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Inflation in Tunisia: Perception and Reality in a Context of Transition

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1 Introduction

The initial months of 2012 were marked by frequent reports of inflationary pressures in Tunisia. These pressures occurred in the aftermath of the economic slowdown resulting from the revolution and against a backdrop of social demands that translated into zero growth, increased unemployment and significant decline in foreign investments.

This note attempts to determine the extent to which the inflationary pressures are real, the goods and services that are affected and to identify the causes. The analysis is based on previous research which indicates that the causes of inflation are diverse (monetary and structural), ranging from money supply to real output and import prices. This note also seeks to generate a debate on the return or otherwise of inflation in Tunisia at a time when the anti-inflationary policy and the existence of a compensation fund are often challenged in the current context of economic recovery. It aims to serve as reference tool for a deeper and broader empirical analysis.

2 Inflation in Tunisia is Managed by the Government Through Price Controls

In Tunisia, as in other countries, inflation is calculated on the basis of the consumer price index (CPI). The CPI covers goods and services that make up urban and rural household consumption. The consumption basket used to determine this index is based on the outcomes of five-year household consumer surveys. The list of products and the structure of the weights applied are based on the average household budget for each group of products. Food products represent the bulk of expenditures and account for over 32% of the CPI.

[1] This report was produced by Kaouther Abderrahim (Consultant, ORNA) and Vincent Castel (Principal Program Officer, ORNA) with the support of Aymen Dhib (Statistical assistant, EDRE). Overall guidance was received from Jacob Kolster (Director, ORNA). The authors would like to thank Safouen Ben Aissa (Consultant, ESTA), Vinaye Dey Ancharaz (Principal Research Economist, EDRE) et Nooman Rebei (Economiste, IMF).

The Tunisian CPI is fairly representative in terms of both geographic coverage and number of products contained in the basket. These were revised in 2010. Thus, the sample of retail outlets was revised upward from 2631 to 3155 in 2010 and taken from all the localities, governorate capitals and major urban centres. Furthermore, the National Institute of Statistics (INS) also revised the list of items constituting the consumption basket. Since 2010, the latter comprises 1010 food items classified into 12 groups. The INS chose 2005 as the new base year for household consumer prices to replace the year 2000. The structure of weights was also revised taking into account the outcomes of the 2005 national household consumption survey (Table 1).

Several studies and analyses[1] show that inflation in Tunisia is driven by a variety of factors. Monetary factors such as money supply, interest rate and effective exchange rate influence the CPI trend, in addition to structural factors ranging from annual average wage to import price index and real output.

Global energy and food price variation is a traditional inflation driver. In addition to the impact of energy prices on households through direct consumption, energy prices also influence the production costs (hence prices) of manufactured goods and their transportation. Furthermore, the escalation of energy prices also affects the cost of agricultural production and the haulage of food products, just as the escalation of cereal prices indirectly affects meat and milk prices, where cereals are included in livestock feed. (In 2007, three-quarters of cereal consumed in the country was imported, over half of which went into stock rearing[2]).

To safeguard the purchasing power of the population against world market contingencies and the effects of input cost increases, the Tunisian government can directly influence prices. This is done through two mechanisms: by setting an official price for specific food and consumer items and by subsidizing some other basic food products. The country's food, energy and transport expenditures represent 32%, 5% and 11% of the CPI, respectively.

Hence the government has put in place a special price system for some basic commodities. Over 30% of the products in the consumption basket are covered by authorized prices. Indeed, in view of the competitiveness and sensitivity of the products in relation to consumers, the country's regulations provide for a dual pricing system: (i) officially authorized prices (homologation) and (ii) negotiated prices (auto-homologation). Thus, authorized prices are fixed beforehand by the Tunisian administration based on the costs and accounting details provided by the relevant company. However, it is important to note that not all the products with officially authorized prices are subsidized. For instance, red meat and coffee are not subsidized and their prices are fixed beforehand by the government. In the negotiated price system, the selling prices are set at the distribution point by the company. Such prices consist of the production cost and a mark-up fixed by decision of the Ministry of Trade. For example, the per minute tariff of telephone calls is determined by the telephone network operators who take into account the mark-up fixed by the Ministry of Information and Communication Technologies.

