

CELSO FURTADO'S ECONOMIC THEORY: THE ECONOMIC GROWTH OF BRAZIL

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Introduction

By any standard, Celso Furtado (1920-2004) has been the most prestigious and influential Brazilian economist of his period. His eventful life includes a wartime experience in the Italian front and a partnership with the famous Argentinean economist Raul Prebisch in the initial stages of the United Nations *Economic Commission for Latin America* (ECLA). He also assumed an important role as a policy-maker in Brazilian pre-military governments and, after the political banishment (1964), achieved a wide academic experience in American and European universities.¹

Although in Europe and in the United States his name is mainly associated with the early versions of the “dependence theory”,² or with the establishment of a “theory of underdevelopment”,³ in Brazil Furtado's memories include his moral stature, his prolific activity as a writer and polemicist and, among economists, his decisive contribution to the diffusion of economic thinking.

With respect to this issue it is worthwhile pointing that, in the 1960's and the 1970's, a significant number of Brazilian students decided to enroll in Economics courses as a direct response to the reading of his books. **The Economic Growth of Brazil** (Furtado, 1963), an interpretive essay on Brazilian economic history, first edited in 1959, soon became a sort of essential reading, a mandatory item in any social scientist bookstand as well as the main textbook adopted by the majority of Brazilian economic history programs. Last but not least, it has the merit of first introducing many students to basic economic concepts.

The Economic Growth achieved two different academic goals. By becoming a work of reference in Brazilian economic history, it furthered the research in this area. Since its edition, the acceptance or rejection of Furtado's main theses has inspired a

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¹ Mallorquin (2005) is an authoritative intellectual biography. For Furtado's contributions to development economics, Szmrecsányi (2005).

² To be further put in its canonical form by Cardoso and Falleto (1979).

³ In its most noticed version, see Frank (1967). For Furtado's view on underdevelopment, Furtado (1975).

great number of research projects in economic history. In addition, as already mentioned, **The Economic Growth** promoted a new interest in economic theory, possibly because Furtado's vision of Economics – the economic science techniques devised as an essential instrument to the analysis of historical social phenomena – was inspiring to many students.

Given the impact of his writings on economic history and economic theory studies in Brazil, this paper is aimed at the reconstruction of the economic theory underneath Furtado's schemata of history, such as presented in **The Economic Growth of Brazil**. This reconstruction requires a review of his upbringing as a professional economist as well as a review of the way he envisaged economic analysis (in section 1); a brief view of the main economic cycles, according to what became known as his canonical interpretation of the Brazilian economic history (in section 2); a disclosure of some important economic mechanisms underneath Furtado's historical account (in section 3). The conclusion (section 4) summarizes and connects some threads of his historical and theoretical approach to economic analysis.

1. Furtado's approach to economic theory

Furtado was one of the many law students of his generation whose attention was drawn to economic problems. In his case, the interest in problems related to organization led to the study of planning, which turns to be his doorstep to Economics. In a sort of intellectual self-portrait, written in 1973, Furtado explains us how he became a self-taught economist, since the ordinary economics courses offered by the Law School were rather poor.⁴ He was much more attracted to sociology, especially to the German sociologists – Weber, Tönnies, Freyer and Simmel – as well as to Economic History. Pirenne's works on the medieval society, and the writings of the Portuguese historian Antonio Sergio also seemed to have had a great impact on him.

In short, the sociologists and historians led Furtado to the field of Economics. Although they did not directly lead him to economic theory, they have nevertheless

⁴ Furtado (1973).

taught him “... the importance of the studies on economic issues, in order to get a better understanding of History.”⁵

The doctoral studies in Paris, in 1948, offered Furtado the opportunity of achieving a more systematical learning in economic theory. And, apart from choosing a historical theme and working under the supervision of the French historian Maurice Byé, his doctoral studies reveal a thorough review of economic theory.

