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SHORT-TERM ECONOMIC STATISTICS IN THE CIS AND WESTERN BALKANS COUNTRIES

Paper by the UNECE Secretariat¹

I. INTRODUCTION

1. Over the last decade national statistical offices (NSOs) of the Commonwealth of Independent States (CIS) and Western Balkans² have made significant progress in the field of short-term economic statistics (STS). Today more economic statistics are being compiled and published according to international standards and methods. However, for a number of indicators the data published does not provide sufficient basis for assessing the economic development in these countries.

2. In 2007 and 2009 the UNECE Statistical Division evaluated the international comparability of available STS in the CIS and Western Balkans countries. The evaluation focused on methodological practices, timeliness, coverage, seasonal adjustment of time series and dissemination of data and metadata for the following key short-term indicators: consumer price index, producer price index, producer price index for services, industrial production index, retail trade turnover, turnover of services, volume of services production and wages and salaries.

3. The lack of seasonally adjusted series appeared as a particular problem in many of the countries. Thus, in 2008 the UNECE conducted a survey on seasonal adjustment practices to the CIS and Western Balkans countries to identify the main problems and challenges for implementing seasonal adjustments methods. The findings of the evaluation of the short-term statistics and of the survey on seasonal adjustment are presented in sections II - IV below. The conclusion in section V lists the identified areas of non-comparability and some recommendations for improving the international comparability of the statistics. Section VI provides a brief presentation of future work in the area.

4. Further information and details are available from the following documents: *Report on international comparability of short-term statistics in the CIS and South-East European countries (2008)*; *Report on the seasonal adjustment pilot project (2008)*; and

¹ The paper is prepared by Anu Peltola and Carsten B. Hansen.

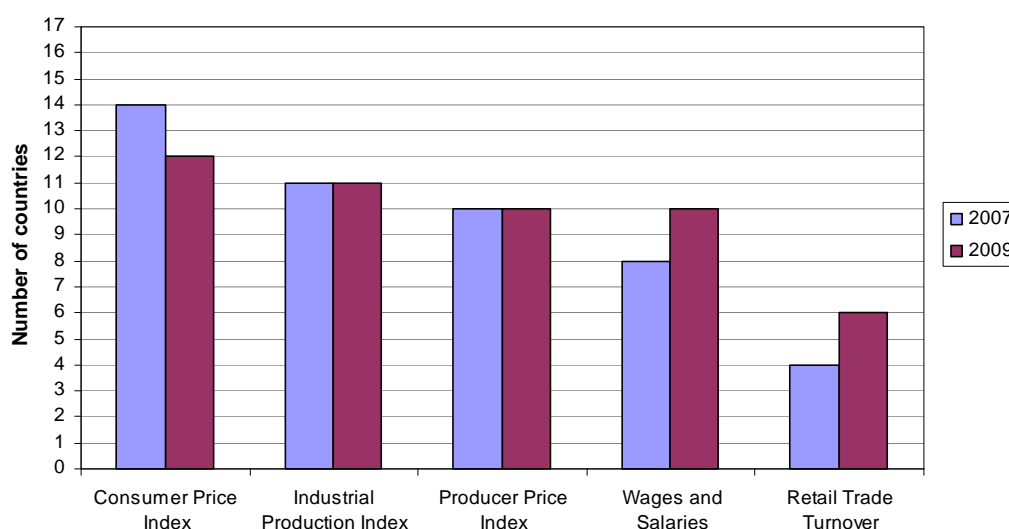
² The CIS and Western Balkans countries include Bosnia and Herzegovina, Georgia, Montenegro, Russian Federation, The former Yugoslav Republic of Macedonia, The Kyrgyz republic, Albania, Armenia, Azerbaijan, Belarus, Kazakhstan, Moldova, Serbia, Tajikistan, Uzbekistan, Turkmenistan and Ukraine. Because of lack of data and metadata in English Uzbekistan and Turkmenistan are not included in the paper.