At the same time, the system of compensation helps to ensure a regular supply of subsidized products to the local market at relatively stable prices in line with the purchasing power. The compensation policy entails a variety of measures ranging from safeguarding the purchasing power of low-income Tunisians from the hazards of the global market to guaranteeing a minimum income to farmers through cereal subsidies. Table 1 provides a list of compensation costs in millions of dinars. It should be noted that the cereal subsidy accounts for over 75% of the total subsidies, excluding energy.

These policies were effective and helped to mitigate the impact of global price fluctuations on Tunisian prices. Indeed, as Figure 1 shows, although global energy and food prices underwent significant variations, changes in Tunisian prices were relatively smooth. Similar conclusions may be drawn from Figure 2 presenting a comparison between disaggregated Tunisian food and energy CPIs and the **global energy and food price indices**.

[1] « La Portée de la Politique de Ciblage de l'Inflation : Approche Analytique et Empirique pour le Cas Tunisien »; Adnen Chockri et Ibticem Frihka, 2011. (Impact of Inflation Targeting Policy: An Analytical and Empirical Approach to the Tunisian Case).
[2] FAOSTAT, 2012.

3 Inflation in a Post-revolution Context

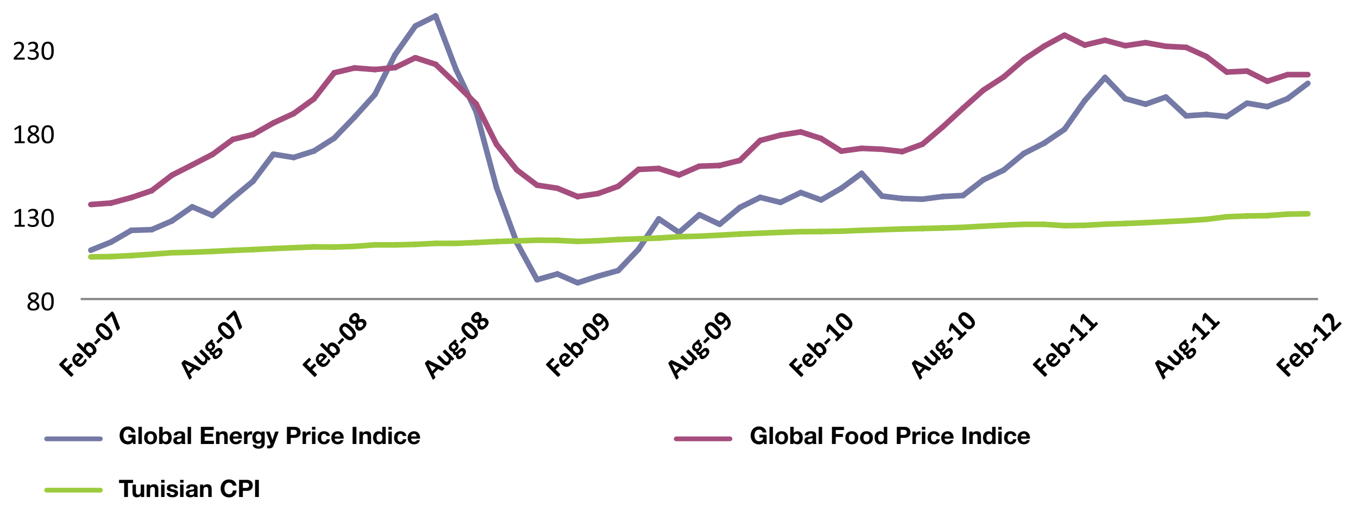
The set of mechanisms described previously helped to stabilize inflation in Tunisia in 2011 (below 4%), and even accounted for its decline in relation to 2010 (Figure 3). The escalation of global prices beginning 2011 did not affect the inflation rates. Figure 4 shows that an increase in food prices was recorded between January and February 2011 whereas, over the same period, the CPI of food products fell by -0.2%. Food CPI remained relatively stable up to July 2011. Similarly, while a rise of over 9.5% of global energy price was observed, its effect on the Tunisian CPI was minimal.