The review included classical political economy, especially Smith and Ricardo, and a surprisingly deep reading of Marx. **Development and Underdevelopment**,⁶ published in a later phase (1961) but composed by essays written in the 1950s - thus reflecting the ambience of his studies in Paris -, presents Furtado's early opinions on the main systems of economic theory. It becomes evident that Furtado had a far deeper understanding (and esteem) of Smith, Ricardo and Marx when compared to the neoclassical economists. Among them, his main references seem to be the Swedish economists: Wicksell, Cassel and Myrdal. His notes on Marshall are rather poor and his comments on Keynes denote a superficial contact with the **General Theory**. Hansen and Harrod seem to have been his great sources in what concerns Keynesian economics.

It should be noted that Furtado's assessment of economic theory was entirely guided by his lifelong involvement with economic development. Having the economic development as a point of reference, he praised the classical economists' and Marx's focus on the economic surplus and deplored, on the other hand, the neoclassical theory of prices and distribution for having extinguished the surplus approach. He objected to the classical fixation on the stationary state as well as Marx's difficulties in admitting the increase of the wage rates, a confirmed historical trend. Among the neoclassical, Furtado recognized Schumpeter's efforts to reconcile innovation with economic theory, although he thought any general equilibrium framework incompatible with the economic development approach.

In his overall evaluation of economic theory, all the great theoretical systems – the classical, the neoclassical and the Marxist – failed in providing a decisive contribution to the comprehension of the phenomenon of economic development, as they lacked the due combination of abstract reasoning and embedment in historical reality. According to Furtado, the main methodological issue in economic studies is “...

⁵ Furtado (1973). Quotations translated from the Brazilian version, Furtado (1983), p. 16.

⁶ Furtado (1964). Quotations translated from the Brazilian edition, Furtado (1961).

the definition of the level of generality – or of concretion – in which any relation with explaining value applies.”⁷ In what concerns the development theory, the abstract models were seen as especially defective, as they missed two points: the irreversibility of the historical processes and the structural differences between economies according to their distinct stages of development.

In other words, Furtado’s view the of economic science takes on account its dual character, i.e., its abstract and historical character. The economic analysis is bound to deal with such dual character and analysts must draw the boundaries limiting the validity of the abstract models. Effectively, this was Furtado’s lifelong commitment: the application of general principles to (historical) economic realities.

2. The historical cycles in the Brazilian economy

The Economic Growth of Brazil has been considered one of the most important applications of ECLA’s method of structural analysis.⁸ Furthermore, it represents the apex of Furtado’s approach to economic analysis, in the sense it contains his most fruitful application of rational abstractions to a determined economic reality. In fact, **Economic Growth** is an attempt of rational reconstruction of the Brazilian economic history, or, as Furtado humbly put it “... a simple sketch of the historical process of formation of the Brazilian economy.”⁹

Before introducing the main aspects of Furtado’s sketch, it is worthwhile to provide some information on the circumstances that surrounded the writing of **The Economic Growth**. In first place, the interpretation of the Brazilian economic history as a succession of great economic cycles, adopted by Furtado, was in no means a totally new approach. According to the traditional view, the Brazilian economy had evolved through isolated economic spells, dependent on the external trade – sugar cane, gold mining and coffee among others. In this way he was still following a common path.¹⁰ His innovation lays in the description of the economic mechanisms inherent to each

⁷ Furtado (1961), p. 20.

⁸ According to Bielschowsky (1988).

⁹ Furtado (1973), Introduction.

¹⁰ For a classical account of the colonial Brazil economic history, Prado Jr (1996), first published in 1942. Although Furtado did not acknowledge it, his approach to colonial Brazilian history is built upon Prado Jr.’s interpretation.

cycle, as well as in his interpretation of the transition from agriculture to industry, this one particularly an original formulation.

Secondly, it is convenient to situate **The Economic Growth** within the set of Furtado's historical essays, which are undoubtedly an important part of his intellectual work. His historical essays include the 1948 doctoral thesis, **The Brazilian Colonial Economy**,¹¹ a study on the sugarcane colonial plantation, and **The Brazilian Economy** (Furtado, 1954). In a sense, **The Economic Growth** is a sequence to these two early works. Yet, in the introduction to this book Furtado admits that it was intended as a complement to – or as a development of - **The Brazilian Economy**, a extremely important work, although scarcely read. **The Economic Development of Latin America** (Furtado, 1970) represents the next important contribution to this line of historical writings.

