5 |
| Hedonics                           | 9     | 4 |
| Scanner Data                       | 9     | 4 |
| Taxes                              | 9     | 4 |
| Quality Management                 | 8     | 4 |
| Calculation                        | 7     | 3 |
| COLI                               | 7     | 3 |
| Core Inflation                     | 7     | 3 |
| General Measurement Issues         | 6     | 3 |
| Price Collection                   | 6     | 3 |
| Seasonality                        | 6     | 3 |
| Family of Indices                  | 5     | 2 |
| HICP                               | 5     | 2 |
| Errors                             | 4     | 2 |
| Regional/Population specific CPIs  | 4     | 2 |
| Weights                            | 4     | 2 |
| Financial Services                 | 4     | 2 |
| CPI Manual                         | 3     | 1 |
| International Methodology          | 3     | 1 |
| International Regulations/Meetings | 3     | 1 |
| Terminology                        | 3     | 1 |
| Bias                               | 2     | 1 |
| E-commerce                         | 2     | 1 |
| Import Prices                      | 2     | 1 |
| International CPI                  | 2     | 1 |
| Output Prices                      | 2     | 1 |

## ANNEX

## Joint ECE/ILO meetings 1978 – 2006: papers presented

|  |  |  |
|--|--|--|
| 1978   | ILO  | Some problems of CPI   |
|  | ECE Secretariat - L. Drechsler (Consultant)  | CPI  |
| 1981   | IRISH Central Statistics Office  | Irish constant tax price index   |
|  | Fed. Stat. Office of YUGOSLAVIA  | Computation of the effects of changes in import prices in Yugoslavia                                 |
|  | Governments of CANADA, NETHERLANDS, NORWAY and U.K.  | Treatment of quality changes   |
|  | STATEC Luxembourg  | Treatment of quality changes   |
|  | Governments of CYPRUS, DENMARK, FINLAND, IRELAND and SWEDEN  | Treatment of quality changes   |
|  | ECE Secretariat  | Treatment of quality changes   |
|  | ILO - Ralph Turvey   | Durable goods, dwellings and credit in CPI   |
|  | U.S. Bureau of Labor Statistics - Robert Gillingham  | Measuring the cost of shelter for homeowners: Theoretical and empirical considerations               |
|  | National Institute of Stat. of SPAIN   | Housing in the Spanish CPI   |
|  | INSEE France   | Measurement of price movements when the supply of goods and services varies: durable goods and rents |
|  | Statistics CANADA - Bohdan Szulc   | The treatment of owned accommodation in the Canadian CPI   |
|  | Fed. Stat. Office of Fed. Rep. of GERMANY - S. Guckes  | Calculation of consumer expenditure parities for various national uses                               |
|  | U.K. Central Stat. Office  | Excluding the effects of changes in import prices from a CPI   |
|  | U.K. Central Stat. Office - Deo Remprakash   | The U.K. tax and price index (TPI)   |
|  | Central Bureau of Stat. NETHERLANDS - J. Egbers  | The Netherlands' price index number of the cost of living, base 1951=100                             |
|  | National Central Bureau of Stat. SWEDEN  | Some methodological problems in the computation of a net price index                                 |
| Central Bureau of Stat. NETHERLANDS - B.M. Balk and H.W.J. Donkers | Adjusting the CPI for changes in the rates of indirect taxes and subsidies   |  |
| DENMARK Statistics   | Comparison of retail price indices with and without indirect taxes 1963-1981: A case study of an index which excludes indirect taxes |  |
| 1986   | Central Statistical Office of FINLAND  | Relations between indices of consumer prices and other price indices in Finland                      |
|  | ILO - Ralph Turvey   | The international comparability of consumer price indices  |
|  | IMF  | Compilation of world and area CPI  |
|  | ILO - Ralph Turvey   | First draft of ICLS resolution concerning CPI  |