Table 1 Compensation Fund Costs in TND Million (excluding energy)

	2008	2009	2010	2011
Cereals	873	687	613	883
Bean oils	168	109	113	214
Milk	3	-	-	23
School stationery	5	4	4	4
Other products	-	-	-	25
Sugar				11
Tomato concentrate				10
Couscous and pasta				4
Total	1 048	800	730	1 150
% share of GDP	1.9	1.4	1.2	1.9

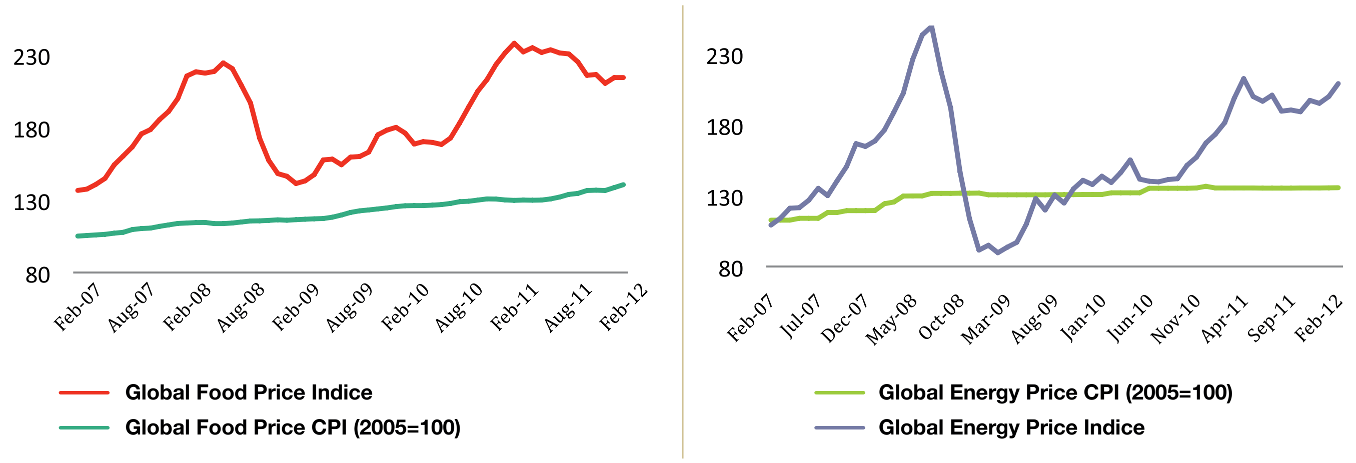
Source: Ministry of Trade and Craft Industry, 2012.

Figure 1 Trends of Tunisian CPI, Global Energy and Food Price Indices



Source: INS and IMF, March 2012.

Figure 2 CPI s and Global Energy and Food Price Indices, 2007-2011



Source: INS and IMF, March 2012.

Table 2 Budgetary Deficit, 2000-2011

	2000	2007	2008	2009	2010	2011 (e)
Budgetary deficit (% of GDP)	-2.4	-2.6	-0.7	-2.7	-1.3	-3.9