In summary, Furtado had a permanent commitment to historical studies. He kept an eye on historical studies even during a period (the fifties) in which his compromises with ECLA's activities were overwhelming. Apart from being an evidence of Furtado's working capacity, this attainment to historical writing simultaneously to many other activities – consultancy, teaching, planning – is also an evidence of the importance ECLA's staff attributed to Latin America economic roots.

Personal circumstances add a final, and not irrelevant, point to this specific period in Furtado's life. In the end of 1957, he interrupted his professional activities in ECLA and started a biennial research period in the University of Cambridge. In Cambridge, although dedicating most of his time to the ongoing controversies on the theory of economic growth, he opted to write a book on Brazilian economic history. He attended the seminars kept by the Keynesian circle – Kaldor, Sraffa and Joan Robinson – and was especially interested in Kaldor's model of growth. In the time spared from these theoretical controversies, he developed **The Brazilian Economy**, his 1954 essay, into a “vast fresco” of the Brazilian economic history.¹² The fresco shared his usual method: “... to approach History and economic analysis.”¹³ **The Economic Growth of Brazil** would have its origins in this specific setting.

One may say that **The Economic Growth of Brazil**, although written in the new and extremely provoking Cambridge theoretical environment, owes almost exclusively

¹¹ Published only in 2000. See Furtado (2000).

¹² According to the first volume of Furtado's memories. See Furtado (1985), p. 205.

¹³ Furtado (1985), p. 205.

to Latin American tradition, in a double sense: it is built upon Furtado's early approaches to economic history and incorporates ECLA's expertise in the treatment of exchange rates and external constraints.

Furtado built his rational reconstruction of the Brazilian economic history around a summary of each cycle income flow. Therefore, the point of departure of this study will be the basic features of the income flows in the main cycles of Brazilian economic history.

The discovery of Brazil, in 1500, is an episode of the Portuguese mercantilist expansion. After some frustrated attempts to establish a lucrative exploitation of the new colony, the Portuguese finally introduced a promising business, the sugarcane plantation, into the territory. The sugar business was based on slavery, and once the attempts to enslave native Americans did not succeed, the African traffic became the alternative to the scarcity and/or inadequacy of labour.

Up to this point, Furtado does not depart from the historical interpretations available at the time. His own contribution begins when he adds to the traditional view and to the cyclical approach a new economic explanation based on a few variables and analytical instruments: an income flow perspective, the contrast between scarce and abundant factors and a supply and demand framework.

In the case of the sugar cycle, the flow runs as follows:

- i. The land tenants take loans (from sugar merchants) and buy part of the equipment and the totality of the slaves abroad. The repayment of the loans and the acquisition of slaves and equipment will absorb part of the export receipts.

- ii. Another part of the receipts represents the net profits of the activity. The land tenants apply their profits either in the consumption of European commodities or in the expansion of the business (which means the acquisition of slaves and equipment - the land is free). Thus all the profits, as well as the investment, revert to expenditures abroad.

- iii. Since there is no salaried labour in the economy, the profits represent the only money-paid income. Within the colonial territory, there is a scarce circulation of money. This simplified model presupposes that the slaves produced their own means of subsistence by themselves in the time spared from the main activity. Other important economic activities as transport or provision of fuel are, in the same sense, non-monetary, i.e., based on slaves' work.

In Furtado's system all the internal costs are "virtual", or non-monetary. They may impact the profitability, since the time spent by the slaves in the various activities must be accounted for. At any rate, the absence of monetary flows into the internal activities developed outside the boundaries of the sugar firm implies its lethargic feature. Furtado's system is twofold: sugar production (dynamic sector, high level of productivity) versus subsistence sector (lethargic, low level of productivity, no surplus).

The expansion of the economy depends on the strength of the external demand for sugar and on the emergence of colonial competitors. As far as the Brazilian sugar production remains competitive and the international price allows high profits, the plantations are extended to new land. Land is the abundant factor; therefore Furtado ignores the rent. Capital, which includes the slaves, is the scarce factor. Technical progress is out of consideration. The system expands itself "horizontally" by the addition of similar productive units. The limits to its expansion are: a) the cost push (since the disposable land is distant and its use implies increasing costs)¹⁴; b) the exhaustion either of land in good location or of fuel, due to the depletion of forests; c) the fall in prices, as a result of excessive or unregulated supply. All these factors stimulate the international competition, and eventually the competition from Holland colonies will beat the Brazilian production. The Brazilian sugar plantation turns into a decadent system.