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|      | Central Stat. Office of U.K. - Deo Ramprakash                              | The U.K. tax and price index (TPI)   |
|      | Central Bureau of Stat. NETHERLANDS - H.W.J. Donkers and A.C. van der Zwan | Analysing consumer price changes using input-output tables   |
|      | U.S. Bureau of Labor Statistics - R. Gillingham and John S. Greenlees      | The impact of direct taxes on the cost of living   |
|      | U.S. Bureau of Labor Statistics - K.D. Zieschang                           | Output price measurement when product design is endogenous   |
|      | Ministry of Finance, Republic of CYPRUS                                    | Problems of seasonality in the compilation of the CPI in Cyprus  |
|      | ILO - Ralph Turvey   | Seasonal items in CPI - A proposal   |
|      | AUSTRALIAN Bureau of Statistics - L.C. Clements                            | Treatment of seasonal fresh fruit and vegetables in CPI  |
|      | ILO - Ralph Turvey   | What is the question?  |
|      | UNITED NATIONS Statistical Office  | Selected problems in CPI computations  |
|      | Central Statistical Office of POLAND                                       | Methods of correction & computations of CPI in Poland  |
|      | INSEE France - A. Marret   | The problem of measurement of time-to-time changes of damage. Insurance premiums & its inclusion in the CPI                                  |
|      | Statistical Office of CZECHOSLOVAKIA                                       | Observing the development of consumer prices when changes occur in the assortment, and observing the development of prices of seasonal goods |
|      | Department of Employment of the U.K. - D.J. Sellwood                       | Reduction of errors in a CPI   |
|      | Central Bureau of Stat. NETHERLANDS - B.M. Balk and H.M.P. Kersten         | On the precision of CPI caused by the sampling variability of budget surveys   |
|      | Fed.Stat.Office of the FED. REP. OF GERMANY - Oswald Angermann             | The treatment of quality changes in price statistics   |
| 1991 | National Comm. for Stat. of ROMANIA - V.V. Dumitrescu and G. Borcan        | Considerations on the CPI during the transition period in Romania  |
|      | National Stat. Board of ROMANIA - Neagu Camelia                            | Current problems as regards the statistics of financial and insurance services   |
|      | Fed. Stat. Office of SWITZERLAND   | Treatment of incentive taxes in the Swiss CPI  |
|      | USSR State Committee on Statistics   | Problems of price monitoring in the USSR   |
|      | The WORLD BANK - Sultan Ahmad and John O'Connor                            | Harmonization of work on prices among national accounting, CPI and ICP   |
|      | Central Bureau of Stat. NETHERLANDS  | Estimating the precision of a CPI; some experiences from the Netherlands   |
|      | Stat. SWEDEN - Jörgen Dalén  | Revising the calculation methods for basic aggregates in the Swedish CPI   |
|      | Stat. SWEDEN - Jörgen Dalén  | The work with an error model and error calculations in the Swedish CPI   |

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|                     | U.S. Bureau of Labor Statistics - P.A. Armknecht   | Replication and regression: Modern solutions to age old problems in price index construction                             |
|                     | Central Stat. Office of BULGARIA - V. Ranguélova and G. Miléva                               | Certain problems in the calculation of the CPI in Bulgaria   |
| 1993                | Fed. Stat. Office of SWITZERLAND   | Owner-occupied housing: Feasibility of a cost-oriented approach  |
|                     | Stat. SWEDEN - Anders Norberg  | Considerations on computing a hedonic price index for clothing in the Swedish CPI  |
|                     | State Commit. on Stat. of the RUSSIAN FED. - Ya Goldina, T.M. Pchelkina and I.I. Dmitrievich | Improvement of CPI methodology in the Russian Federation   |
|                     | Central Stat. Office of HUNGARY - Mihaly Zafir   | Recent improvements in the Hungarian CPI   |
|                     | EUROSTAT   | Harmonization of CPI - Progress report   |
|                     | Central Bureau of Stat. NETHERLANDS - B.M. Balk  | The new CPI of the Netherlands: An outline   |
|                     | U.K.   | The treatment of non-market goods in CPI: Owner-occupied housing   |
|                     | Central Bureau Statistics ISRAEL - Miri Sabag and Yoel Finkel                                | The Israeli CPI: Alternative computing methods for an "Item price index"   |
|                     | Fed. Stat. Office of SWITZERLAND   | Taking changes in product range and quality into account in the CPI  |
|                     | U.S. Bureau of Labor Statistics - P.A. Armknecht   | Effects on changing market baskets and product substitution in the U.S. CPI  |
| 1995                | U.K. Central Stat. Office  | Some problems in the application of hedonic regression   |
|                     | U.K. Central Stat. Office  | Owner-occupied housing in the retail prices index  |
|                     | U.K. Central Stat. Office  | Wider inflation measures: The expenditure approach   |
|                     | U.K. Central Stat. Office  | Sampling errors in the U.K. retail prices index  |
|                     | U.K. Central Stat. Office  | A new sampling scheme for the U.K. retail prices index   |
|                     | U.K. Central Stat. Office  | Construction of net price indices - The U.K. experience  |
|                     | Statistics NETHERLANDS - Bert M. Balk  | On the use of unit value indices as consumer price subindices  |
|                     | Central Bureau Statistics ISRAEL - M. Sabag  | Updating the consumer price index  |
|                     | State Commit. on Stat. of the RUSSIAN FED.   | Refinement of procedures for the monitoring of prices for goods & services and CPI calculation in the Russian Federation |
|                     | Fed. Stat. Office of SWITZERLAND   | Determination of the smooth component: Low pass filter VS census-X-11  |
| ILO Bureau of Stat. | The treatment of owner-occupied housing in national consumer price indices                   |  |

