

**THE ROLES OF CORPORATE INVESTMENT AND FISCAL  
SUBSIDIES IN THE EXPANSION OF SUGARCANE AGRIBUSINESS  
WITHIN THE STATE OF GOYAZ, BRAZIL.  
(2007 – 2010).**

**Abstract**

This article aims at discussing which role private investment played in the recent expansion of the sugarcane agribusiness within the state of Goyaz, Brazil. This goal, however, can only be reached if some of the fundamental determinants of the dynamics of Projects of Investments are strictly looked at. The relevance of such issue is that it appears to have lots of confusion about the reasons for them to be attracted and once welcomed, start different movements towards innovation diffusion, market strategies, areas demand and managerial of institutional arrangements, particularly fiscal subsidies. The issue this work argues is what are the fundamental determinant reasons for the investments being drained into Goyaz within the sugarcane agroindustrial system, especially between the intervals from 2007 to 2010. By guessing that fiscal subsidies solely do the job, explanations for the search of companies for an opportunity to place herein will not be complete, then five hypotheses are set in an attempt to clarify the problem. No individual theory can deal with such a complex matter. Thus, there will be made a set of theories that will be arranged to exploit the matter and, hopefully, retrieves an acceptable understanding for it. In general, one can state that an integration of Keynesian, Schumpeterian and neoschumpeterian schools will support the task. The chief conclusions that had been reached are that there seem not to be enough evidence to support that the expansion of sugarcane are due to productivity earnings; also, the study found out to be sufficient evidences to state that subsidies really has to do with the quest of the investments for placement in Goyaz; there also seem to be evidences that the investments are related to the level of flex fuel automobiles. It also came up to support with evidences that the autonomous investments are carrying out innovative diffusions. Finally, it appears that the economic indicator retrieved from the cities with cane projects has influenced the Gross State Product. The role of investment are of higher profile, establishing disputes for land, concurrence among global rivals, great variations in productivity levels, but could not ever do this job unless the fiscal subsidy, that attracted those investments, were made available.

**Key words:** Fiscal Subsidy – Investment – Foreign Direct Investment – Sugarcane agribusiness – Goyaz, Brazil.

# **DETERMINANT ROLES OF CORPORATE INVESTMENT AND FISCAL SUBSIDIES IN THE EXPANSION OF SUGARCANE AGRIBUSINESS WITHIN THE STATE OF GOYAZ, BRAZIL. (2007 – 2010).**

## **1 Introduction.**

This article aims at discussing which role private investment played in the recent expansion of the sugarcane agribusiness within the state of Goyaz, Brazil. This goal, however, can only be reached if some of the fundamental determinants of the dynamics of Projects of Investments are strictly looked at. The relevance of such issue is that it appears to have lots of confusion about the reasons for them to be attracted and once welcomed, start different movements towards innovation diffusion, market strategies, areas demand and managerial of institutional arrangements, particularly fiscal subsidies. The referred to dynamics stands for variations in Gross State Product, levels of employment, levels of productivity for goods over investments, fiscal subsidy and employment, as well as the sugarcane itself, different ratios of investment and unequal subsidies concession. However, the most highlighted dynamics is undoubtedly the variations in the number of projects between 2007 and 2010.

The issue this work argues is what are the fundamental determinant reasons for the investments being drained into Goyaz within the sugarcane agroindustrial system, especially between the intervals from 2007 to 2010. By guessing that fiscal subsidies solely do the job, explanations for the search of companies for an opportunity to place herein will not be complete, the hypotheses that are expected to clarify the problem are five, as follows:

A first one relates to the fact that the expansion of sugarcane may have to do with the availability of areas rather than productivity incomes; following to that, another issue that can support the quest and is far the most polemical is that fiscal subsidy exerts an important influence upon the attractiveness. A third one states that such investments are induced by the sales of flex-fueled vehicles to a national extent. The fourth is related to autonomous investments and states that they are represented by the diffusion of innovation and anticipation of future demands. The last one drives that the Gross State Product for those cities, which carry on cane projects, pulls the overall GSP.

In order to disclose those issues, obviously, no individual theory can deal with. Thus, there will be made a set of theories that will be combined to exploit the matter and, hopefully, retrieves an acceptable understanding for it. In general, one can state that an integration of Keynesian, Schumpeterian and neoschumpeterian schools will underpin the task.

