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**MACROECONOMICS AND AGRICULTURE**

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Agriculture as a segment of the economy is embedded in economic policy

In Brazil are rare and the research studies that seek to assess how the agricultural sector responds to the policies and the macroeconomics variables, and vice versa. This article seeks to explain this relationship. Among the macroeconomic variables are: the income growth, economic development, exchange rate policy, inflation and fiscal policy. For its part the agriculture has its own characteristics which affect this relationship, such as: the homogeneity of products, agricultural markets more competitive than the markets in other sectors of the economy, more flexible and more volatile prices, domestic prices influenced by international market mainly for commodities, production prices are seasonal fluctuations, the influence of the production is affected by climates and phytosanitaries factors the production relies on a factor which is almost inelastic, the soil. In this case, at most one can change its use – transforming crops-pasture or increase their productivity. This relationship is demonstrated from the following macroeconomic variables.

**Growth of national income.** The expansion of GDP increases the purchasing power, heating demand. However, in agriculture this impact is less because their products generally feature lower-income elasticity of demand. Historically it is observed that the impact of the growth of national income on the demand for agricultural products is lower the more developed the country. In Brazil, this aspect was very clear from the last decade with the rise of a new middle class, who at first increased the demand for animal protein, fruits and vegetables, but that will follow the trend, with the continuity of this increasing income, reducing its stake in the consumption of agricultural products.

**Economic development.** Agriculture has to constantly seek improved efficiency. As producers have limited capacity to influence the final price of the product, the alternative is constantly investing in technologies that reduce costs or increase productivity to ensure

and/or increase the profit margin. However, innovations in this sector are rapidly disseminated as soon as a significant fraction of production will be produced with this new technology knocking down the price and eliminating and/or lessening the excess profit. Register that the trend of new technologies is to save manpower, targeting to gain scale. However, this has contributed to reduce the terms of trade between agricultural prices and prices of other economic sectors.

Thereby, technological changes, rising incomes and changing relative prices have encouraged the consolidation of an agricultural activity now known as agribusiness, inserted into productive chains. This means more complex production systems, in which producers increasingly look executives advised by specialized technicians, and using more inputs and equipment provided by industrial sectors, which demand greater costs and investments.

**Foreing exchang policy.** In recent years, in Brazil, agriculture has been the sector that has contributed to the current account balance (the balance of imports and exports of goods and services). In these conditions, agricultural price fluctuations can cause significant changes in the balance of payments (account that records the entry and exit of foreign currency), affecting also the exchange rate. On the other hand, as the exchange rate is a key macroeconomic price for agriculture, any movement to change its equilibrium exerts important influence on the sector. Is the case of speculative attacks, a great devaluation, and a strong resource input by capital account or a shock positive exporter other sectors (minerals or oil, for example).

**Inflation.** In agriculture will depend on the nature of the inflationary process. When inflation is (for example, materials or workmanship), profit of the agricultural activity is compressed, for failing to pass on in full to its prices that cost shock, as competition in the sector is very large, in addition to suffer pressure from international prices. If inflation is demand raises agricultural prices. This time it is reflected in production costs, which extends the producer's profit margin, though the consumer has an offer of substitutes that soften these effects.

It is important to separate the effects of short and long term. In the short term, farmers are the most heavily impacted by both positive and negative shocks. However, in the long term, agricultural activities are returned to their original trends unless there has been some structural change. This happens because the agricultural markets are characterized by a more competitive environment, i.e. are close to perfect competition.

**Fiscal policy.** An expansionary fiscal policy, whose goal often is to stimulate the economy, generally have limited impacts on agriculture, due to the low-income elasticity of demand for agricultural products. However, if this fiscal expansion leads to rising inflation, the agricultural sector could get some short term gains with rising food prices, agricultural prices are more flexible. Is what is happening in Brazil from 2008 with the specialized tax

policy to lessen the impact of the European-American crisis, which has caused an inflation ceiling target next. In this scenario the consumer immediately detects the reflection of inflation in gondolas of supermarkets and trade shows.

On the other hand, agriculture, generally, is favored by differentiated tax regimes, such as, subsidized interest rates, aid for storage, reduction or elimination of taxes, etc., this is because these tax benefits are a transfer of resources from taxpayers to agricultural producers. There are still no studies that evaluate clearly if this transfer is completely offset by cheaper food, since its price is set on the international market, or for greater food safety (stability on offer). However, many of these benefits are reflected in the increase in the price of land, whose property represents access to them.

However, if the agricultural policies support to demand a significant volume of resources from the Government, as was the case in Brazil in 1980, budget variations can affect the performance of the sector, and, conversely, the agricultural price fluctuations can have decisive impact on fiscal policy.

It turns out, since the relationship between macroeconomics and agriculture deserves attention and knowledge both on the part of the Government as by farmers. These in turn are increasingly not able to fix only to aspects of production, with empirical knowledge. In need of professional management of your business, and the technical advice it becomes imperative to its success, since elaborate policies away from its context become close and determinants of outcome in remuneration and profit from their activity.