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|------|---|---|
|      | Stat. NETHERLANDS - Martin Boon and Jan de Haan                                   | Estimating accurate consumer price indices for small reference populations  |
|      | AUSTRIAN Central Stat. Office - A. Franz  | European comparison programme and quality adjustment issues   |
|      | ECE Secretariat   | National experience in the treatment of owner-occupied housing in CPI   |
|      | CZECH REPUBLIC Stat. Office   | The 1993 revision of CPI in the Czech Republic  |
|      | EUROSTAT  | The "comparability" of CPIs in the European Union   |
|      | EUROSTAT  | Harmonisation of CPI  |
|      | INSEE France  | Laspeyres price indices - Substitutions and quality adjustments   |
|      | INSEE France - Lionel Viglino   | On the usefulness of the geometric mean   |
|      | Statistics CANADA - Bohdan Schultz  | Treatment of owned accommodation  |
|      | Statistics CANADA - Bohdan Schultz  | Choice of price index formulae at the micro-aggregation level: The Canadian empirical evidence                                    |
| 1997 | State Statist. Committee AZERBAIJAN   | Improvement of the methodology for the monitoring of prices of goods and services and CPI calculation in the Azerbaijani Republic |
|      | ECE Secretariat - Lidia Bratanova   | New developments in CPI methodologies in ECE Member Countries   |
|      | INSEE France  | Extension of distribution to include two new indices, and improvement of the CPI methodology                                      |
|      | Fed. Stat. Office of SWITZERLAND - Claude Vuffray                                 | Calculation of a rent index: The example of Switzerland   |
|      | Stat. NETHERLANDS - Martin Boon   | Sampling designs in constructing CPI: Current practices at statistical offices  |
|      | ILO Bureau of Stat. - B.J. Hannon (external consultant)                           | Data collection and quality assurance problems in CPI   |
|      | Office for National Stat. U.K. - David Fenwick                                    | Quality management of the monthly processing for the U.K. retail prices index   |
|      | CZECH REPUBLIC Stat. Office   | Problems of data collection and quality control of data   |
|      | State Commit. on Stat. of the RUSSIAN FED.  | CPI Compilation in the Russian Federation in the context of high (decelerating) inflation   |
|      | ECE Secretariat - Peter Hill  | Non-market goods and services in CPI  |
|      | ILO Bureau of Stat.   | New developments in CPI methodologies   |
|      | Central Bureau Statistics ISRAEL - M. Sabag-Endewald/<br>H. Bezabel and Y. Finkel | Treatment of seasonal goods in a CPI. The case of fresh fruits & vegetables   |
|      | State Institute of Stat. TURKEY   | Survey of national practices in constructing of 1994=100 based CPI  |
|      | Statistics CANADA - Terri Markle  | An application of the hedonic approach to clothing in the CPI   |