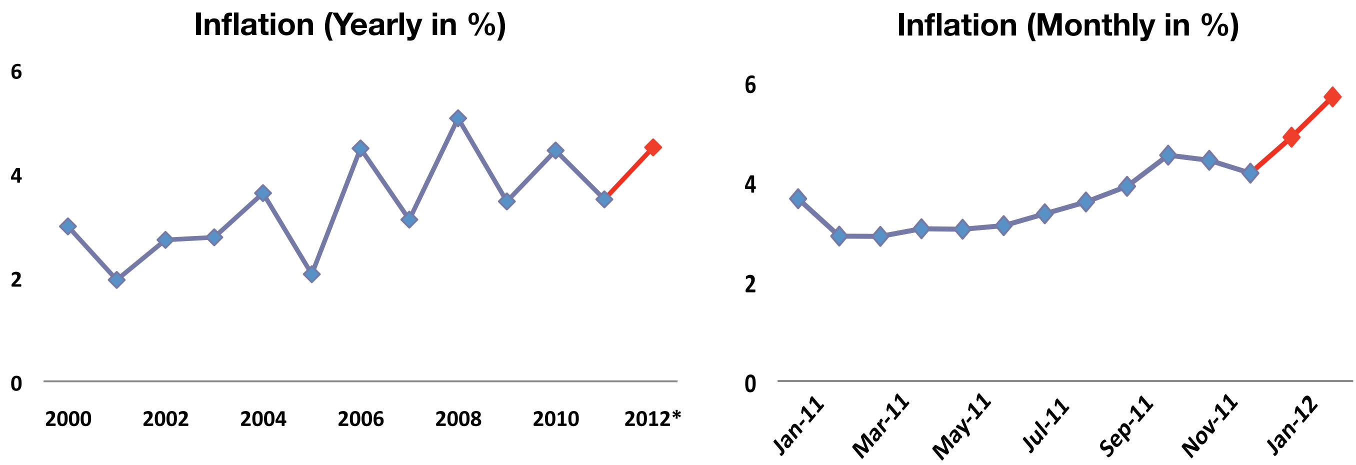
However, the price control effort worsened the already elevated fiscal pressures (Table 2) due to the increased mobilization of the compensation fund. In the aftermath of 14 January, the transition government reviewed the compensation fund upward, notably for cereals, in order to appease the population whose expectations continued to rise after the ouster of the former president. Taming price escalation became possible in 2011 only after the doubling of the national compensation fund[3]. The subsidy expenditure in support of the purchasing power of the population amounted to 2.8 billion dinars (4.5% of GDP). Energy products benefited the most from the government's intervention to the tune of TND 1.5 billion, followed by food subsidies (TND 1.1 billion). These new subsidies weighed heavily on the budgetary deficit which increased to -3.9% in 2011. Furthermore, the range of subsidized products was widened to meet social demands by including sterilized semi-skimmed milk, sugar and tomato concentrate.

These measures peaked in July 2011 and although average inflation remained under control, the prices of staple goods and services rose sharply, thereby affecting households significantly. A 6.4 % rise in food prices was recorded between July 2011 and February 2012 (and 8.3 % in one year). Other goods and services had similar price increases that had a low impact on average inflation but a relatively high one on consumers: tobacco (+9.7 % over a 6-month period), education (+9.8 % over a 6-month period), and housing (+ 4 % in one year).

Since the beginning of 2012, average inflation rose by 4.9% in January, and over 5.7% in February compared to a year-over-year rate of 3.5% in 2011. These inflationary tensions – which are extremely hard on average consumers - indicate a major escalation of the prices of food that represents over 32 % of average consumer expenditures (Table 3).

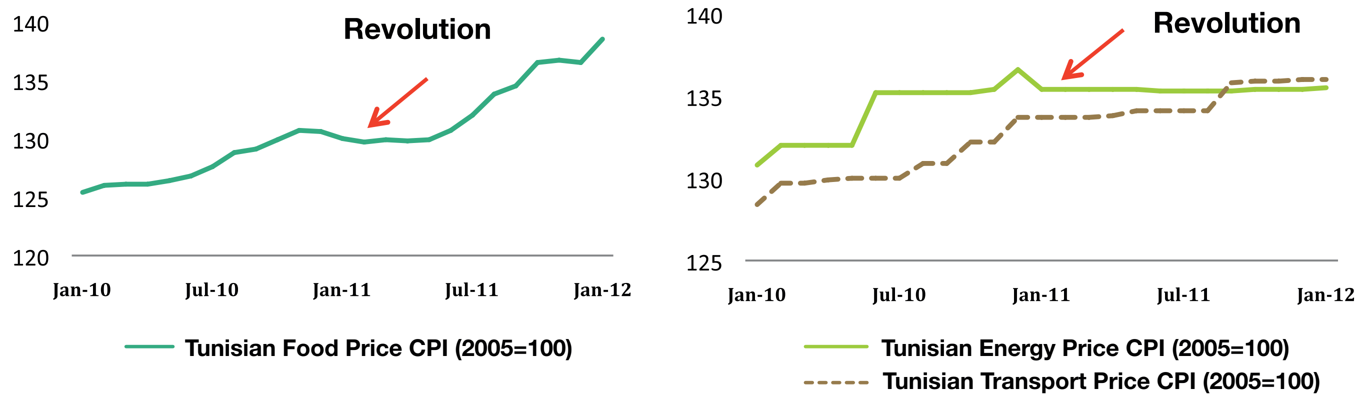
[3] Taming inflation by maintaining subsidies at a fixed rate results in a sharp increase in subsidies.