In addition, the methodology employed will not be unique and will have to articulate its parts towards a response.

The chief conclusions that had been reached are that there seem not to be enough evidence to support that the expansion of sugarcane are due to productivity earnings; also, the study found out to be sufficient evidences to state that subsidies really has to do with the quest of the investments for placement in Goyaz; there also seem to be evidences that the investments are related to the level of flex fuel automobiles. It also came up to support with evidences that the autonomous investments are carrying out innovative diffusions. Finally, it appears that the economic indicator retrieved from the cities with cane projects has influenced the Gross State Product. Thus, the role of investment are of higher profile, establishing disputes for land, concurrence among global rivals, great variations in productivity levels, but could not ever do the job unless the fiscal subsidy, that attracted those investments, were worked out.

The matter: what are the fundamental determinants for the investments projects expansion in Goyaz sugarcane agribusiness within 2007-2010 years?

Objective: explain the dynamics, i.e., the variations in the number and values of the projects in sugarcane agribusiness in Goyaz from 2007 to 2010 through the analysis of both indicators and strategies of different companies.

**2 Hypotheses:** there are five hypotheses embedded in the plan to find out the economic reshape process of the dynamics in Goyaz, as follows:

1. The expansion of sugarcane is due to the productivity earnings rather than the availability of areas;
2. The fiscal subsidy influences the investments;
3. The investments are induced by the national sales of flex fuel automobiles;
4. The autonomous investments are related to fiscal subsidies and innovation, that stand for the diffusion of technologies;
5. The economic increasing of the cities that has received investments projects drives the expansion of the Gross State Product.

**3 Methodology:**

***Material:***

This piece is supported by an exploitative research, which dug from a sheet made available by the state Secretariat of Industry and Commerce, particularly, under the board of 'PRODUZIR' *budget-programme* that decides and releases the fiscal subsidies for each submitted project. That document contains all values, number of projects, and the situation of each one (approved / running). Also, it permits that one can make new calculations for other indicators, e.g., productivities of employments, investments and of subsidies, as well as the products themselves (ethanol, sugar, electricity). Another source to be looked into is the chart of national sales of flex fueled automobiles, which has been prepared by the National Automobiles Fabricants Association (ANFAVEA). Furthermore, there are other two indicators charts that will be consulted: the finance state secretariat Gross National Product for cities with and without cane investment projects and planning secretariat's cane productivity and areas under plantation data.

***Proceedings:***

Quantitative simple methods are required for most of the hypothesis placed in this article. Thus, for the first one, it was employed a trend analysis in order to estimate the exponent that will give out the greater degree between area and productivity. Concerning the second, simple linear regression was used to find out *how much* did the fiscal subsidy influenced the investments in each year of the series 2007 to 2010. Looking at the third, since there are few data, which avoids a perfect regression, the choice was to make a single linear graph analysis showing the behavior of both investments in Goyaz sugarcane agribusiness and national flex fuel vehicles between 2007 and 2010. In order to verify the fourth – autonomous investments – a comparison involving some selected evidences from the empirical reality, under the guidelines of the Industrial Organization Literature. Finally, regarding the fifth hypothesis, again, a simple linear graph analysis was drawn with the available data obtained from the chart of the Planning and Finance state secretariat.

**4 Review and Theoretical Foundations.**

Since the very object of the research is the investment, then the theoretical guidelines should be the theories about it. Anyway, not only for testing the hypothesis but also, and maybe chiefly, to build up a concise explanation of the dynamics, there should be a combination of a set of comprehensive theories. Thus, Keynesian, Schumpeterian and neoschumpeterian schools will be integrated.

- Theory of the Investments.

- Theories of Location.