Report on Seasonal Adjustment Survey to the CIS and Western Balkans countries (2009).
The documents are available from: www.unece.org/stats/archive/02.08.e.htm

II. AVAILABILITY AND TIMELINESS

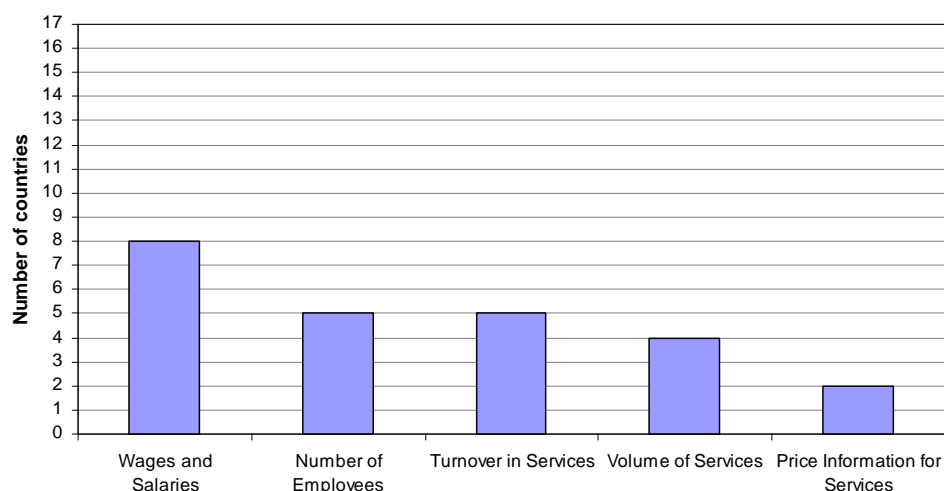
5. The availability of short-term statistics has been evaluated by considering, firstly, the following series: Consumer price index, producer price index, industrial production, retail trade turnover and wages and salaries, since these are often considered main short-term indicators. Graph 1 depicts the number of countries that publish series of more than six observations for the five selected indicators.

Graph 1. Availability of time series with more than six observations



6. Secondly, the statistical coverage of the services producing sector has been evaluated. The share of services (including trade) in GDP in the CIS and Western Balkans countries has risen from 50 per cent in 1996 to some 56 per cent in 2008. However, regardless of the importance of the sector, so far little has been done to describe short-term development in services. The lack of data for services may add to the problems associated with the compilation of rapid estimates of GDP.

7. The more common short-term indicators for services (excluding trade) in the CIS and Western Balkans countries concern the labour market (see Graph 2): eight of 17 countries publish wages and salaries and five countries publish the number of employees for the service sector. Output indicators are more rarely produced. Excluding trade statistics, only five countries produce turnover for some service activities. In total seven countries (Albania, Armenia, Belarus, Georgia, Kazakhstan, Moldova, Serbia) produce either turnover or volume of services. Serbia and The Former Yugoslav Republic of Macedonia are the only countries publishing price statistics on services. The indicators usually do not cover the whole of the service sector; in most of the countries only part of the activities, such as transport, hotels and restaurants are included in the estimates.

Graph 2. Availability of short-term indicators for services (2009)

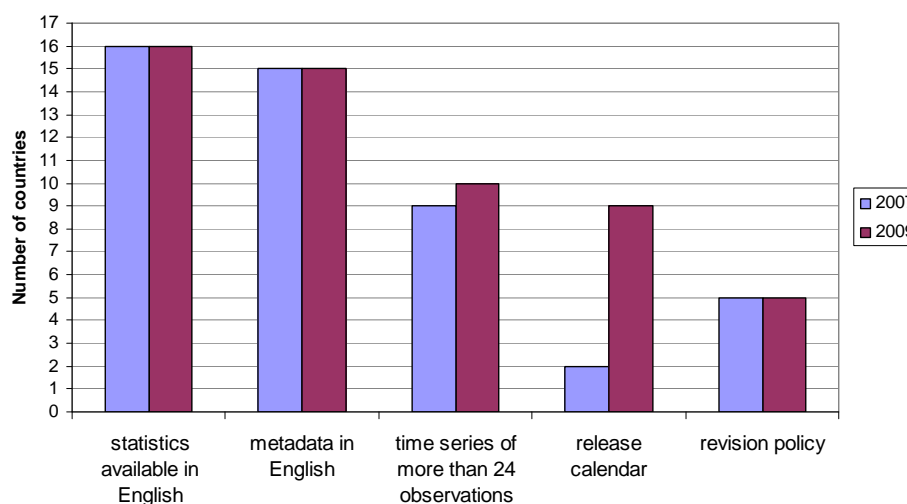
8. The timeliness for publication of STS varies between countries but is in general good, and countries publish their statistics in a very timely manner compared to other European countries, as seen from Table 1. Price indices are published first: CPI is published on average after 11 days and PPI within 19 days. Industrial production index is published at around 25 days on average varying from 11 to 78 days between the countries. Retail trade turnover and wages and salaries in most countries are published within 40 days. The indicators for services are available in 48 days, on average.

