

Meeting of the Group of Experts on Consumer Price Indices

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Integration of survey activities for CPIs and PPPs

Note of the Interstate Statistical Committee of the CIS (CIS-STAT)

Abstract

This paper considers differences between price surveys for CPIs and PPPs compilations and the possibilities for their integration. Issues of methodological and organizational alignment of these activities are proposed for further discussion and decision making.

1. Introduction

Development of systems for calculating price indices and conducting international comparisons are the two most important areas of statistical work in the CIS region.

CIS-STAT being an international organization coordinating the efforts of CIS countries regarding the reform of their systems of official statistics. Such coordination is undertaken in the fields of price statistics and PPP based GDP comparisons.

As regards international comparisons, the joint activities of CIS-STAT and the national statistical offices of CIS countries includes such aspects as improving the methodology for comparisons, discussion and approval of the product lists, organizing the collection of average annual national prices at the regional level within the participating countries, harmonizing price data, analyzing the aggregated data, and organizing regional calculations. Meetings of employees of the national statistical offices of CIS countries along with specialists in price statistics and national accounts are regularly conducted to discuss issues of international comparisons. For statisticians from CIS countries, the most complicated issues in these statistical areas seem to be price collection and GDP disaggregation. As there is a whole range of

price statistics activities to support international comparisons, we believe there are some specific issues that require attention in the context of further development of ICP.

2. Integration of ICP and CPI price survey activities

Results of making international comparisons of gross domestic product (GDP) on the basis of purchasing power parities (PPPs) represent one of the basic tools for analyzing and forecasting the dynamics and structure of the world economy.

Purchasing power parity is a ratio of currencies with the account for price levels in different economies calculated by equalizing costs in national prices and currencies of comparable sets of goods and services.

In spite of many advantages of the PPP concept there are still problems that are widely discussed by statisticians and researchers who deal with the current methodology of international comparisons and its further development. We believe it will be important to discuss the methodology and organization of price collection for ICP product items in view of further development of PPP based GDP comparisons.

The integration of works on price statistics and international comparisons may support the reliability of PPP estimates.

On its 47th session the UN Statistical Commission suggested exploring a closer alignment of ICP price surveys with consumer price index compilation by countries and encouraged involving existing working groups engaged in price statistics.

PPP is an implicit analogue of traditional dynamic price indices. While dynamic price indexes measure changes in the purchasing power of one currency over time, PPPs measure differences in the purchasing powers of different currencies by countries. Both indices are compiled on the basis of primary data on price levels for a certain set of goods and services.

Both statistical areas, the price statistics and ICP, mainly use similar price collection methods. In the majority of CIS national statistical offices these activities are concentrated in one division which is justified by the methodological and practical similarity of the works. However, in general, these two statistical areas use their own product lists to collect prices for CPI compilation and PPP calculation. Of course there are certain peculiarities in the compilation of the product lists for CPI and ICP. The methodology and organization of price collection should be in the hands of

respective specialists, and duplication of these functions in various departments increases labor costs and negatively affects data quality. Product lists for CPI and ICP contain many similar products. Of course, unification of product lists for these two types of observation will be labor and cost intensive, and it may need some unpopular decisions to be made, however the outcome may be rather good in terms of better data quality and future savings of time and financial resources. Certain efforts, of course, will be needed from the international organizations and national statistical offices. However as a Russian proverb states: "One can't learn how to swim without jumping into the water". At the first stage, it may be advisable to experiment without dismantling the existing system in order to assess the pros and contras of the proposed changes.

3. Approaches to a closer alignment of CPI and ICP activities

It is necessary to resolve several tasks in order to support closer alignment of activities in the fields of price statistics and international comparisons.

The table below shows similarities and differences in these two areas.

Stage	CPI compilation	PPP estimates
Product lists	A representative sample of consumer goods and services based on household surveys	Product list proposed by international organizations responsible for the round of ICP
Geographical coverage	Selected cities including country capitals, regional and district administrative centers	Narrower coverage, only capitals for several countries
Observation units	Enterprises and organizations of trade (services)	Enterprises and organizations of trade (services), internet data, product catalogues
Aggregation methods	Data are aggregated while compiling totals on the territorial basis	Processing of primary data is done in the central offices of the national statistical services
Frequency	Monthly	Quarterly for consumer goods, in some countries annually
Data revisions	Not done	Data may be revised
Weights used to	Household survey data at	Total GDP with further

Stage	CPI compilation	PPP estimates
estimate the aggregate	basic headings level	disaggregation on the basis of household survey data

As one can see from the table, changes in the procedures of primary data processing and aggregation will require revisions to the software used for CPI compilation and PPP calculations.

To illustrate the scope of price registration for CPI compilation and PPP estimation within ICP, we present some information on the quantity of product items for price collection in several categories.

Quantity of product items for collecting price data for 2011 ICP round in CIS countries

Category	Quantity of items (goods and services)
01 Food, beverages, and tobacco	404
02 Products for personal use	313
03 Home and garden products	371
04 Services	231
05 Furniture	108
06 Health care	274
07 Transport	71
08 Other products	150
Subtotal	1922
Construction materials	66
Machines and equipment	481
Wages and salaries	30
Total	2499

Of course, one should realize that a time consuming and very detailed analysis should be required to harmonize product lists and match product specifications for CPI compilation and PPP calculation.

Harmonization of the product lists for CPI and PPP calculations is the most complicated methodological issue. Revision of these lists shall be undertaken considering the need for compromise solutions and uneasy decisions.

Quantity of product items for price collection by the NSOs of CIS countries

Consumer prices					Producer prices for manufactured goods
Country	CPI total	of which:			
		Food items	Non-food items	Services	
Azerbaijan	565	148	304	113	1950
Armenia	470	161	216	93	1119
Belarus	459	156	229	74	700
Kazakhstan	508	167	252	89	1500
Kyrgyzstan	370	116	190	64	323
Moldova	312	96	159	57	900
Russia	506	125	260	121	1100
Tajikistan	351	85	198	68	300
Ukraine	335	132	141	62	...

Taking into account the differing frequencies of price collections (for price indices-monthly and for ICP usually quarterly or annually) the alignment of these works will make it possible to maintain the quality of data collection.

It should be noted that deciding in favor of harmonization of price collection activities will eliminate one more problem related to conducting price registration for ICP purposes only in the capitals of the majority of CIS countries and the subsequent extrapolation of estimates for the whole country using different methods.

Another issue is how to construct the weights used for calculating both the price indices and PPPs. In both cases weights are estimated on the basis of such data sources as household surveys, data on production volumes, and – at the higher level of aggregation – data on GDP, as well as other information sources. Construction of weights, together with above mentioned issues, also requires additional analysis and profound discussion.

In the article presented by the Beijing National Accounting Institute (Dong Qiu, Lixin Du, and Yafei Wang) “Index approach to assess reliability of PPPs in China” the authors noted that this method is still under discussion at present. The results of their research confirmed that the representativeness of indices improves through the conduct of national price surveys, including urban and rural areas. Apparently, we should agree that this issue needs more detailed examination.

4. Conclusion

The expressed position may be criticized by some colleagues dealing both with price statistics and international comparisons, however, additional intellectual and material costs at the first stage should provide large positive effect in future.

Harmonization of price indices compilation and PPS calculation can not be achieved in the short run. First it is necessary to hold consultation with all participants of such calculations and to consider funding for the pilot project for which an implementation plan should be developed. It could be done within a working group with participation of representatives of the international organizations and NSOs.