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|      | Statistics CANADA - Terri Markle                         | An application of the hedonic approach to clothing in the CPI - A pilot study using checklists  |
|      | Statistics CANADA - Robin Lowe                           | Item selection and quality change   |
|      | State Commit. on Stat. of UZBEKISTAN                     | Survey of national practice in constructing a CPI in the Republic of Uzbekistan   |
|      | Stat. DENMARK - Carsten Hansen                           | The effects of changing method for price collection for clothing from questionnaires sent by mail to price collectors visiting the outlets                    |
|      | ECE Secretariat - Peter Hill                             | The measurement of inflation and changes in the cost of living  |
|      | EUROSTAT   | Progress report on harmonization of CPI in the European Union   |
|      | Stat. NETHERLANDS - Jan de Haan                          | Item sampling in the CPI: A case study using scanner data   |
|      | Stat. FINLAND - M. Arja Kinnunen                         | Hedonic methods and their implementation  |
|      | National Comm. for Stat. of ROMANIA - Marcela. Volintiru | Methodology of computing CPI in Romania starting with 1997  |
|      | Stat. NETHERLANDS - Martin Boon                          | Effects of outlet sampling on CPI: A case study using scanner data  |
|      | ECE Secretariat  | National practices in quality adjustments for specific items  |
|      | U.S. Bureau of Labor Statistics - Jim Saxton             | Measurement issues in the CPI   |
|      | U.S. Bureau of Labor Statistics                          | Testimony of Katharine G. Abraham Before the Sub-Committee on Human Resources House Committee on Government reform and oversight                              |
|      | ISTAT ITALY - Franco Mostacci                            | The weighting structure of CPI: An analysis of two possible alternatives  |
|      | Central Stat. Office of POLAND - Bogumila Uminska        | Issues connected with terminology and definitions of terms applicable to the consumer price statistics  |
|      | Stat. NORWAY   | Data editing with Artificial Neural networks  |
|      | Central Stat. Office of POLAND                           | Instability in the provision system and difficulties with proper goods identification. Problems and practical solutions applicable to CPI computations in GUS |
|      | Depart. of Stat. of LITHUNIA - Nadiezda Alejeva          | Problems of data collection and the quality control of the data   |
| 1999 | OECD - Carl Obst   | A review of BIAS in the CPI   |
|      | EUROSTAT - Ralph Turvey                                  | CPI Terminology   |
|      | IMF - Kim Zieschang                                      | A framework for price statistics - Chapter 2 of Manuals on compiling the CPI  |
|      | ECE Secretariat - Peter Hill (Consultant)                | Inflation, the cost of living and the Domain of a CPI   |
|      | Statistics CANADA - Marie Allard-Saulnier                | Report on the CPI Sample diversification Project - Phase I  |

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|      | Central Stat. Office of AUSTRIA - Paul Haschka   | Price collection  |
|      | Stat. NETHERLANDS - Jan de Haan  | Item sampling in the CPI: The success of cut-off selection methods                                    |
|      | Stat. NETHERLANDS - Martin Boon  | Sampling and non-sampling errors in a CPI   |
|      | U.S. Bureau of Labor Statistics - John S. Greenlees                                    | CPI: Methods for quality and variety change   |
|      | Stat. FINLAND - J. Hyrkkö, A. Kinnunen and Y. Vartia.                                  | Implementation of hedonic methods in Statistics Finland   |
|      | Stat. NETHERLANDS - Bert Balk  | On curing the CPI's substitution and new goods BIAS   |
|      | U.K. Office for National Statistics - David Fenwick                                    | Quality management and auditing of CPI  |
|      | Central Bureau Statistics ISRAEL - Y. Finkel and Israël Givol                          | Training and modern technology in a CPI framework   |
|      | Stat. NETHERLANDS - Martin Boon  | Quality assurance in a CPI: A conceptual framework  |
|      | ILO - Valentina Stoevska   | CPI methodologies in transition countries   |
|      | State Commit. on Stat. of the RUSSIAN FED. - Irina Goryacheva                          | Methodology for measuring inflation in the Russian Federation   |
|      | Statistical Office of SLOVENIA - Ema Misic   | New ways of monitoring consumer prices  |
|      | Fed. Stat. Office of SWITZERLAND - Corinne Becker                                      | Revision of the Swiss CPI 2000: Principal methodological and technical changes                        |
|      | State Commit. on Stat. of AZERBAIJAN   | Sampling and data collection, selection of outlets and items, use of scanner data, etc. in Azerbaijan |
|      | ECE Secretariat  | CPI glossaries used by selected national statistical offices  |
|      | Government of INDIA  | An overview of price indices compilation in India   |
|      | Ottawa Group - W. Erwin Diewert  | The CPI and index number purpose  |
|      | Reserve Bank of NEW ZEALAND and The Treasury - Dr Denis Lawrence & Prof. Erwin Diewert | Measuring New Zealand's productivity  |
|      | ISTAT ITALY - F. Mostacci & F. Di Iorio  | Practical Implications of the transition to a chain index   |
|      | Management & Coordination Agency of Japan - Masato Okamoto                             | Empirical study of outlet sampling using scanner data   |
| 2001 | University of British Columbia, CANADA - Erwin Diewert                                 | Hedonic regressions: A consumer theory approach   |
|      | U.S. Bureau of Labor Statistics - John S. Greenlees                                    | The U.S. CPI and the cost-of-living objective   |
|      | Stat. NETHERLANDS - Cecile Schut   | Using scanner data to compile price indices: Practical problems                                       |
|      | State Commit. on Stat. of the RUSSIAN FED. - Irina Goryacheva                          | Introduction of paperless technology for collecting information on prices in the Russian Federation   |

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