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Group of Experts on Consumer Price Indices

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EXPERIENCES FROM COMPILATION OF THE HUNGARIAN CPI*

Submitted by Central Statistical Office of Hungary

The meeting is organised jointly with the International Labour Organization (ILO)

I. INTRODUCTION

1. In 1990 the planned economy was officially repealed, when value added and income tax were introduced in parallel with decreasing subsidies the inflation jumped much more higher than it was in the previous decades. Following the fundamental changes in the economy, under new circumstances, the significant methodological renewal of the CPI took place in 1991 and first applied in 1992 with respect to the practice of EU countries, and with consideration of the major requirements and earlier expectations of the Hungarian CPI.

2. From 1996 Hungary has participated in the harmonisation work and as we started to implement the regulations and guidelines of HICP in the Hungarian HCP we have developed our national CPI as well.

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* This paper has been prepared by Ms. Borbala Minary, Central Statistical Office of Hungary, at the invitation of the Secretariat.

3. I selected the treatment of some difficult items from the Hungarian practice and I briefly present the problems what we faced to and the solution what we found.

(a) additional data sources – pharmaceutical products;
(b) tariffs – town gas;
(c) timing of entering of prices – airfares;
(d) price determination – gambling.

4. The first three are belong to the national CPI and the HICP as well, while game of chance is included only in our CPI not in the HICP.

5. The Central and Eastern European Countries are facing with similar circumstances it can happen that the following situation will be familiar to the colleagues from these states. However there are still enough differences found in terms of economic structure and sometime of price determining conditions.

Pharmaceutical products (medicines) – changes in the system of subsidy

Background

6. In Hungary the most part of the expenditure on health products and services purchased by the household is regulated. The larger part of the pharmaceutical products is partly paid through the public health insurance system. (A public institute – National Health Insurance Fund managed the system of subsidy and all other expenditures according the health insurance.) The rate of subsidy can be either 100%, 90%, 70%, 50% or fixed. The rest of the medicines are paid by the households themselves.

7. An other grouping criteria is the statue of the prescription:

(a) medicine can only be issued with prescription (all subsidized and some non-subsidized product);
(b) medicine can be issued without prescription (the major part of non-subsidized product);
(c) medicine can only be issued with a specialist's prescription ;or
(d) medicine can only be used in hospitals.

We deal with the first two groups only.

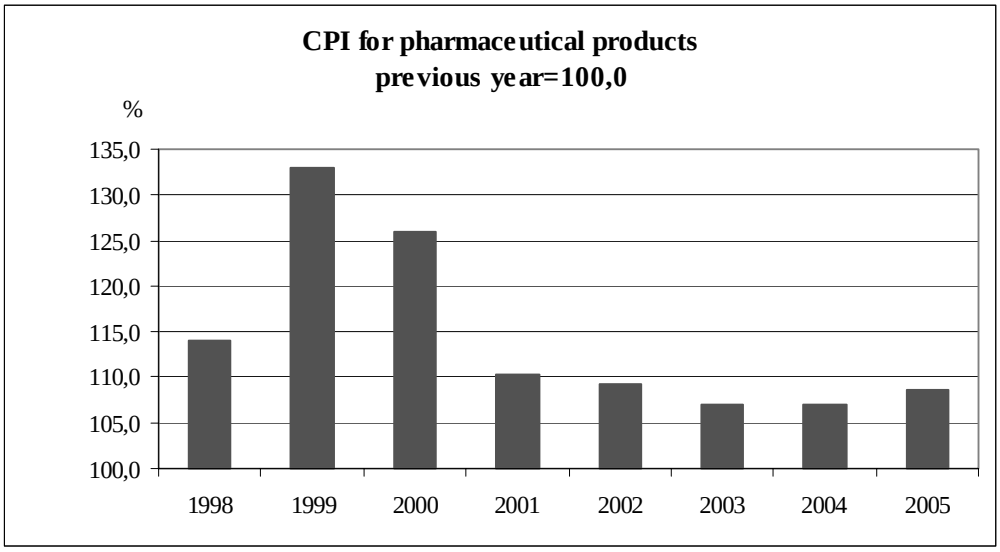
The problem

8. The acceleration of inflation in the beginning of the nineties has occurred because of the disequilibrium of the economy. In order to moderate this disequilibrium, there were some administrative measures which had an increasing effect on the consumer price level. In the case of pharmaceutical product this administrative measure was the reduction of the subsidies. In 1999 the government employed this instrument again. The following table and graph presents these years.

