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**"Can we collect prices on the ICP products and integrate with
CPI prices to compute Inflation"?**

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Introduction

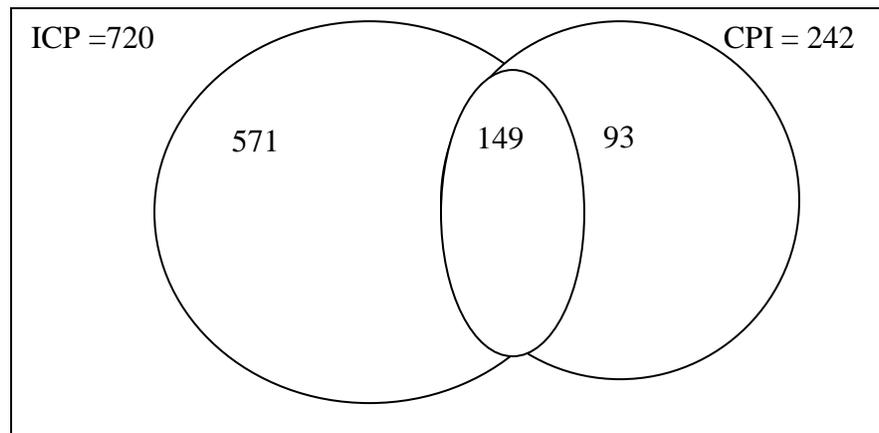
There is an urgent demand by countries in Africa for reliable and timely data to support the Millennium Development Goals (MDG) and Poverty Reduction Strategy Programs (PRSP). In view of this, when the World Bank, in collaboration with the Africa Development Bank (AfDB) and the United Nations Economic Commission for Africa (UNECA) commenced the 2005 round of International Comparative Program (ICP), most of the countries in Africa embraced it.

The ICP project is a comprehensive global Statistical Capacity Building Initiative, with the objective of facilitating cross-country comparisons of economic aggregates such as price levels, GDP and their sub-aggregates among participating countries. The main activity of the ICP is market price collection. The National Statistics Offices (NSO) were responsible for executing the ICP.

ICP in Ghana

With the inception of ICP in July 2005, market price collection by Ghana Statistical Service (GSS) increased tremendously because of the need to undertake market prices for both the ICP and the existing Consumer Price Index (CPI) used to calculate the rate of inflation. The CPI is mainly concern with the annual rate of inflation that is changes in the general price level over a period of one year within Ghana.

The ICP and CPI have the same basic data (market prices) requirement even though they differ in terms of the scope and emphasis. The ICP covers the whole country, both the urban and rural areas and in all the ten regions. It has forty two (42) markets, made up of 10 urban and 32 rural markets sampled throughout the country with 740 goods and services in the ICP basket. The CPI also has forty (40) markets, made up of 9 urban and 31 rural markets sampled throughout the country with 242 goods and services in the CPI basket of goods and services. Some 149 products are common in both the ICP and the CPI baskets of goods. The figure below indicates the number of items in both CPI and ICP baskets. We realized that out of the 720 ICP items and 242 CPI items, 149 items are common to both.



Data Collection

Ghana Statistical Service collects price data separately and independently for the local CPI and the ICP every month. Market prices for the CPI are collected in the first and third weeks of the month. Those of ICP are collected in the second week of the month. This means that market prices collection is undertaken throughout the month. Two main problems are associated with this independent market prices collection. First, it increases cost in terms of money and time and it does not allow effective human resources utilization. Second, it also suffers from interviewer and interviewee fatigue.

The ICP produces a lot of data (monthly market prices) which may be used for the computation of inflation.

The monthly market prices collection for the ICP ended in June 2006 and currently price collection for the CPI is being undertaken. There is the tendency for the ICP to continue in future. The question is;

- Can we integrate the collection of prices for ICP and CPI and calculate the inflation from the collected data?
- What level of integration can be adopted to optimize the use of resources.

Objective of the paper

The objective of this paper is to determine a basis for incorporating or harmonizing the collection of market price for the CPI and ICP in order to calculate inflation rates?

Benefits

The result would form a scientific base for a decision on whether or not to integrate ICP and CPI data collection for the calculation of inflation.