Table 1. The average timeliness of STS indicators

	Number of days after the reference period		
	Min	Max	Average
Consumer Price Index, CPI	1	30	11
Producer Price Index, PPI	3	65	19
Industrial Production Index, IPI	11	78	25
Retail Trade Turnover, RTT	12	105	39
Wages and Salaries, WS	8	80	40
Volume/Turnover in Services	20	78	48

III. PUBLICATION POLICY

9. The publication policy has been evaluated according to the availability of statistics and metadata in English, the number of published long time series, release calendars and revision policy (see Graph 3).

Graph 3. Publication policy of STS

A. Statistics available in English

10. The NSOs of all CIS and Western Balkans countries have websites with English language interfaces with the exception of Turkmenistan. At the moment, Turkmenistan only has a government website containing some limited statistical information. The English websites provide basic information on the main indicators, while more information and details are usually available in the language of the country.

B. Metadata in English

11. International comparison of statistics relies on the availability of appropriate documentation. Fifteen of the surveyed countries provide some methodological information in English. The countries subscribing to IMF's SDDS³ or GDDS⁴ metadata templates provide a much more comprehensive set of metadata than the non-subscriber countries.

12. The information on methods, samples and coverage of surveys as well as advance release information is quite comprehensive among the SDDS and GDDS subscribers. However, only a few countries provide methodological information for statistics not included in the SDDS/GDDS. As a result, there is very little metadata available for the retail trade and service sector statistics. Also many details about production methods are missing from the metadata.

C. Availability of long time series

13. According to international recommendations and good practices countries should be publishing either fixed base indices⁵ and/or absolute values for discrete periods. Publication of only snapshots of a few observations or movements between periods instead of longer time series is insufficient for two reasons. Firstly, it does not readily facilitate time series analysis and, secondly, the user may not be aware of revisions of

³ Countries subscribing to SDDS: Armenia, Belarus, Kazakhstan, Kyrgyzstan, Moldova, Russian Federation and Ukraine.

⁴ Countries subscribing to GDDS: Albania, Azerbaijan, Georgia, the Former Yugoslav Republic of Macedonia and Tajikistan.

⁵ Time series with an index reference period equal to 100 that is kept constant for a period of time. This includes both fixed weight indices and chain-linked indices.

historical data. When only the observations of the current period (month or quarter) or the current and the previous period are published the user will have to derive time series by chaining or otherwise combining the monthly/quarterly observations. This is, however, not always possible in practice and it gives misleading results in cases where historical series have been revised but not published.

14. Also the production of reliable early estimates of GDP requires that revisions to earlier published data are taken into account. However, only few CIS and Western Balkans countries maintain and publish complete time series with all relevant revisions. Thirteen countries publish one or more time series of STS with six or more observations, but only 10 countries publish time series with more than 24 observations.

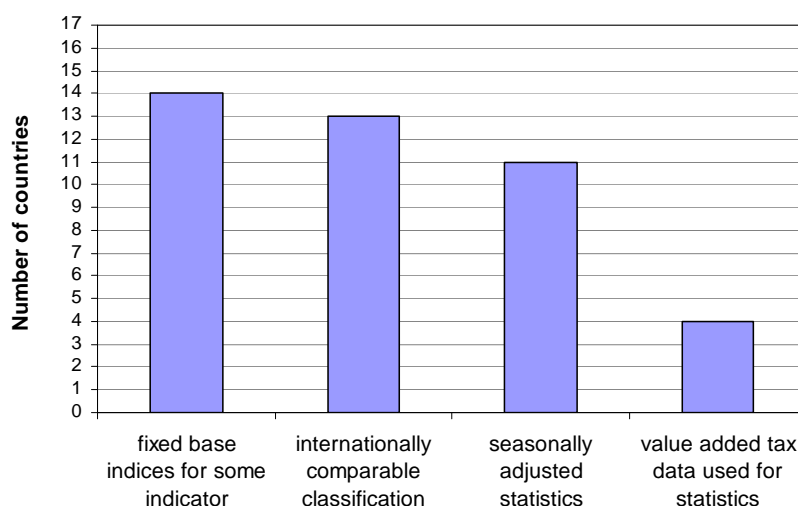
D. Release calendars and revision policy

15. The publication of advance release calendars have improved over the last years. Whereas in 2007 only two countries published advance release calendars for the entire year, in 2009 nine countries publish an advance release calendar for the next year, and four countries publish a calendar for the next quarter. Only four countries do not have an advance release calendar, but one of these countries states quite exact dates for the indicators in their metadata. Transparency of statistics production has also increased, since most of the countries have started to archive first releases of statistics to their web pages. Out of the seventeen countries only five publish their revision policy on Internet.