Table 1. Consumer price indices for pharmaceutical products (previous year=100%)

	1992	1993	1994	1995	1996	1997	1998	1999
Index	178,4	148,1	150,8	153,7	141,6	122,4	114,0	132,9
Weight	0,7	0,8	1,1	1,3	1,4	1,7	1,8	1,8
		2000	2001	2002	2003	2004	2005	
Index		126,0	110,2	109,3	107,0	107,0	108,6	
Weight		1,7	1,9	2,1	2,2	2,2	2,3	

Graph 1. Annual consumer price indices for pharmaceutical products



Solution

9. In 1999 the basket of the CPI covered 45 medicines. We collect prices completely in the traditional way, in pharmacies. (In Hungary the medicine are had to sell in pharmacy only.) We decided to enlarge our sample of pharmaceutical products, but it was not possible to collect much more prices in pharmacies or at least it would have been very costly. We started to analyse the availability of some other data sources.

10. The prices of all medicines are available in the Health Insurance Gazette. The database of the National Health Insurance Fund is a good basis for selecting the sample and providing the weights as well. We select more than five hundred medicines which covered the 80 percent of the total turnover. The ratio of the subsidised and non-subsidised products was 60-40%. This ratio is more or less unchanged during the past years. In every December we fixed the sample and collect the prices centrally from the Gazette.

11. The newest change: from November 2005 the prices of the non-subsidised medicines can vary pharmacy by pharmacy. There is a list with the recommended prices in the web-site of the Hungarian Pharmacist Chamber but the individual pharmacies can apply a different price if they can obtain the medicine cheaper or they received some discount from the producer or the wholesaler. The list is publicly available and updated monthly. But it contains only recommended prices. So we had to return back to the conventional price collection method. Currently for non-subsidised medicine we monitor 44 products and compare the collected prices to the list prices. For subsidised product we continue the practice which was introduced in 2000.

Town gas prices and indices – treatment of tariffs

Background

12. Town gas prices in Hungary are centrally fixed by the Ministry of Economy and they are the same in the whole country. The weight of the group town gas has been raised year by year from 1992 (when it was 0,8%) till the current 2,4 percent in 2006. Before 1999 the annual increase was more considerable than following that year.

13. The major difficulties in dealing with tariff prices arise from changes in the tariff structure. In Hungary till 2003 there was one single category for town gas independently of the time or the quantity of consumption. Since October 2003 a new tariff structure was introduced. There are two main categories in accordance with the output of the gas-meter, moreover under both sections there are three other different categories according to the quantity of consumption. From that time we have taken into consideration one further point: the household get some compensation directly in the gas bill. The amounts of the compensation are determined according the same quantity categories what are applied in the case of prices. The following table shows the most important elements.

Table 2. Example of calculation prices

		Price HUF/MJ	Compensation HUF/MJ	Price with compensation HUF/MJ	Average heating value MJ/m^3	Price HUF/m^3
1	2	3	4	5=3-4	6	7=5×6
Output of the gas-meter under 20m^3/h	up to 1500 m^3	1,843	0,478	1,365	34	46,4
	1500-3000 m^3	1,843	0,330	1,513	34	51,5
	over 3000 m^3	1,843	-	1,843	34	62,7
Output of the gas-meter over 20m^3/h	up to 1500 m^3	1,725	0,478	1,247	34	42,4
	1500-3000 m^3	1,725	0,330	1,395	34	47,4
	over 3000 m^3	1,725	-	1,725	34	58,7

The problem

14. There is a tradition that the Hungarian Central Statistical Office frequently (monthly and yearly) publishes average prices of selected goods and services. As the town gas has significant share in the consumption of course we publish average price for it. But from October 2003 it is difficult to calculate an average price which is in harmony with the published index. Table 3 shows the two different results.

Table 3. Calculation average prices and indices

Categories	Base price	Current price	Index		
1	44,8	46,4	103,6	105,2	105,1
2	47,9	51,5	107,4		
3	56,2	62,7	111,6		
4	41,9	42,4	101,3	103,0	
5	45,0	47,4	105,4		
6	53,3	58,7	110,1		
Total	46,1	48,9			*106,0*

Solution

15. The main question was the following: whether we stop to publish average price for town gas or we try to find some practical solution. An other question arisen as well: if we calculate an average price with using of the different consumption categories what the result will exactly show.

16. We decided to publish three separate prices in the first main category (output of the gas-meter under 20m^3/h) according to the consumed quantities because the weights of this category is much more relevant (~96%) than the other.