In Furtado's view the crisis of the sugarcane plantation neither led to an economic diversification nor to a relevant substitution of activities. The absence of money payments and the low level of productivity in the "subsistence economy" blocked the demand stimulus to all activities outside the sugar nuclei, even in the expansionary phase. In the downfall, the sugar planters could not afford the acquisition of new slaves and/or the occupation of new land. The sugar system did not disappear, but entered into a lethargic state, with deep social consequences.

After the downfall of the sugar system, the discovery of gold mines in central Brazil, in the eighteenth century, led to a new expansive cycle. The mining economy is also an export led economy, but its typical income flow differed from the one that characterized the sugar cycle, due to the following factors:

¹⁴ However, Furtado's scheme does not allow differential rent.

i. The gold cycle was shorter (the mines exhausted in less than a century) and its activities were confined to a restricted region. This confinement resulted in a strict control by the Portuguese authorities and hence the exacting of taxes, which flowed into Portugal.

ii. The slaves were allowed to work only in the mines, and not in the parallel subsistence activities. The mining firm was not self-sufficient and was dependent on other sectors, especially for food supply. In fact, the gold cycle stimulated urbanization. Therefore, there were relevant internal activities outside the mining nucleus.

iii. The net profits of the central activity were not very large, since the taxation was fixed at a high level.

For all these reasons, and differently to what occurred in the sugar cycle, the mining cycle stimulated other activities and enhanced monetary transactions. The multiplier effect expanded the income. Since Furtado refers to the existence of a significant contingent of free workers around the mining firm, the question is, why the development of the internal market did not lead the Brazilian economy to a self-impelling growth? A kind of ad hoc argument is then introduced: the low technical capability of the immigrant population constrained the development of the internal market.

The gold cycle's short span of time and the lack of technical skills inhibited the development of an internal market, in spite of the monetary transactions and the presence of salaried or money-paid labour. Irrespectively of the historical accuracy of Furtado's conclusions,¹⁵ it is important to note that, according to his view, the sugar economy could have never developed into a self-sustained economy. The gold mining cycle had internal self-stimulating virtues, but circumstantial conditions blocked the transition to a self-expanding economy. The end of the mining cycle dispersed the population in the "subsistence economy".

The third export-driven cycle – the coffee cycle – represents a turning point in the Brazilian economy. The cycle started around 1830, after the Brazilian independence, and involved national capital. The coffee plantations soon spread from its original location, in the surroundings of Rio de Janeiro, to the plateaus of São Paulo. The progressive ending of the slave traffic led the economy to a decisive step, as the

¹⁵ Furtado's thesis on the decadence of the activities in the mine's territory, following the exhaustion of the mines, has been objected by historians.

expansion of the business implied a transition to free labour. In fact, the coffee plantation became the first economic activity dependent on a massive use of free labour in Brazil.

The constitution of a labour market based on salaried or semi-salaried work¹⁶ demanded a massive immigration policy, which involved public patronage. Once established, the salaried labour imposed new characteristics to the income flow:

i. The coffee exports generate a flow of international currency. Part of this flow goes to the import of consumption goods for the farmers.

ii. Another part of the proceeds is converted into national currency and spent on wages or other inputs to the coffee crop.

iii. Wages and other money expenses within the internal market activate a multiplier mechanism, which accrues to the dynamism of the economy. The coffee cycle stimulates the urbanization and the urban activities in general.

The expansion of the coffee crops depended, as in other export-driven cycles, on the external demand. As far as the prices were high, new capitals flowed into the activity. Furtado's coffee model is a variant of a growth model with unlimited supply of labour: labour and land were the abundant factors, and capital the scarce factor. In the coffee cycle, the supply of labour was based on an initial immigration, followed by the attraction of workers dispersed in the "subsistence sector", to whom the new occupation represented an upgrade in their standard of living. The over-supply of labour established a ceiling to the wage levels, therefore connecting all the wages to the subsistence level.

