SOME THEORETICAL CONSIDERATIONS ON OPEN ECONOMY

Assoc. prof. Mădălina-Gabriela ANGHEL PhD *(madalinagabriela_anghel@yahoo.com)*
Artifex University of Bucharest
Lecturer Stefan Virgil IACOB PhD *(stefaniacob79@yahoo.com)*
Artifex University of Bucharest
Daniel DUMITRU PhD Student *(dumitru.teticdaniel@gmail.com)*
Bucharest University of Economic Studies
Ştefan Gabriel DUMBRAVĂ PhD Student *(stefan.dumbrava@gmail.com)*
Bucharest University of Economic Studies

Abstract

Starting from Benjamin Franklin's maxim that No nation was once destroyed by trade*, we come to the conclusion that production in an open or closed society must be destined for the market. In this respect, the economy is integrated and consumers have goods and services to choose from, and economists have more opportunities to determine how to invest further.*

The open economy must be understood as the one in which the key macroeconomic variables, which measure interactions between countries, manifest themselves fully. Accounting identities reveal a key by which the factors of production that we consider to be taken into account when it comes to an open economy.

In the European Union, the Community market is an open market, in the sense that every country, every economic operator in each country, has the possibility, under the Directive on the free movement of goods and services, to move and come to the market with those products and services.

The international flows of capital and the trade balance is a problem that arises in an economy, be it closed or open, because international capital creates for each nation the possibility of producing more, above the requirements of the internal market. In this context, we can model the correlation that exists between the international market and the trade balance of external payments in the sense that a nation with little opportunity to produce more than its own country's needs and does not have all the necessary materials, materials and components, must resort to imports. Imports, which in the European Union are considered a sale-purchase, mean that part of the national economy goes to buy from the outside. Then, in order to fully elucidate this situation, we also take the reverse in which an economy produces much more than its own needs and makes exports. We thus encounter two categories of nations, namely nations with open or closed economies that have surplus and closed or open

economies that have deficits. From this we can also make the calculation of purchasing power parity, which is the basis of effective comparability between states.

In this article, to achieve this aforementioned goal, we used a complex methodology of logical, interpretive analysis, the use of econometric methods and models that we have adapted to the specifics and requirement of a closed, open, small or large economy.

Keywords: *economy, market, production, capital, factors, trade balance.*

JEL classification: *E20, E30*

Introduction

In the article *Some theoretical considerations on the Open Economy*, we started from the fact that within economic entities, national economies and more broadly, worldwide, there is always a need for goods and services to have free movement. Thus, we can expand and specify that the free economy of a country fits, in fact, into the free economy of the European Union, of Europe more broadly or globally, in the general global context.

We have analyzed in this regard the closed and open economies, making some clarifications regarding the division of expenditures for production, for components of the economic structure or for wider participation.

We also referred to the level of expenditure on imports that are included in domestic expenditure, and because sometimes services imported from abroad are not part of domestic production, but those ensure the correlated development of the economy in important periods.

From the identity of the national income accounts we have shown that domestic production, domestic expenditure, respectively net exports are linked to each other. In this respect, net exports represent the export, or exit of goods and services and expenditure on imports of goods and services. Depending on the algebraic size of this net export, we are also talking about the ability of an economy to meet its needs and be able to produce according to its needs.

Undoubtedly, the issue of imports and exports cannot be simplified and eliminated because it is impossible under the current conditions for at least one nation in the world to operate in autarchic, perfectly closed economic conditions. That is why references to the closed or open economy take on significance in the context of this analysis.

At the same time, the law of an internationally applied price suggests that export and import are very sensitive to exchange rate movements. We say this because, with the exception of the Euro Group in the European Union, in

the rest of the countries of the world we are talking about imports and exports based on exchange rates, which give significance to the volume of the two sides of the generating trade, namely export and import.

In other news, we have analyzed the situations regarding the identity of the national income accounts, which show and express the effect of the net output, of the net export, always algebraically equal to the trade balance.

We have sought to adapt some statistical-econometric models that, in using data specific to an open, closed, smaller or larger economy, can lead to obtaining parameters based on which to achieve a pevision for the next period.

We have also paid attention to purchasing power parity, which is an indicator that must be analyzed in the case of an economy, especially in the context in which at the micro level we need comparisons, but also at the macroeconomic level we need international comparisons that must be made in the most precise terms possible.