Figure 3 Trend of Inflation in Tunisia, 2000-2011



Source: ADB and INS, March 2012.

Figure 4 Trend of CPIs and Global Energy and Food Price Indices, 2007-2011



Source: ADB and INS, March 2012.

Table 3 Household Consumer Price Index (base 100 in 2005) and Inflation

Group of Products	CPI Weigh-ting (%)	Inflation by Category of Goods and Services (%)			Weighted Contribution to Aggregate Inflation (%)		
		Feb-11	Feb-12	Feb-12	Feb-11	Feb-12	Feb-12
		Feb-10	Feb-11	Jul-11	févr-10	Feb-11	Jul-11
Food and Beverages	32.7	2.9	8.3	6.4	1.0	2.7	2.1
Tobacco	2.5	1.6	9.7	9.7	0.0	0.2	0.2
Clothes and Shoes	9.2	2.8	6.9	0.1	0.3	0.6	0.0
Housing. Water. Gas and Other Fuels	14	3.9	4	1.2	0.5	0.6	0.2
Furniture. Household Goods and Regular House Maintenance	7.8	2.4	5.8	3.5	0.2	0.5	0.3
Health	6.3	2.1	2	1.2	0.1	0.1	0.1
Transport	11.3	3.1	1.8	1.5	0.3	0.2	0.2
Communications	3.5	-1.1	0.1	0.1	0.0	0.0	0.0
Leisure and Culture	2.1	1.8	2	0.6	0.0	0.0	0.0
Education	2.3	1.7	9.8	9.8	0.0	0.2	0.2
Restaurants and Hotels	4.2	5.8	7	5.0	0.2	0.3	0.2
Misc. Goods & Services	4	1.9	3.9	2.6	0.1	0.2	0.1
Total	99.9				2.8	5.7	3.6

Source: Calculated by the authors based on INS data, March 2012.

4 What Accounts for the Inflation of the Past 7 Months?

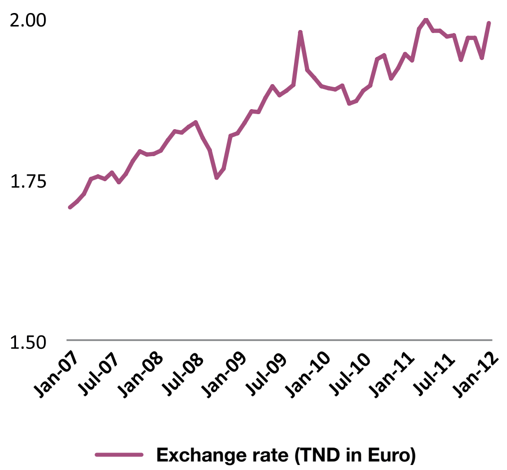
Structural Factor

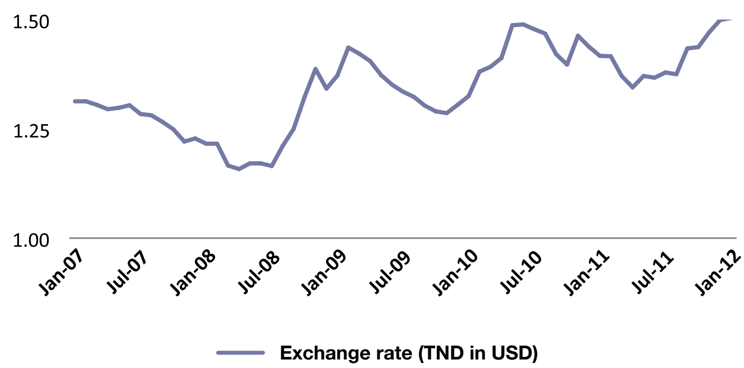
This increase in inflation had been anticipated by making provision for increased production costs. According to the INS economic newsletter published in September 2011, production costs rose in July 2011 compared with import prices. This stemmed from the anticipation early July of the escalation of some production costs that were scheduled for re-evaluation in early 2012 (energy expenditures, wages etc.). Consequently, Tunisian businesses incorporated the expected increases in the selling price of many products in advance.