Furtado's analysis of the coffee expansion opened a wide space to economic policy. Yet, the limits to the expansion depended on particular circumstances: the coffee bourgeoisie formed a powerful elite, with strong influence on the economic policy, not to mention that Brazil was, to some extent, almost a monopolist producer. These two circumstances enabled the implementation of a protective policy, which for a long time allowed the planters to push the threat of an oversupply to a further horizon. The protective policy consisted in the building up of stocks, financed by foreign loans, and in a proper management of these stocks in order to avoid a permanent market overflow and a drastic price fall. As it should be expected, this policy stimulated a further expansion of the crops.

¹⁶ The coffee workers received a certain amount of money, and were allowed to cultivate corn or other staples in the interstices of the coffee plant lines. These staples were either consumed or sold.

The final crisis was brought about by the Great Depression. The prices paid to the producers plunged, considering a situation in which the existing stocks and the incoming production amounted to extraordinary numbers. According to Furtado, the government faced two options: either admitted a natural breakdown of the planters, with all its consequences, or tried to extend a safe net in the form of a sustained program of coffee acquisition under some price guarantee. The government adopted the last option and supplemented it by the burning of part of the stock.

Although this option was devised as a protection to the coffee planters, and did not come as a result of a thoughtful calculation of the general advantages to the economy, it avoided a sharper decrease in income. It was backed by monetary expansion – the external market for loans was closed, and the public finances were in collapse – and caused expansion, instead of inflation, since there were plenty of under-used resources. According to Furtado, the Brazilian post-1930 coffee policy played the role of the Keynesian pyramids.

In Furtado's scheme, the beginning of Brazilian industrialization process was a direct consequence of the development of the internal market, brought about by the coffee drive, as well as by the economic policies adopted to protect the planters. In a wider perspective, the industrialization was a response to the balance of payments constraints, which led to the "import substitution process" - a process of adjustment of the supply structure under conditions of severe restrictions in the economy's import capacity.

It is not meant here to extend the presentation of the full characteristics of the Brazilian industrialization, according to Furtado's (and ECLA's) interpretation. A few remarks suffice to the understanding of the economic mechanisms behind Furtado's rational reconstruction of the industrialization process.

To start with, the industrialization and the coffee cycle have in common the fact that they are both based on a full monetary income flow. All the main transactions in the economy – factors' payment included - are based on money. Although the coffee crop is an export-led cycle, while the industrialization is commanded by internal demand, both processes activate the multiplier mechanism.

The dynamism of the export-driven economy depends on the external demand, while the dynamism of the industrialization process depends on internal demand and on the economy's capacity to adapt its supply structure and overcome some bottlenecks.

The most important bottlenecks are the discontinuities in the internal industrial structure, the infrastructure deficiencies and the small size of the market (given the existence of economies of scale in the industrial sector). Anyhow, the growth of the internal industrial production can be seen as a response to the changes in the relative prices, which are byproducts of the exchange rate moves following the collapse of the country exports.

Tariffs and other administrative controls impel further changes in the relative prices and stimulate the production of local products. The continuous expansion of the internal market and the industrial production keeps the import capacity under a permanent squeeze, thus the import substitution proceeds.

In the Brazilian case, the large dimension of the market pushed the import-substitution process to superior phases, viz the internal production of durable consumption goods, equipment and intermediate goods. According to Furtado, the industrial structure tended to become “complete”, and the inter-industrial relations less dependent on imports. This does not mean the end of the underdeveloped condition, since, in the last analysis, the underdevelopment is related to the existence of a dual economic structure: a dual labour market (or the permanence of a large amount of workers in the “subsistence sector”) and a structural heterogeneity across the economic sectors. However, the dependence of the economic dynamism on internal, and not external, demand means that the old pattern of export-led growth became definitely extinguished.

3. Some features of Furtado’s economic analysis

This section focuses on four nuclear elements of Furtado’s economic analysis: absorption and release of resources and productivity, in kind versus monetary transactions, surplus versus subsistence economy, and relative prices. Furtado’s uses of economic concepts are not always straightforward, consistent or compatible with the general understanding of the economists. An attempt to clarify the meanings Furtado attributes to some of the concepts will contribute to establish the range, and also the limits, of his analysis.