IV. METHODOLOGICAL ISSUES AND INTERNATIONAL COMPARABILITY

16. Methodological issues and international comparability has been evaluated with respect to the publication of fixed based indices, use of international or internationally comparable classifications, seasonally adjusted series and the use of register data, see Graph 4. In general, there are significant methodological differences among the CIS and Western Balkans countries especially with regard to the compilation of producer price indices, retail trade turnover and wages and salaries statistics, and for the service sector common indicators are missing. Among the price statistics, the consumer price indices seem to be the more comparable, while further improvements in terms of implementation of internationally agreed standards and classifications are needed for the compilation of producer price indices.

Graph 4. Production of STS according to international standards (2009)



A. Fixed base indices

17. Fixed base indices are required to perform time series analysis. Fourteen countries publish fixed base indices for one or more of the selected STS indicators. However, only half of the CIS and Western Balkans countries publish most of their indices with a fixed reference period, while the other half tends to supply only two to three monthly observations, usually as percentage change from the previous month or from the same month of the previous year. One third of the countries provide only observations from the base year onward. In some cases the base is changed annually and no chain-linked series are published. However, publication of only monthly or quarterly indices, comparing the current period with the previous period, is not suitable or sufficient for time series analysis, and chaining of such period-to-period indices will miss changes in the level of the indicator as a result of e.g. changes in the coverage of the statistics or calculation methods.

18. It should also be mentioned that some countries continue to publish selected STS indicators in the form of *cumulative* series, where e.g. the published data for industrial production covers first quarter, first and second quarter, first, second and third quarter etc. Cumulative series, however, are not suitable for time series analysis, and “de-cumulation” by subtraction the cumulative series has proved in practice not to result in correct time series. Thus, time series derived from published cumulative series will not necessarily reflect the correct development over time.⁶

B. Classifications and definitions

19. The majority of the CIS and Western Balkans countries apply international or internationally comparable classifications for their economic statistics. All of the countries publish their consumer price indices on the basis of COICOP (Classification of Individual Consumption by Purpose). Other indicators are usually based on ISIC or NACE, or comparable national classifications developed by the countries. A few countries (Belarus and Tajikistan) use OKONH⁷, developed by CISSTAT, or the SICNE⁸-classification, which are not comparable with ISIC or NACE.

20. Some incoherence also exists in the definitions of short-term variables. Thus, for an example, retail trade turnover is defined differently in different countries and value added taxes and other taxes, subsidies and delivery costs are treated differently which hampers international comparability. The internationally agreed standards for CPI, PPI and IPI are in general being followed by many of the countries, or the countries are in the process of adapting to these standards, which helps to improve international comparability of the statistics. For wages and salaries, where there are no internationally agreed standards, the applied coverage and definitions vary widely between countries; some countries include part-time employed, some take account of bonuses and annual holidays, some publish gross salaries and some only net salaries etc.

⁶ The problems associated with the use of cumulative series are described in more details in the UNECE paper *Rapid estimated of GDP in CIS and Western Balkans countries*.

⁷ The CISSTAT classification of industries

⁸ Soviet Industrial Classification of National Economy

C. Seasonally adjusted STS

21. The survey on seasonal adjustment practices carried out in 2008 was aimed at the NSOs and Central Banks of the 17 CIS and Western Balkans countries. Eleven answers were received from ten different countries (from one country both the NSO and the Central Bank responded). Lacking seasonal adjustment (SA) is one of the major obstacles for international comparison of economic development. In 2007 only two countries published SA estimates, whereas in 2009 seasonally adjusted data are published by 11 out of the 17 CIS and Western Balkans countries. Kyrgyzstan, Montenegro, Tajikistan, The Former Yugoslav Republic of Macedonia, Turkmenistan and Uzbekistan do not yet publish any SA data. However, almost all of the NSOs which responded to the survey, reported limited capacity in SA. All respondents highlighted the need for training and materials/guidelines (in Russian) and further support on methodological and practical issues of seasonal adjustment.

22. Even if a country produces seasonal adjusted data, seasonal adjustment is usually done for a limited number of series. The length of the seasonally adjusted series appears to be problematically short for many countries. The release practices of SA data differ between the countries and the available metadata are sometimes limited. In the EU countries TRAMO/SEATS is nowadays most commonly used approach, while the common approach is X-12-ARIMA in the CIS and Western Balkans countries. The pre-treatment methods vary between the countries and some do not regularly update the seasonal adjustment models. (More details are available in the *Report on Seasonal Adjustment Survey to the CIS and Western Balkans countries*).

23. The main obstacles to introduce seasonal adjustment procedures seem to be lack of resources and knowledge. The CIS and Western Balkans countries are aware of the interests of the users of statistics in acquiring seasonally adjusted statistics, and support and training are requested from the international organisations.