Methodology

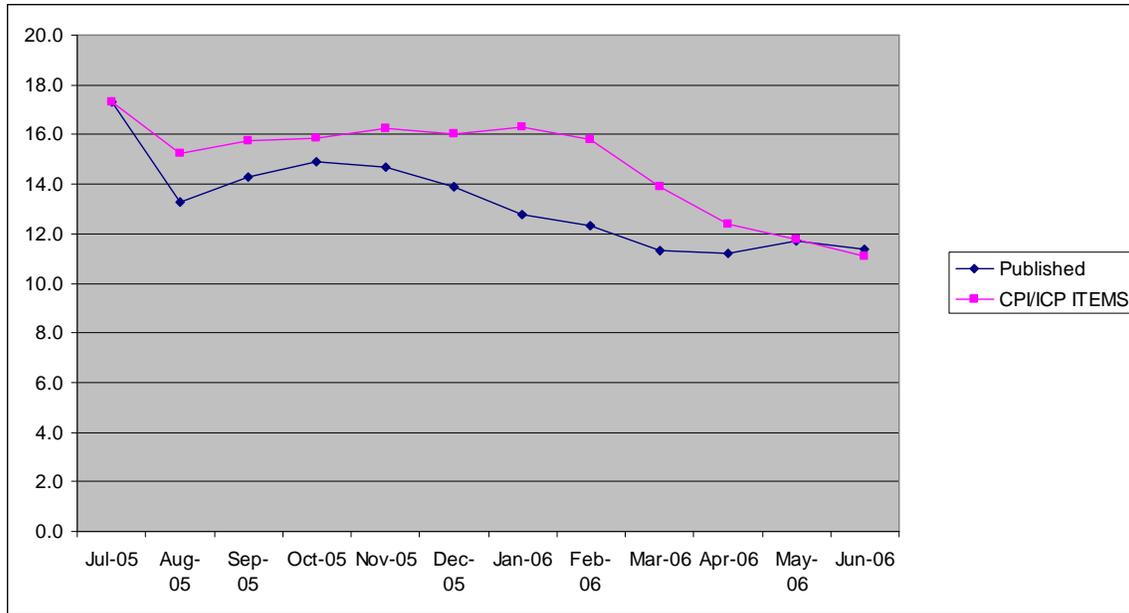
The method is to collect prices once on the 149 items common to both ICP and CPI baskets. Prices are also collected for the remaining 93 items that are in the CPI basket only. These two data sets are then combined for the calculation of the rate of inflation. The trends for the published and the integrated ICP/CPI inflation rates are compared graphically and by significance testing.

The results

Table 1 shows that the integration of ICP/CPI market price reading gives inflation rates similar to the published rates except three months which could be due to data quality.

Table 1. CPI and rate of inflation using ICP data

	CPI		Yearly Rate of inflation	
	Published	CPI/ICP ITEMS	Published	CPI/ICP ITEMS
Jul-04	152.55	39.10		
Aug-04	158.35	40.58		
Sep-04	158.15	40.53		
Oct-04	158.30	40.57		
Nov-04	159.62	40.91		
Dec-04	161.31	41.34		
Jan-05	164.81	42.24		
Feb-05	168.29	43.13		
Mar-05	172.30	44.16		
Apr-05	174.59	44.74		
May-05	176.05	45.12		
Jun-05	178.46	45.74		
Jul-05	179.00	45.87	17.3	17.3
Aug-05	179.46	46.78	13.3	15.3
Sep-05	180.83	46.91	14.3	15.7
Oct-05	181.92	47.01	14.9	15.9
Nov-05	183.01	47.55	14.7	16.2
Dec-05	183.74	47.97	13.9	16.0
Jan-06	185.84	49.13	12.8	16.3
Feb-06	188.94	49.95	12.3	15.8
Mar-06	191.74	50.30	11.3	13.9
Apr-06	194.16	50.29	11.2	12.4
May-06	196.73	50.44	11.7	11.8
Jun-06	198.78	50.81	11.4	11.1



Two tests were applied: the testing of two means using the t-test and the paired-samples t-test, in the first and second rows, respectively. While the means are not significant at 5%, the differences between the individual level are highly significant ((at 0.001).

t-test for Equality of Means						
t	df	Sig. (2-tailed)	Mean Difference	Std. Error	95% Confidence Interval of the Difference	
					Lower	Upper
-1.965	22	.062	-1.55000	.78874	-3.18574	.08574
-4.246	11	.001		.36504	-2.35346	-.74654

Conclusion

The figures and the pattern, even though seem similar for most of the months, it is not significant. However in the long run the annual means may not be different. It is possible that when data quality is properly taken care of and the methodology is sharpened, this approach would yield results that are comparable. This will require that data collectors go to the same markets to collect prices for the 149 common items in the CPI and ICP baskets. This would then save National Statistical Offices tremendous time and scarce human and financial resources. More work and thought would have to go into this issue before we can make a concrete conclusion.