In Furtado's view, the colonial economies are stores of idle or under-used factors of production: land, natural resources and labour (when the population is dispersed in the "subsistence sector"). The discovery of gold and silver mines or the cultivation of highly appreciated products – sugar, coffee, cocoa and rubber – connects these resources to the world economy. In other words, the international trade awakes idle resources and shakes a dormant economy enhancing its productivity.

When these export-driven pushes collapse before the adoption of an alternative substitute or prior to the achievement of economic diversification and the development of an internal market, the economy retrogresses and the resources disperse into idleness. As already noted, the new retrograde state is not identical to the pre-expansion state; nevertheless, the resources go back to an under-using condition.

The above description brings to surface two important elements of Furtado's system: the role of the external trade and the mechanisms that determine a rise/fall in productivity. The external trade plays the virtuous role of awakening internal factors, otherwise dormant. Due to historical reasons, some countries (USA, Australia) succeeded in making the transition from this first stage – export-led growth – to the second – development of an internal market. Other countries, as Brazil, underwent a late transition and, most importantly, under different conditions and with different consequences. Apart from any further discussion on development and underdevelopment, it is important to stress Furtado's approach to the absorption and release of under-used resources and its further implication.

Another significant element of Furtado's system is the specific conceptions of productivity he adheres to in different parts of his work. There are three relevant conditions to an increase in productivity: i. the absorption of under-used resources; ii) a rise in prices, typical of primary exports; iii. a "Smithean" rise in productivity, typical of manufacture and industry.

The first and the second situations are the most relevant, as they underline Furtado's understanding of the process of economic development. The simple establishment of a successful export front, the expansion of an already established export business (as coffee) or a rise in the export prices, can be taken as events that increase the overall productivity of the system. There are two reasons for this increase: first, the resources are being transferred from less to more productive uses; second, and in the case of a rise in prices, the same amount of resources gives access to more commodities abroad. In other words, a positive change in the terms of trade and the

simple transfer of resources into more productive uses – in the sense of connected to high demand and high prices – increase the overall productivity of the economy.

On the other hand, there are increases in productivity related to the organizational process, or to technical progress. This increase in productivity is physical: a greater output per unit of resources. According to Furtado, the technical progress scarcely applies to agriculture, at least in Latin America. The productivity is higher in the sugarcane plantation than in the “subsistence sector”, basically due to the sugar price. And, since labour and land are abundant, there is no competition among the producers, thus no induction to technical progress in the sugarcane business.

As a matter of fact, Furtado admits that some plantation activities (as coffee) bring about an upgrade in physical productivity. However, as a general approach, he is not concerned with technical progress within the dynamic sector of colonial economies. The prices of the leading export goods are the colonial economies’ key to increases in productivity.

The conclusion drawn from what has been exposed is that the import substitution process brings about two sources of productivity gains. On the one hand, there is a continuous transfer of labour from the “subsistence sector” to the industrial or to the urban activities. On the other hand, the industrial activity itself involves a continuing technical progress. In Furtado’s view, the technological patterns in industry are entirely determined by the developed countries. The underdeveloped countries follow the patterns of the developed countries, which means a constant fading of the capacity of absorbing labour from the subsistence sector.

As mentioned, the constitution of a salaried labour market is a central point in Furtado’s scheme. **The Brazilian Economy** sheds some light on this issue. In this book Furtado examines the consequences of the dissolution of the feudal world by the mercantile economy, emphasizing the contrasts between the mercantile system and the manufacturing economy. These contrasts provide a key for a proper understanding of his particular view on the impact of the introduction of salaried labour in an underdeveloped economy.

According to **The Brazilian Economy**, the classic model of dissolution of the feudal economy by the commerce increased the demand for artisan’s products, stimulating the reorganization of production by merchants. This process originated what Furtado refers to as the “industrial profit”. The industrial profit must be incorporated to

the selling price of commodities, since it represents the retribution of a factor of production. Unlike the commercial profit, it allows no preservation in the form of treasure. The profits – as well as the salaries and the other paid incomes – only come to real existence when the product is sold, hence the permanent urge in liquidating the operation. As far as the production cycles are based on credit, the absence of sales will mean non-performed obligations. According to Furtado, the urge in liquidating the operation increases the competition among producers, with all its implicit cost reduction effects.