Literature review

The state of national economies, or that they are Closed or Open issues related to division of expenditure on production, those of imports and exports do not pot be neglected and as a consequence they were analyzed by a number of researchers. Thus Akçomaka, I.S. and Weel, B. (2009) address in their paper the problem of social capital and the impact that investments in research and development have on economic growth. Anghelache, C. (2008) and Anghelache, C., Anghel, M. (2014) they highlight the factors that influence the economic growth of a nation, and also present a series of methods and models of statistical-econometric analysis of the economic phenomena that these economies face. In the same sense is directed his work Capanu, I and Anghelache, C. (2000) in which the authors highlight economic indicators that can be calculated for the insurance of a management quality at the micro and macroeconomic level. Cicak, K., Soric, P. (2015) are concerned with the correlation between foreign direct investment and economic growth, making a study of European countries in transition. Diaconu, A., Popovici, M., Mirea M., Samson, T. (2017) highlight through their study the effect that the major price change has on the demand of goods and services. Pistoresi, B., Rinaldi, A. (2012) present in their study the impact that exports and imports have on economic growth.

Methodology, resources, results and discussions

Even if you never leave your hometown, you are an active participant in the global economy. When you make a deposit in your local bank, the bank could lend those funds to your next-door neighbor or to a Japanese company that is building a factory outside Tokyo.

Because the national economy is integrated with many others around the world, consumers have more goods and services to choose from, and economists have more opportunities to invest in their reserves.

In reality, most economies are open, export goods and services abroad, import goods and services from abroad and borrow on global financial markets.

Exports from the United States make up about 14% of GDP, and imports account for about 17%. Trade is even more important for many other countries. Thus, imports and exports are about a quarter of GDP in China, a third in Canada and half in Germany. In these countries, international trade is essential for the analysis of economic developments and the formulation of economic policies.

To understand how the open economy works, we need to understand the key macroeconomic variables that measure interactions between countries. Accounting identities reveal a key perspective: the flow of goods and services across national borders, which are always equal, is with an equivalent flow of funds to finance capital accumulation.

Next, I develop a model of the small open economy that corresponds to the model for a closed economy. The model outlines the factors that determine whether a country is a borrower or a lender in global markets and how policies at home and abroad affect capital and commodity flows.

The key macroeconomic difference between open and closed economies is that, in an open economy, a country's expenditure in a given year must not be equal to its production of goods and services. A country can spend more than it produces through loans from abroad, or it can spend less than it produces and borrow the difference from other markets.

If you take into account the expenditure on the production of goods and services of a closed economy, it follows that all production is sold domestically and expenditure is divided into three components: consumption, investment and government purchases. In an open economy, part of the production is sold domestically and part is exported to be sold abroad. We can divide the expenses for the Y production of an open economy into four components:

C^d consumption of domestic goods and services,

I^d investment in domestic goods and services,

G^d government purchases of domestic goods and services,

X domestic exports of goods and services.

The structure of expenditure in these components shall be expressed in the relationship:

$$Y = C^d + I^d + G^d + X$$

The sum of the first three terms, $C^d + I^d + G^d$, represents the internal expenditure on domestic goods and services. The fourth term, X, consists of external expenditure on domestic goods and services.

Expenditure on all goods and services is equal to domestic expenditure on domestic goods and services plus domestic expenditure on foreign goods and services. Therefore, the total consumption, C, is equal to the consumption of domestic goods and services C^d plus the consumption of foreign goods and services C^f, and the total investment I is equal to the investment in domestic goods and services I^d plus investments in foreign goods and services. Total public procurement G is equal to government procurement of domestic goods and services G^d plus government procurement of foreign goods and services G^f.

Therefore, we can present the relationships:

$$C = C^d + C^f ; I = I^d + I^f, G = G^d + G^f$$

Replacing these three equations in the above identity, we obtain:

$$Y = (C - C^f) + (I - I^f) + (G - G^f) + X$$

Rearranging the equation, we will get:

$$Y = C + I + G + X - (C^f + I^f + G^f)$$

The sum of domestic expenditure on foreign goods and services ($C^f + I^f + G^f$) represents expenditure on imports (IM). We can thus write the identity for the national identity income accounts in the form of:

$$Y = C + I + G + X - IM$$

Since expenditure on imports is included in domestic expenditure (C + I + G), and because goods and services imported from abroad are not part of domestic production, expenditure on imports is deducted in this equation. The definition of net exports as exports minus imports (NX = X - IM), leads to identity Y = C + I + G + NX.

This equation highlights that expenditure on domestic production is the sum of consumption, investment, government purchases and net exports. This is the common form of identity of national income accounts.

The identity of the national income accounts shows that domestic production, domestic expenditure and net exports, respectively, are linked: NX = Y - (C + I + G), which can be written:

Net exports = Outbound - Domestic expenditure

This equation shows that, in an open economy, domestic expenditure must not be equal to the production of goods and services. If production exceeds domestic spending, we export the difference: net exports are positive. If production does not cope with domestic expenditures, we import the difference: net exports are negative.

International capital flows and the trade balance are another problem that arises in an economy, be it closed or open.

