

The SNA93 Household Final Consumption Definition and Its Impact on CPIs Estimates

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1. Introduction

The System of National Accounts 1993 (NA93) and the European System of Accounts 1995 (ESA95) settle the distinction between actual consumption and consumption expenditure. So far, the Consumer Price Indexes (CPIs) have been based on the concept of consumption expenditure and not on that of actual consumption. As a consequence, their weighting structure does not account for goods and services financed by the government or NPISHs and supplied to households as social transfers in kind. This is likely to cause a bias in the estimates of the CPIs that is worth discussing. Since SNA93 and ESA95 explicitly provide the guidelines for establishing which of the items of the government final consumption expenditure should be considered as individual consumption services and, therefore, actual consumption, it is now possible to try to proceed some steps further in this direction, on the basis of the Classification of the Functions of Government (COFOG).

Buzzigoli and Ferrari (2000) have analysed the "Indice nazionale dei prezzi al consumo per l'intera collettività" (NIC), a monthly price index that refers to the generality of consumption of domestic households elaborated by the Italian Statistical Institute (Istat). Based on an analysis of the 558 products of the basket, they have identified 4 items (Clinics; Secondary school; University; Nurseries), which would include shares of the above government final consumption expenditure. Therefore, their weights were supposed to be underestimated and an attempt of upward revision of them was made. This revision was undertaken on the basis of an imputation over the 4 items, according to 3 different hypotheses of sub-division, of the "Actual collective consumption" estimated by the National Accounts Division (NAD) of Istat (Collesi-Di Leo, 2000). The results have been compared to the official chained NIC monthly estimates for 1999, both in calculation and reference base. They showed significant differences for the three hypotheses in both cases, quite obviously higher in the second one.

Due to lack of information, the revision, despite providing promising and stimulating results, was a very rough one. Now, we are in a position to provide it with some refinements. That's what we are going to do in what follows.

2. The NIC estimation which accounts for the government final consumption expenditure

This further refinement of the first revision was based again upon Collesi-Di Leo (2000), where the 1999 actual collective consumption is subdivided into 7 sub-groups, according to COFOG, one digit. Out of them, we have selected 3 sub-groups: "Services including pollution abatement and control", accounting for 2,215 billion lira; "Housing and community amenity affairs and services", accounting for 4,550 billion lira; "Health, education, social security and welfare affairs and services" (functions 04-06), accounting for 4,195 billion lira. Based on the 3 digit COFOG, we were able to impute the total of the first two sub-groups (6,765 billion lira) to (COICOP code, first): 7135, "Rent" (70%); 7110, "Pollution abatement and control" (10%);

7140, "Water supply" (20%). As far as the third group is concerned, we imputed its total, 4,195 billion lira, to "Health, welfare and social affairs" (30% to codes 107-110, "medical analyses and cares" and to 111, "clinics") and to "Education" (70% to codes 8010, "secondary education; 8020, "university"; 260, "language training"; 272, software training).

The re-calculation of the 1999 NIC subsequent to the above weight revision led to the results shown in Table 1, along with the results of the previous revision and the Istat official estimates.

Table 1. - Istat estimates of 1999 monthly NICs and our own 2000 and current revised estimates.

	January	Febr.	March	April	May	June	July	August	Sept.	October	Nov.	Dec.	Average
Calculation base, December 1998=100													
Istat	100.1	100.3	100.5	100.7	100.9	100.9	101.2	101.3	101.5	101.8	102.0	102.1	101.1
2000 Revised 1	100.1	100.3	100.5	100.7	100.9	100.9	101.2	101.2	101.5	101.8	102.0	102.2	101.1
2000 Revised 2	100.1	100.3	100.5	100.8	101.0	101.0	101.5	101.6	102.0	102.4	102.6	102.7	101.4
2000 Revised 3	100.1	100.3	100.5	100.8	101.0	101.0	101.5	101.6	102.0	102.4	102.6	102.7	101.4
Current revision	100.1	100.4	100.5	100.8	101.0	101.0	101.6	101.7	102.0	102.3	102.5	102.7	101.4
Reference base, 1995=100													
Istat*	109.4	109.6	109.8	110.1	110.3	110.3	110.5	110.6	110.8	111.1	111.3	111.5	110.4
2000 Revised 1	110.8	111.0	111.2	111.5	111.8	111.8	111.9	112.0	112.3	112.6	112.9	113.1	112.3
2000 Revised 2	111.3	111.5	111.7	112.0	112.3	112.3	112.4	112.5	112.9	113.2	113.4	113.6	112.4
2000 Revised 3	111.1	111.3	111.5	111.8	112.1	112.1	112.2	112.3	112.7	113.0	113.3	113.5	112.2
Current revision	108.8	109.0	109.2	109.6	109.8	109.8	109.9	110.0	110.2	110.5	110.7	111.0	109.9

*These figures have been calculated by us and are uniformly slightly higher (0.5-0.6 points) than those published by ISTAT, due to some missing price relatives and weights.

3. Conclusions

The current revision of 1999 monthly NICs, based on a more refined imputation of the actual collective consumption over the consumption basket items, confirms the results obtained in Buzzigoli-Ferrari (2000), both as for the calculation base and as for the reference base. In fact, as one can see from the fifth row in the first part of Table 1, the calculation based monthly indexes are very similar to those obtained in 2000 revision, hypothesis 3 (quite decidedly education oriented: 65% out of the total actual collective consumption allocated to it). They are quite different from the Istat estimates and uniformly higher than them. Also the reference base monthly indexes, the second part of Table 1 all, despite being quite lower than those of 2000 revision, are different from Istat estimates and, unlike the calculation base ones, uniformly lower.

This in turn confirms that it is probably the time that the problem of the underestimation of the weights in CPIs due to the non consideration of the shares of actual collective consumption over the concerned items of the weighting basket is faced by the National Statistical Institute. This is likely to be even more important factor in sub-indexes construction case. In fact, many National Statistical Institutes, as well as Eurostat, are undertaking the way of elaborating them, particularly for selected households groups like pensioners, for which the negligence of the above effect can cause significant biases.

REFERENCES

Buzzigoli, L. and Ferrari, G. (2000). Does the SNA93 Subdivision of the Household Final Consumption into Consumption Expenditure and Actual Consumption Affect the CPI? The Case for Italy. In *Quantitative Methods in Economics*, November 30-December 2, Bratislava, p. 11-17.

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RESUME

Dans ce papier, les auteurs abordent le problème du biais de l'indice des prix à la consommation dû à la sous estimation des poids causée par la négligence de la consommation collective qui doit être imputée aux biens et services qui sont en partie financés par l'état.