Two points stand out from Furtado's account: the selling pressure (and the induction to modernization) and the existence of a flow of disbursements within the community, even when the product is bound to the external market. The payment of factors originates a permanent income flow in the internal market, which involves all productive chains.

Differently to what occurred in the traditional artisan production, "... the activity of the businessmen is not anymore restricted to the creation of income for himself, but has, as a side effect, the increase of the demand by a great number of people within the community"¹⁷ and hence the multiplier effect.

The analogy with the slave labour plantation economy is evident. In this economy, the disbursements in the internal market are inexistent. The situation is aggravated by the fact that the profits are driven abroad. The multiplier effect does not operate and the rest of the economy remains in a stage of subsistence.

Furthermore, the technical progress is impelled by the competition inherent to the "industrial profits" process. Therefore the technical progress is not an intrinsic characteristic of the colonial economy, as much as it was not an embodied feature of the pre-mercantile system.

By its turn, if the process of industrialization does not succeed in extinguishing the oversupply of labour, the spread of production functions more intense in capital will remain restricted to the industry and to some other activities that follow the international standards. The industrial production function is not adapted to the factors mix of underdeveloped economies.

¹⁷ Furtado (1954), p. 38.

What is a “subsistence economy”? Furtado applies this concept to many different situations. In the colonial economy, all the activities outside the central export nuclei are part of the “subsistence sector”. For instance, the cattle herds in the Northeastern hinterland, which provided meat for the cities or for the sugar plantations, were part of the “subsistence sector”. The provision of food for the gold mine slaves was also a “subsistence” activity. In this direction, even after the establishment of the process of industrialization, a significant part of the agriculture is kept under “subsistence” conditions.

The “subsistence sector”, apart from providing a basic living for its workers, provides food for the leading sectors and for the cities. A paradox is already confronted: the “subsistence sector” is a surplus producer. Furtado always insists on the presence of a dual structure, comprising the leading (surplus producer) sector and the “subsistence sector”. In fact, “subsistence” seems to be used as synonym to low productivity.

Leaving aside the apparent inconsistency in the usage of the term, the question is, if the “subsistence sector” is capable of generating surplus, which are the exchange relations between the export goods and the internal market staples? Or how to determine the relative prices? Additionally, although Furtado admits that the goods are exchanged in a currency setting, no money flows into and from the “subsistence sector”.

The Economic Growth of Brazil provides no satisfactory answer to these puzzles. Possibly, Furtado considered these monetary transactions as residual. In this case, an afterthought on relative prices wouldn't be relevant.

The previous point leads to a further, and more difficult, one: Furtado's treatment of price adjustments. As mentioned, in the export led cycles no attention was given to the prices of the internal staples, even when they were admittedly produced outside the exporting units. Yet the price of labour (whenever salaried labour existed) was fixed immediately above the level that prevailed in the “subsistence sector”.

Considering the fixation of prices of the export goods by the international market, a distributive scheme in which the profits and the income distribution are roughly determined by the international prices given the level of subsistence, can be envisaged. The model is consistent, provided the hypothesis of no constraints to the expansion of the staples production, at fixed prices. In other words, the staples supply must be perfectly elastic. Furtado does not consider this proviso.

In the analysis of the import substitution process, the relative prices do play a role. Furtado's scheme incorporates the terms of trade and the impacts of the exchange rate moves on the internal prices. As already mentioned, the domestic industry becomes viable exactly because the exchange rate and the occasional additional protection place it in a competitive condition vis-à-vis the international suppliers. In other words, the import substitution process entails an adjustment between the supply and the demand structures commanded by changes in the relative prices. However, the price relations of the internally produced commodities do not appear in Furtado's scheme.