In an open economy, as in the closed economy, financial markets and commodity markets are closely linked. To establish the relationship, we need to rewrite the identity of the national income accounts in terms of savings and investment. The starting identity is:

$$Y = C + I + G + NX$$

We subtract C and G from both sides and we get:

$$Y - C - G = I + NX$$

Recall that Y - C - G is the national saving S, which is equal to the sum of private savings, Y - T - C, and public savings, T - G, where T represents the amount for taxes. Therefore, we get:

$$S = I + NX$$

Subtracting I from both sides of the equation, we can write the identity of the national income accounts as:

$$S - I = NX$$

This form of identity of national income accounts shows that in an economy with net export, exports must always be equal to the difference between saving and investing.

Let's take a closer look at each part of this identity. The right-hand side, NX, expresses net exports of goods and services. Net exports must be analyzed in correlation with the trade balance, in order to ascertain what the trade in goods and services balances, which departs from the normal standard of equal imports and exports.

The left side of identity is the difference between domestic saving and domestic investment, S - I, which we will call net capital outflow. The net capital outflow is equal to the amount that domestic residents borrow abroad less the amount that foreigners borrow in the country under consideration.

If the net capital outflow is positive, national savings exceed the investment and the country borrows the surplus abroad. If the net capital outflow is negative, the economy faces a flow of capital. Investment exceeds

saving, and the economy finances this additional investment through loans from abroad. Thus, net capital reflects the international flow of funds to finance the accumulation of capital.

The identity of the national income accounts shows that the net capital outflow is always equal, algebraically, to the trade balance, so, net capital output = Trade balance:

$$S - I = NX$$

If S - I and NX are positive, we have a trade surplus. In this case, we are net creditors in the world financial markets and export more goods than we import.

If S - I and NX are negative, we have a trade deficit. In this case, we are net borrowers on the world financial markets and we import more goods than we export.

Purchasing power parity is another indicator that needs to be looked at in the case of an economy.

The law of an internationally applied price suggests that net export is very sensitive to small movements determined by the exchange rate.

We showed how a small open economy works. We examined the determinants of the international flow of funds for capital accumulation and the international flow of goods and services.

The economy we studied was a *small* one in the sense that the interest rate is fixed by the world financial markets. We have assumed that this economy does not affect the world interest rate and that the economy can borrow and borrow at the world interest rate in unlimited amounts.

In the closed economy, the domestic interest rate balances domestic savings and domestic investment, showing that policies that influence saving or investment change the equilibrium rate of interest.

The great shortcomings of trade in the 1980s, 1990s and 2000s show the importance of international financial markets for financing investment in any economy. Therefore, the analysis of the closed economy cannot fully explain the impact of policies on a large open economy.

However, the economy of any country is not so small or so open that the analysis of this fact is done perfectly. Firstly, some countries are large enough to be able to influence the global financial markets. Secondly, capital can easily move in other countries. If individuals prefer to keep their savings rather than foreign assets, funds for capital accumulation will not move freely to equate interest rates in all countries. For these two reasons, we cannot directly apply a model of the small open economy.

When we look at the policy of a large country, we must combine the logic of the closed economy with the open small economy. In these intermediate situations, there are domestic loans and international loans, but the interest rate is variable dependent on global financial markets.

The more the economy borrows from the outside, the higher the interest rate that is offered to foreign investors will be.

Let us see a reduction in national savings as a result of a fiscal expansion. As in the closed economy, this policy leads to an increase in the real interest rate and excludes domestic investment. As in the small open economy, the reduction and net outflow of capital leads to a trade deficit and an appreciation of the exchange rate.

Conclusions

From the way in which the article was presented *Some theoretical considerations on Open Economy*, some conclusions can be drawn, especially of a theoretical nature, but easily adaptable and applicable in the concrete situation. A first conclusion is that the national economy is integrated with many others around the world and that is why a marketing study conducted internationally must also be taken into account in the forecast of the activity of a national economy.

This ensures the possibility of establishing areas in which the world economy has deficiencies and then we can produce for export, or internationally the production is surplus in some areas that interest the national economy of the country analyzed to complete and ensure the proportions and correlations that ensure macrostability.

The developed models of the small, open economy also correspond to a closed economy model, since the model presents the factors that determine whether a country is a borrower or a lender in global markets and how policies, at home and abroad, affect the flows of capital and commodities. Based on such a conclusion, we can structurally direct the macroeconomic production in order to ensure the sale and ensure the best possible evolution.

We know that any production function is based on the structural elements of the function, as defined by Cobb – Douglas and then modernized, adapted and updated by many others. In this sense, the way in which we have constituted the production functions, on the basis of which equations result, can be constituted models ensuring a perspective of a viable forecast for the development of the economy of each country.

Last but not least, I must conclude that purchasing power parity is the most sensitive indicator to be applied, and to ascertain whether the outcome of the economic activity carried out shows efficiency or that it will encounter a

number of difficulties. However, the economy of a country is not so small, or so open that the analysis is done perfectly. That is why we use in econometric models and residual parameters, those that incorporate the effect of a number of other factors that can be found in the market.

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