Airfares – time of entering of purchaser prices

Background

17. Commission Regulation (EC) No 2601/2000 regarding the timing of entering of purchaser prices states that ‘prices for services shall be entered into the index for the month in which consumption of the service at the observed prices can commence’. In the case of some more complicated services such as airfares it is not so easy to follow the instruction of the above regulation. The price of the same flight can vary depending on when you book the flight. Additionally the market of the air transport became more complex when the low-cost or low-fare airlines appeared in Hungary and in the last year they have continuously extended their destinations and market share.

18. Pricing strategy of the companies: In the case of traditional (no low-cost) airlines the prices are mainly based on seat availability so if there are just a couple of seats are available prices

can be much more higher then previously when there is only some booking for the same flight. Moreover the prices are varied according other conditions as well. The next table shows some price categories for a single fare to London without taxes and charges in the case of the Hungarian airline.

Table 4. Airfare ticket prices

Price (HUF)	Condition
19500	Budget
29500	Smart choice
41000	Great value
55000	Fully Flexible (B)
103000	Fully Flexible (Y)
119500	Discounted Business
156350	Business
161050	Premium Business

19. The low-cost airlines just partly follow this kind of pricing strategy. Sometimes they apply extreme discounts but otherwise the prices do not show large movements month to month.

The problem

20. In which month shall we collect the price of a pre-selected flight if the ’consumption of the services commences’ in January for example?

Solution

21. In both case, traditional and low-cost airlines, prices are started to collect 6 months in advance. For every single item till January we collect five prices per companies and these prices are aggregated with geometric mean. We apply simple geometric mean because we have not any real data on consumer behaviour about the time of booking.

22. The prices are collected via the Internet, from the website of the different airlines. We monitor the prices always in the middle of the month and made the booking for a well-defined time period. The next table contains some example for two low-cost airlines, return ticket to London (prices with taxes and charges).

Table 5. Prices (in HUF) of a ticket for a long weekend at the middle of March (10-13)

Price collection time	Wizzair	Skyeurope
14 October 2005	15440	29659
15 November 2005	16470	27859
15 December 2005	18640	15980
16 January 2006	18370	20657
15 February 2006	30320	25656
Average price	19245	23388

23. As it mentioned earlier low-cost airlines offer sometimes extreme discounts. In these cases we suppose that the consumer make his decision sensibly and we observe a price for a flight which departure e.g. on the previous day or on the next day depending on the given conditions.

Games of chance – problem with the price determination

Background

24. Commission Regulation (EC) No 1687/98 regarding the coverage of goods and services of the HICP states in Annex1b that 'household final monetary consumption expenditure does not cover lotteries and gambling, neither the payment of the service charge to the unit organising the lottery or gambling, nor the residual current transfer that is paid out to the winners (although according to ESA 4.135 service charge is included in final consumption expenditure)'. Compliance to the regulation the HICP does not cover gambling bit the Hungarian CPI does.

The problem

25. In 2001 the 'price' of one lottery ticket or the participation fee which is paid by the consumer was increased from 100 HUF to 130 HUF. At the same time the sum of prize which is paid out to the winners was also increased from 43,2 HUF to 58,5 HUF per coupon.

26. Till that time we calculate the price index of lottery as the change in the participation fee, but in this case it would have been 30%. Of course the Hungarian Gambling Company did not agree that time with our former calculation method. We ask some expert on CPI about their suggested alternative calculation.

Solution

27. We received different sorts of suggestion. I show now them in a summarising form.

Table 6. Price elements of a lottery ticket

Period	Cost of ticket	Prize per ticket	Net loss	Net loss (as % of the cost of one ticket)
1	2	3	4=2-3	5=(2-3)/2
0	100	43,2	56,8	56,8
t	130	58,5	71,5	55,0
% change	+30,0	+35,4	+25,9	-3,2

(a) If we use the gross cost of tickets purchased for our weights and the representative item is the cost of a single ticket the increase is 30%.
(b) If we use the net loss as the basis for calculating weights and the representative item is the cost of a single ticket the increase is 25,9%
(c) If we use the net loss as the basis for calculating weights and the representative item is expenditure of a fix amount on lottery ticket the change is -3,2%

28. It seems that it is not easy to get the right answer if there is at all. We need to agree on an acceptable solution.

II. CONCLUSION

29. In the past years we achieved that we can produce comparable HICP figures and our national CPI are met with the users' expectation.

30. At the same time experience has shown that there are still enough problems left for further investigation. For example: the harmonisation of the applied quality adjustment methods, sampling, owner-occupied housing, treatment of seasonal items, etc.

31. For 'new' Member States remaining problems with difficult areas are no longer much different from the situation in 'old' Member States. If we can continue the harmonisation work, adapt common recommendation, exchange of methodologies then our index figure will be more reliable and comparable with each other.
