DETERMINANTS OF INFLATION IN ARUBA

A summary of a research paper "The imported and domestic determinants of inflation in Aruba'' by drs. J. Ridderstaat, Economist at the Economic Policy Department.[*]

Being a small tourism-based economy, Aruba has a high propensity to import goods and services: the ratio of current imports (excluding oil) to gross domestic product amounts to about 70 percent. Thus, one would be inclined to, initially, assume that foreign price movements are the dominant factor causing inflation. Imported inflation originates from increases in international oil quotations, as well as from changes in the prices of other goods.

The influence of the energy component has become more pronounced over time, due to higher world market prices. On its turn, the latter partly originates from various geo-political tensions. In reaction to these tensions, the frequency of calculating the tariffs of water and electricity was raised. Consequently, the weight of the energy component in inflation rose by nearly 1 percentage point to 12.4 percent, roughly implying that for every Afl. 1.00 spent by a consumer, about 12½ cents are directly used on water, electricity, and gasoline. It should be noted in this respect, that the selling price of utility products (excluding the imported inflation) has not been raised since mid-1993, despite higher depreciation costs associated with the massive realized investments in the production process.

The aim of the more frequent changes in the water and electricity tariffs is to timely adjust local prices to changes in the world market conditions. However, these changes have also contributed to an increase in the variability of total inflation. This introduces extra noises of a temporary nature, which may lead to higher inflation. After all, certain agents are inclined to improperly adjust prices and incomes proportionately to the increase in energy costs. Moreover, they do not make similar opposite adjustments when these costs are, subsequently, reduced. In this way, incidental increases become more permanent.

The estimations presented in the paper indicate that the direct influence of the energy component on the inflation rate varied between –0.6 percent and 1.6 percent during the period 1997-2003, while its annual average amounted to 0.4 percent (see summary table). The direct impact of the import of other goods and services on the consumer price index was estimated on the basis of the export price statistics of the eight major suppliers' countries. The exercise suggests that this impact varied between -0.4 percent and 1.0 percent. The annual average was 0.3 percent. The total direct effect of imported inflation amounted to an average 0.7 percent per annum.

[*] The views expressed in this paper are those of the author and do not necessarily reflect those of the Centrale Bank van Aruba (the Bank). A full PDF version of this paper is available on the Bank's website (www.cbaruba.org).

Summary table 1)

	Imported inflation							Local inflation	Total inflation
	Direct			Indirect			Total		
	Energy	Other	Total	Energy	Other	Total			
1997	0.7	0.6	1.3	0.1	0.3	0.4	1.7	1.3	3.0
1998	-0.6	-0.4	-1.1	-0.2	-0.2	-0.4	-1.5	3.4	1.9
1999	-0.1	-0.1	-0.3	0.1	-0.1	0.0	-0.2	2.5	2.3
2000	1.6	1.0	2.7	0.5	0.5	1.0	3.6	0.4	4.0
2001	-0.2	0.1	0.0	-0.1	0.1	-0.1	-0.1	3.0	2.9
2002	0.0	0.2	0.2	0.0	0.1	0.1	0.3	3.0	3.3
2003	1.2	1.0	2.2	0.4	0.4	0.8	3.0	0.7	3.7
Average	0.4	0.3	0.7	0.1	0.2	0.3	1.0	2.0	3.0

1) Some rounding differences may occur.

Source: CBA.

The indirect effect of imported inflation, defined as the reaction of local entrepreneurs to movements in prices of goods and services originating from abroad,
was calculated using a regression technique. This effect fluctuated between –0.4 percent and 1 percent; its annual average was about 0.3 percent.

Subsequently, the local component of inflation was determined by subtracting the imported inflation (direct and indirect) from the total figure. The results indicate that the local inflation varied between 0.4 percent and 3.4 percent, and its annual average amounted to 2 percent.

The conclusion of the calculations summarized above is disquieting. Although in certain years imported inflation was dominant, this was (contrary to what one may initially have assumed) not the case for the investigated period as a whole. Overall, domestic factors were on average the major cause behind the increase in the consumer price index, contributing a notable 67 percent to inflation during the period under review.

The main factors causing the dominance of domestic inflation were the excessive demand for goods and services associated with the rapid increase in money supply, wage rises, extra profit margins, the additional costs of General Health Insurance (AZV), and the raising of excise tariffs and import duties.

As a consequence of the relative rapid rise in domestic inflation, the real exchange rate vis-à-vis the major currency to settle international transactions, i.e., the US dollar, has appreciated by 4 percent during the indicated period, weakening Aruba’s international competitive position. Meanwhile, the Bank, in its role as guardian of financial stability, tightened its monetary policy to bring the credit expansion in line with the country’s growth potential, and, thus, to contain demand-pull inflation.

In addition, the Bank has repeatedly advised the authorities to consistently implement a comprehensive package of budgetary, income, price and structural measures, to also mitigate cost-push inflation. Actions should also be taken to limit the effect of imported inflation, inter alia, by enhancing the efficiency of the import process and buying goods from the cheapest sources. Furthermore, it should be considered whether the benefits of frequent adaptations of utility products, as well as of gasoline prices outweighs their effect on inflation.