Monetary Factor

The dinar whose exchange rate is controlled by the Central Bank has depreciated in relation to the dollar and the Euro. The symbolic threshold of two dinars to one Euro was reached in March and the dinar to the dollar rate is currently 1.5, historically the highest ever. This depreciation has generated inflationary pressures that could accelerate if Tunisian foreign reserves continue to dwindle and the balance of trade worsens. Foreign exchange reserves fell from TND 13.1 billion on 13 September 2010 to TND 11.5 billion a year later, and have gradually stabilized since then at TND 10.2 billion - representing 113 days of imports as against 186 and 147 in 2009 and 2010, res-

Figure 5 **Dinar Exchange Rate in Relation to the Euro and the Dollar, 2007-2011**





Source: INS, March 2012.

pectively. In addition to worsening the balance of trade and reducing foreign exchange reserves, the exchange rate depreciation significantly affected the energy and food bill, which could have an adverse impact on the government budget.

Furthermore, since 2011, the Central Bank (BCT) has adopted an expansionary monetary policy aimed at reducing the interest rate and limiting banks' mandatory reserve levels. At 3.23 % in December 2011, the money market rate (MMR) has been at its lowest historically, compared with an average of 4.32 % and 4.43% in 2010 and 2011, respectively. The decline in interest rates is not without consequences on bank liquidity. To address this, the BCT injected TND 3.87 billion in February to stimulate demand-driven inflation in a context of scarcity of goods supply.

The Libyan Crisis

The Libyan crisis fuelled the black market in exports to that country. The high volumes of exports to Libya and contraband activities at the border resulted in the scarcity of several basic food items. During the Libyan crisis, some Tunisians sold goods to Libyans at higher than market prices, thereby driving prices upwards in Tunisia. Attention was consistently drawn to the fact that the illegal exports were a potential source of inflation beginning 2012. According to an official representative of the Ministry of Industry and Trade, "trafficking and illegal exports are the main causes of the escalating prices of basic consumer goods and the deterioration of the purchasing power of Tunisians". Most of the smuggled goods are subsidized products. With the return of peace in Libya, there are plans to introduce stringent measures to discourage the traffickers, thereby restoring economic balance and matching supply with domestic demand. Thus, an action plan has been formulated to combat the trafficking of goods at the borders.

5 What Accounts for the Divergences between Official Inflation and the Actual Inflation Perceived by the Population?

Challenging Price Control in a Context of Transition

The 2011 crisis jeopardized economic price control efforts, thereby culminating in non-compliance with the official government prices. Considerable discrepancies (from 10 to 30% locally) between the official prices and the selling prices of a number of products, particularly food products, have been noted. However, these increases do not appear to be reflected in official inflation indicators recorded in January and February 2012. In addition to improved economic control, the sample of retail outlets whose prices are used by the INS staff to calculate the national CPI should be revised upward, in addition to better distribution in relation to the localities, governorate capitals and major urban centres.

As a General Indicator, the CPI Does not Reflect Household Basket Inflation

The method of calculating the CPI is often challenged because of a considerable discrepancy noted between the calculated inflation and inflation as perceived by the population. Because Tunisians consumers have sound knowledge of prices, they are quick to notice an increase in the cost of living. Their weekly or virtually daily visits to markets enable them to directly and immediately feel the impact of the escalation of food prices. And although food products represent 32% of the CPI, the 8.3% increase of food prices felt and recorded in one year (February 2011 – Feb 2012) is reduced to 2.5 % in the total inflation. In contrast, the average consumer is less sensitive to variations in the prices of furniture or household appliances which are purchased on average every 2 or 5 years, but which statisticians use to calculate total inflation based on goods and services consumed by an average household.

6 Steps Have Been Taken to Combat These Inflationary Trends

Steps have currently been taken to ensure more effective price control and enhanced citizenry commitment. To ensure greater efficiency of the work of economic control officers, the Ministry of Trade published the price list of authorized products and provided a hotline for reporting cases of price malpractices. Permanent units have been created in weekly, municipal and bulk-breaking markets with the support of the army as well as security and control agencies to institute spot fines and combat all forms of fraud that undermine the transparency of trading activities. Furthermore, an appeal was made to the Ministry of Justice to pay greater attention to and accelerate the imposition of spot fines on traders who do not comply with the prices fixed by the Ministry of Trade, which is mandated by law to establish ceiling prices.