The basic import substitution model admits other hypothesis on prices. For instance, the agricultural products supply is considered inelastic to prices (thus the inflationary trend produced by urbanization); there is an element of monopolistic and oligopolistic pricing in some branches of industry. But these hypotheses envisage an explanation of the inflationary trend, supposedly inherent to the import substitution process. They are not part of the price model underneath the basic structure of the income substitution process. It can be considered that apart from the impacts on the price relations produced by the exchange rate adjustments or by other adjustments related to the balance of payments, Furtado keeps the price relations out of his schemes.

4. Conclusions

The main instruments of economic analysis in Furtado's rational reconstruction of the Brazilian history are: i. the adjustments between the supply and demand structures; ii. the income flow and iii. the multiplier mechanism.

The adjustment of the demand and supply structures, in a non-equilibrium and permanently unstable growth path, is the foundation stone of Furtado's dynamics. The decomposition of the elements of the aggregate demand and supply, having in view the class structure and a rough scheme of income distribution, internal production, imports and exports, and the distinction between investment and consumption goods, is part of Furtado's analytical framework. In the import substitution process, the changes in relative prices play a role in the adjustment of demand and supply. However, Furtado makes a limited use of the relative prices – they concern the terms of trade and the contrast between tradeables and non-tradeables.

The operation of the circular income flow may be taken as Furtado's permanent analytical horizon. His version of the income flow has two distinctive twists: the distinction between monetary and non-monetary income and an accent in the international trade. In effect, the non-monetary transactions and the non-monetary factors payments are segregated from the circular flow, since they do not activate (Furtado's version of) the multiplier mechanism. The non-monetary expenses may be accounted as costs, as in the case of slave's subsistence – which means they have value, may be expressed in money and affect the profitability of the business. However, they skip out of the income flow. The imports and the payment of factors abroad represent a kind of leak in the income flow. It should be noted that the circular flow has no connection with the traditional distinction between Internal Product and National Product.

The multiplier mechanism figures as the other instrument in Furtado's toolbox. In this case, as mentioned, Furtado's twist is the distinction between monetary and non-monetary incomes. As a matter of fact, the non-monetary incomes do not count as income, for macroeconomic effects. They do not activate the multiplier mechanism, which is the engine of Furtado's growth models presented in **The Economic Growth of Brazil**.

Besides the above mentioned economic analysis instruments, Furtado's abstractions are built upon a series of stylized facts. The most important are the distinction between monetary and in kind transactions, surplus and subsistence economy, leading and backward sectors of economic activity.

Apparently (and sometimes explicitly), Furtado's in kind transactions presuppose a value standard (or prices). As far as scarcity of currency is not Furtado's issue, the conclusion drawn from it is that the non-monetary economy is taken as a residual economy, in the sense that it is not relevant to the definition of the dominant economic trends.

The "subsistence sector" is a mere substitute for low productivity sector. It may be a surplus producer. This stylized fact spared Furtado of further considerations on internal relative prices. Relative prices – apart from the exchange rate – are a blind spot in Furtado's schemes.

Finally, the distinction between leading and backward sectors is definitely associated with the capacity of generating economic growth, and not with technology,

the type of labour-force involved or any other issue. Sugar cane and coffee plantation, in their prime, were high productivity sectors, although Furtado did not consider the existence of technical progress within these sectors. They were high productivity sectors because the international prices were high and the territory had comparative advantages in these crops. In the case of industry, Furtado considers its physical productivity as well as the technical progress.

Having in view the instruments of economic analysis, the stylized facts, and the particular application of both sets by Furtado, one may conclude that his uses of economic theory are not always clear-cut. Indeed, Furtado's theoretical schemes have many blind spots. This paper is intended to put in evidence the backbone of these schemes and, as far as possible, to identify the idiosyncrasies of his usage of economic theory.

As stated in the Introduction of this study, Furtado's books, especially **The Economic Growth of Brazil**, had a tremendous impact on the Brazilian intellectual debate, furthering both the historical research and the study of Economics. Considering the strong use Furtado makes of economic instruments, variables and ways of thinking, it is not difficult to understand why this peculiar historical essay so much contributed to the expansion of the interest in the economists' approach to social reality. It is also not difficult to understand why the Keynesian multiplier, the circular flow, the distinction between a surplus economy and a "subsistence" economy, and not the basic price mechanism, became the staple of economics teaching in Brazil in the late 1950's, the 1960's and in the early 1970's.

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