ON THE MEASUREMENT OF IMFLATION AND COMPLEX INFLATION TARGETING

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The paper analyzes the regime of inflation targeting which, unfortunately, has a number of deficiencies. One of them is that inflation targeting is powerless toward imported inflation. This problem is especially important in import dependent countries. The paper suggests the notion of an imflation index which reflects the dynamics of imported product prices in the domestic market where an important role is devoted to the national currency exchange rate. The paper suggests a complex inflation targeting when monetary policy indicators are both inflation and imflation.

Key words: *inflation; inflation targeting; exchange rate; complex inflation targeting; imflation.*

Nowadays, inflation targeting (IT) is one of the most widespread regimes of monetary policy. The are many publications discussing the experience of different countries in this regard (e.g., [1-3]).

For countries with different levels of development, a generally accepted inflation index is not always equally able to reflect the social and economic peculiarities of those countries. In particular for poor countries, the main problem, first of all, is the food price increase and not the increase in the price of the whole consumer basket (e.g., [4-5]). For these particular countries, the prices of medication and utilities are not less important. At the same time, in countries with a negative trade balance, an important aspect is the price dynamics on imported products. Taking into account this important aspect, it is natural to „widen" the possibilities of the inflation index through the creation of its modification (e.g., [6-8]).

The goal of this paper is to study the issue of the measurement of the dynamics of imported product prices in the domestic market and „widening" the IT frame.

In 1984, the Reserve Bank of New Zealand decided to control the maximum level of inflation and consequently automatically moved its monetary policy toward IT [9; 10, pp. 86-114]. At present, around 70 different countries are employing this regime of monetary policy.

Nowadays, there are quite a lot of publications making „accusations" against IT because of its shortcomings. Professor Joseph Stiglitz, a Nobel Prize winner in economics, opposes IT because central banks are not able to control inflation which is often imported from abroad [11].

The issue of imported inflation could be generalized for a more general case. For this purpose, it is necessary to understand the real reasons for inflation.

As is known in economics, the reasons for inflation can be a total demand increase or a production costs increase, based on which two different types of inflation could exist: *demand-pull* and *cost-push* inflation (e.g., [12, pp. 147-149]).

Demand-pull inflation is caused by an excess of total demand when production is not able to meet the demand and, consequently, causes a price increase. It is not by chance that this type of inflation is interpreted in the following way: „too much spending chasing too few goods" [12, p. 147]. As is also known, central banks have several effective instruments in service through which it is possible to influence the amount of money in the economy which means that it is really possible to control the demand-pull inflation.

Much more complicated is the situation with cost-push inflation when increasing the per-unit production costs may bring a consumption decrease.

Mechanisms to decrease total supply through a production costs increase is quite simple. For instance, because of increasing the production costs, the reaction of companies will be the increasing of the prices for the purpose of the preservation of the level of their profits. The result of such an action will be following:

1. If the market is willing to „accept" the price increasing, then inflation is obvious.

2. If the market „rejects" the price increasing, then the companies are pushed to decrease the prices at the expenses of decreased profits which, in its turn, could force the companies to „leave" the market; this will bring us to a supply decrease and, finally, prices will be increased as a result. In this case, the inflation level will be increased.

As is well-known, a source of cost-push inflation can be the increase of wages (for instance, through the pushing of trade unions) and the price increase of raw materials and energy [12, p. 149].

In cases when different raw materials and energy are imported and when their prices are rising, we have the import of inflation.

Another important reason for so-called „imported" inflation is a depreciation of the national currency as a result of which prices on imported products are rising in the domestic market. In cases when the market is „rejecting" this price increase, importers have several options: to decrease their profits or to decrease import which finally will finish as a supply decrease and, as a result, will cause a price increase.

It is well known that in the case of demand-pull inflation, central banks have appropriate instruments to limit inflation. But, unlike this situation in the case of cost-push inflation (an exception is when this increase is not caused by the depreciation of the national currency), central banks have no instrument of influence: trade unions, import price increasing on raw materials or energy.

As for costs-push inflation, which could be brought about by the depreciation of the national currency, central banks following IT and, as a result, refusing exchange rate regulation, consequently cannot manage to decrease the inflation level. In other words, imported inflation, caused by the increase on international prices or by the depreciation of the national currency under the IT regime, are out of the sphere influence and regulation of the central banks.

In the case of countries when import is exceeding (sometimes several times) export, it is obvious that the measurement of the inflation level should be done not only through the traditional inflation but based on that part of the consumer basket which consists of especially imported products and services.

Along with the calculation of average prices on imported goods, it is not less important to focus on the exchange rate of the national currency (for instance, [13]) because these imported products are sold in the national currency in the domestic market. Consequently, for the domestic consumers of those imported products, the most important issues are how much these products will cost in the national currency and how much they will have to pay.

The indicator which can simultaneously reflect the average changes of imported prices and exchange rate changes in the national currency we call – imflation [14] which is a combination of two terms – „import" and „inflation."

We suggest calculating the imflation index in the following way:

$$I_t^m = \frac{E_t}{E_{t-1}} P_t^m,$$

where: I_t^m – imflation index in the period t

E_t – average nominal exchange rate of the national currency to foreign currency in the period t in which import is measured (in USD as a rule)

P_t^m – import price level indicator (measured in USD as a rule) in the period t.

The imflation level is directly related to the exchange rate of the national currency whose regulation instruments belong in their entirety to the central banks.

As mentioned above, the import price increase in the domestic market or, in other words, the imflation increase could be caused by three factors: a) a rise in prices in the international markets for imported goods, b) the devaluation of the national currency and c) a simultaneous rise in the price of imported goods and a depreciation of the national currency.

In this context, the imflation parameter can „fit in" the IT system when the target aims of the monetary policy of central banks, especially in import dependent countries, could be used simultaneously in terms of the inflation and imflation indicators.

Exactly such a kind of IT, based not only on one inflation indicator but on two – inflation and imflation – can guarantee a *complex approach* in the monetary policy of central banks when they can regulate price dynamics in the domestic market using these two indicators. For instance, in the case of an import price increase, central banks will be able to „soften" these price increases through an intervention in the exchange rate of the national currency. On the other hand, if the price increase in the domestic market will be caused by the national currency exchange rate depreciation, central banks will still be able to influence the national currency exchange rate.

Such an IT regime, based on the target goals of inflation and imflation, could be called complex IT (CIT) [15].

The target aims for CIT are inflation and imflation while the exchange rate of the national currency plays the role of an instrument in supporting the imflation target.

If the CIT system is including the imflation indicator along with the traditional inflation index, then central banks will also have to react on the devaluation of the national currency which usually leads to an import product price increase in the domestic market.

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იმფლაციის გაზომვისა და ინფლაციის კომპლექსური თარგეთირების შესახებ

პაპავა ვლადიმერ
პროფესორი
ივანე ჯავახიშვილის სახელობის
თბილისის სახელმწიფო უნივერსიტეტი

ჭარაია ვახტანგ
პროფესორი
საქართველოს საავიაციო უნივერსიტეტი

რეზიუმე

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