The government has tightened security at the Tunisia-Libya border to combat the illicit export of consumer products. The Minister of Interior stated on 22 February 2012, following a visit to the fruit and vegetable bulk-breaking market, that security arrangements had been tightened at the Libyan border to combat the illicit export of consumer goods. An agreement was signed between the Ministry of Industry and Trade and the Ministry of Interior to intensify road checks on farm products that bypass legal and official distribution channels.

7 Recommendations

To better ascertain the impact of inflation on the society, it is necessary to refine its measurement. A communication campaign must be organized on household basket inflation. Furthermore, given the strong regional and social disparities in Tunisia, the PCI based on the average consumer basket does not adequately reflect inflation as perceived by the population. Hence instead of focusing on a single index, several inflation indices that reflect regional and consumption disparities between the various social groups should be considered.

Changes in consumption patterns may be one of the factors accounting for the heightened impact of price escalation on the population – which calls for a more regular review of the CPI. The major changes in consumption patterns as well as the emergence of new products and services are not necessarily reflected in the index, in view of the fact that the CPI is based on the average consumer basket that is reviewed only every five years. Changes in consumer behaviour occur at a steady rate. The current method of using an estimated consumption basket to calculate the CPI does not make it possible to ascertain whether it is prices that influence consumer choices or vice-versa.

To address these issues, the African Development Bank awarded a technical assistance grant to the National Institute of Statistics (INS) to undertake relevant studies, one of which will deal with inflation measurement. To support Tunisia in its fight against price escalation, the study will contribute to analyzing the link between inflation and poverty. It will thus examine the impact of inflation on household purchasing power and determine whether the type of household has any influence on the inflation-poverty relationship. Indeed, it is clear that a rise in energy prices would have a lesser impact on poor household consumption. Furthermore, as our discussion on the significance of household consumption subsidies indicates, a review of the basic basket of goods (most of which are subsidized) appears to be necessary to the extent that household consumer patterns depend on the type, size and location of such households (e.g. households in towns along the Libyan border have suffered the more from shortages than those in Tunis).

This study therefore seeks to measure: (i) the impact of the type of household on the relationship between inflation and household consumption; and (ii) the influence of the geographic location of households on the inflation-poverty ratio. Thus, these impact measurements will help to develop different[4] consumer price indices: (a) a national price index (b) a price index for poor households, and (c) a price index by region. These indices will be used to simulate the discussions to be held on the compensation fund.

8 Conclusion

In a sound macroeconomic context, an inflation control policy is generally based on the assumption that eliminating the impact of global price contingencies on national prices is enough to stem all the indirect negative effects of price escalation. However, the risk of eliminating a particular distortion (here inflation) can aggravate the impact of the remaining distortions (budgetary deficit and decline in foreign exchange reserves), thereby impacting negatively on the economy in general. Clearly, if one were to compare the inflation recorded in Tunisia with that of Egypt or even Libya, it would be noticed that the transition governments succeeded in containing inflation at below the 5 % threshold. However, it is worth noting that the impact of an inflation control policy in a post-revolution context is immense. Limiting inflation by doubling the compensation fund and increasing imports to meet demand will lead to significant fiscal pressures in a context of economic recovery.

[4] This study will be mainly based on national surveys on the budget, consumption and household standard of living (2000, 2005 and 2010). The data for 2005 has been available since end October 2011 and the more recent one (2010/2011) since end December 2011.

Furthermore, the CPI inflation indicator does not accurately reflect the actual inflation felt by households daily. Where inflationary tendencies relate to daily or common consumer products and services used daily or frequently by consumers (food, tobacco and education), the latter clearly feel the impact significantly, although such tendencies may be less significant in the aggregated indicator.

Price performance in 2011 and early 2012 underscores the need for a more refined approach to the monitoring of inflationary trends in Tunisia. This could be achieved through a more specific inflation indicator regularly communicated to the people, which mirrors their perception of price escalation more accurately.

African Development Bank