D. The use of register data

24. Many CIS and Western Balkans countries have well-developed administrative registers and the use of such data sources is increasing. The use of register data may provide practical answers to problems with statistical coverage, sampling and e.g. introduction of new statistics on services. As an example of use of register data four countries (Albania, Serbia, Tajikistan and Ukraine) use data from their VAT register in the statistical production. VAT registers may be used as a data source for various short-term statistics and/or for validation of survey based statistics. It is also possible to base the preliminary data mainly on surveys while the VAT register and/or other available registers are used as the main source for the final data. Short-term statistics or rapid estimates of GDP may also be produced on the basis of relatively small survey samples adjusted by the use of information available from administrative registers, as is the practice in several European countries. Thus, in general, the use of register data can help to reduce sample sizes and increase efficiency.

25. The use of register data, however, requires substantial IT resources and implementation of various techniques to ensure the quality of data and to correct for differences in definitions and coverage etc. It also calls for cooperation with the providers of the administrative registers. It should be mentioned that there are often difficulties for the statistical offices to get access to the relevant registers, or access is denied for various reasons, which reduces the use of the registers for statistical purposes.

26. IT should be mentioned that survey based STS in most of the countries relies on very large samples or surveys covering all or almost all of the population; e.g. 95% of industrial production in one country is included in the industrial production index, and the producer price index in another country is based on observations covering 97% of industrial production. There is thus scope for a considerable reduction of sample sizes in most of the countries by improving sampling techniques and utilizing administrative data sources.

V. CONCLUSION

27. The improvement in the availability and international comparability of STS has continued over the last two – three years. Also the publication of metadata has been improved, and more countries provide advance release calendars, as one example. The timeliness of STS is in general very sufficient and several countries have started to publish longer time series and seasonally adjusted series.

28. There remain, however, a number of areas where further development is needed in order for these countries to compile and publish internationally comparable short-term indicators, as follows:

Availability – long time series, coverage of services

- (a) More countries need to publish longer, coherent time series to facilitate statistical analysis, including seasonal adjustment. Depending on the indicator between four and thirteen countries out of the surveyed 17 CIS and Western Balkans countries publish sufficiently long time series to facilitate analysis.
- (b) Revised historical data should be published. Some countries do not publish revised historical data so that users are unable to obtain coherent series.
- (c) The growing service sector in general requires better statistical coverage and measurement. There is a particular lack of short-term indicators on services.
- (d) The lack of short-term statistics for services in many countries underlines the need for practically oriented guidelines and technical assistance.

Methodology and Comparability – indices, definitions, seasonal adjustment

- (a) Time series should be published as indices with a fixed index reference period and/or as discrete absolute values for the months or quarters; only half of the countries provide such series.
- (b) Many of the countries still do not publish seasonally adjusted STS.
- (c) The use of register data in many countries may help to improve the quality and coverage of STS and reduce response burden.
- (d) There is scope for considerable reduction of sample sizes by improving sampling techniques and utilizing register data.
- (e) There are substantial differences in the definitions of wages and salaries in the CIS and Western Balkans countries compared to the EU countries.

Publication – revision policy, metadata and release calendars

- (a) More documentation (metadata) is needed on collection methods and data sources, statistical coverage and compilation methods.
- (b) There is a need for formulation of a revision policy in many countries.
- (c) Some NSOs need a publication policy for e.g. (long) time series and revised historical data, methodological information and advance release calendars.

29. The implementation of the revised activity classifications (ISIC9 rev. 4/NACE10 rev.2) will also require revision of historical series. Hence, the implementation of the revised classifications may make some of the above mentioned issues more evident and offer an opportunity for harmonization of classifications and methods.

VI. FUTURE WORK

30. Currently the UNECE is preparing a training and capacity building program for 2009-2010 on STS for the Central Asian and other CIS Countries. The program, which is financed by the World Bank, will focus on current problems and challenges in improving STS. It is a continuation of previous cooperation with the CIS and Western Balkans countries, including a regional seminar on STS in Teheran in September 2008.

31. The program consists of three workshops on which training and exercises will be provided, and current problems and possible solutions for improving the statistics will be discussed, based on international recommendations and standards. The first workshop, which will take place in September 2009, will focus on time series methodology, dissemination practices and seasonal adjustment of time series. The second workshop in 2010 will be a continuation of the first workshop going into more detail on seasonal adjustment methods and practices. The third workshop in late 2010 will focus on the compilation of consumer price indices.

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⁹ International Standard Industrial Classification of All Economic Activities

¹⁰ Statistical Classification of Economic Activities in the European Community