The main economic approaches over location issues appear to start from a set of authors that supported their analyses onto the neoclassical economics, who behold a market structure under perfect competition, constant prices, balance between supply and demand of raw materials, production factors under fixed quantities and so on. *Von-Thünen* (1826) – the prominent one – stated a relation among land income (Richardian), distance and location. In short: the more the marketplace was distant, the less would be the surplus receipts of the producer in rural areas. Such output was a function of the transportation costs and production expenditure. The industrial location was worked out by Weber (1909); the theory of the central place was developed by Christaller (1933); Wingo (1961) e Alonzo (1964) studied the matter of land use. None of them, however, take into account the increasing of the productivity, inputs exchange, neither different size of the firms, production scale and their design, as well as the interdependence among the companies. A reasonable headway over those impervasive point-of-views has been made with the Industrial Organization School. The Theory of the Industrial Organization enlarged the roll of inputs and production factors beyond land, capital, work and natural resources. Porter, brought into the infra-structures (physical, commercial e administrative), as well as scientific knowledge. Porter also states that the advantage of a location competing for productivity comes from the high quality of inputs, particularly, specialized ones. The environment for rivalry and strategy comes up when incentives and institutions enhance the investments in a determined sector, which comprehends R&D, training services and market development. Anyway, before it becomes a general hypothesis, one should bear in mind that such advantages were conceived for a model that targets Productivity, seen as the main source of advantage for industrial competition. Unfortunately, there seem to be few evidences that preconditions for agricultural productivity and/or more systemic advantages can be explained from a conception based on locational advantages.

- Theory of Investment.

The theoretical references about investments that are adopted in this article are those proposed by Keynes and refined by his colleagues. If, at one hand, it's true that the pavement of the *Keynesian Revolution* are related to a timeline when the Systemic Crisis of super production and liquidity has found a new paradigm in economic management with a prominent and important role of the government, on the other hand, it's also true that the inherited research programme sheds light over the complex dynamics of investments. Keynes launched the bases of a new interpretation of the economic game, in which the investment plays a priority role within the economic increasing models. Seldom after him did other authors not take investment into account in many other different models of economic increasing. Even though where the supremacy of capital over governments as well as those that highlight the public expenditures emphasize the 'public investment'. As far as a definition for investment is concerned, Keynes (1982) signs that it is not pacific what investments mean. Thus, suggests that aggregate investment corresponds to the liquid addition to every species of capital equipments after depreciations of older ones (still liquid incomes) had been deduced, and this stands for liquid investment. Different definitions occur perhaps because of light differences in the term 'capital', e.g., fixed capital, flowing capital or liquid capital. Thus, Hawtrey suggests that liquid capital has to do with stock variations and so on. After discussing many points-of-view and bring the meditations of D. H. Robertson about income, the less controversial conclusion that Keynes presented is that both savings and investment are equal, *inter alia*, because one can only save if he acquires an asset, that should correspond to an amount of the new current investment. Kalecki (1982) went along and refined that statement suggesting that investment decisions keep a close relation with the

gross savings of the firms that consists in the depreciation and distributed profits. Moreover, the investment can be financed with any money out of the firms, which could be attracted by the inner accumulation of capital in the company so that gross savings overtake the constraints put by either the capital market or the “increasing risk”. Kalecki adds to the register ‘gross savings’ the term personal savings (controller groups that invest in their own company by underwriting shares). Thus, the investment decisions are influenced by the total of the gross savings and the temporal expansion of the profits.

Comparing Keynes and Kalecki, the concept of investment becomes more complex although more structured because – at one hand – influences the economic increasing, but, on the other hand, it is also influenced by factors like the variation of the effective demand and by the technical progress, since what will generate a more regular behavior in the level of the economic activity. Such a comparison makes it possible to distinguish Autonomous Investment from Induced Investment. In other words: there will come up a model to interpret the individual effects of each one over the economy as a whole.

It is the Hansen Model, or Hansen-Samuelson Model.

In his article *Interactions Between the Multiplier Analysis and the Principle of Acceleration*, Samuelson (1939) explains a model that had been developed by his advisor Alvin Hansen, which intended to estimate the amount by which the National Income is multiplied after a plus in governmental expenditures. The original matter of Hansen’s Model, as Samuelson puts it, is a sequence of Keynesian Model that states that the more government increases its expenditures, the consumers raises theirs too, and, as a matter of consequence, the entrepreneurs tend to practice incremental investments: the ‘Multiplier Effect’. Nevertheless, the register ‘multiplier’ in its more common acceptance does not reveal the relation between the Total National Income induced by the government expenditure and the normally wasted amount, before the governmental raises. The solution to this puzzle is simple. According to Samuelson, the ‘multiplier’ gives the ratio between the total raise of the National Income vis-à-vis the total investments (government and private). He also explains that the effects over the private investments are often regarded as tertiary, that’s why no systematic attention is paid to it. The last hypothesis put by Hansen-Samuelson is that the Private Induced Investment is proportional to the increment of the consumption in-between both the prior and the moment of the observation itself. However, it should be made clear that the relation governmental spending x national income lead to different results depending on the period the expenses are made, whether they are constant, if their variation is not so large, etc and the *Proxy*:

$$\frac{I}{I - \alpha} \quad (1)$$

There, (I) stands for the total investment and ( $\alpha$ ) is the multiplier. Thus, divide the graph and, four regions and establish discriminations.

The model find out that after rewriting the original equation of the National Income ( $Y=C+G+I$ ) at the time of the observation.

Samuelson consolidates the thought that the National Income is, in essence, a function of Government Expenses and of the Consumption. Therefore, the Investment is induced by Demand. In this model, Autonomous Investment isn’t enough to raise the Income.

## 5 Discussions and Results Presentation.

Once the hypotheses are verified, the next step will be to find out if the investments shaped any dynamics into the Agroindustrial System of sugarcane.

**Hypothesis #1** states that there seem to be enough evidences that the expansion of sugarcane is due to the productivity earnings rather than land availability.

In order to assess it, tests of linear regression for "Area" and "Productivity" were run. Thus, the following results were retrieved:

$$\text{Log}(YG) = 11,32924 + 0.069996.t$$

Where: 'YG' is the planted area in Goyaz, and the first term represents the constant of linear function, and the second term (0.069996) is the exponent that shows the trend for the raise of the planted area with sugarcane within Goyaz state.

$$\text{Log}(\text{PROD\_GO}) = 4.165409 + 0.011826.t$$

Whence: PROD\_GO is the productivity of sugarcane in Goyaz, the first term is the constant, and the second one is the trend of the expansion of the productivity.

The findings are that there not seem to be sufficient empirical evidence to support that the productivity has been greater than the area. According to these results, the area raised almost 7% at the average between 1990 and 2009, and the average increment for the productivity was 1%. A possible explanation is that there is still a large amount of land available for sugarcane, although there are some institutional arrangements that constraint its expansion, such as the Agroecological Zones Decree and local rules.

**Hypothesis #2** states that there seem to be evidences that the fiscal subsidies influence the total investments between 2007 and 2010.

To find out if it can be validated, it is going to be necessary to gather the time series of both Investments (Approved and Running) and Fiscal Subsidies recorded in the 'PRODUZIR' sheet. To find out if it can be validated, it is going to be necessary to gather the time series of both Investments (Approved and Running) and Fiscal Subsidies recorded in the 'PRODUZIR' sheet. It will be evaluated how much the fiscal subsidies (CFiscal) will have influenced the level of investments within that period.

The first evaluation refers to the year 2007, as follows:

$$\text{Loginv07} = -3,847 + 1,124 \text{ CFiscal}$$

(0,013) (0,001)  $R^2 = 0,622$ ; Durbin-Watson = 1,593

Whence: the dependent variable (Loginv07) is the Total Investment, and the 'regressor' variable is the Fiscal Subsidies, which, accordingly to the data retrieved above accounts for over 60% of the variation in the investment through 2007. In short: the role of attracting investments had been perfectly fulfilled.

It can be inferred that there really seem to be sufficient evidences to support the hypothesis that the fiscal subsidies influence the investments of sugarcane projects in Goyaz in 2007.

The second evaluation (2008) can be presented as follows:

$$\text{Loginv08} = -2,170 + 1,037 \text{ CFiscal}$$

(0,220) (0,001)  $R^2 = 0,662$ ; Durbin-Watson = 1,885

As shown, in the year of 2008, the fiscal subsidy was responsible for about 66% of the variation of the total investments - recorded in 'PRODUZIR' sheet - therefore, it seems to be enough evidences to support that 2008 investments were influenced by the subsidies.

The third test refers to the year 2009 and the following results were achieved:

$$\text{Loginv09} = -2,948 + 1,075 \text{ CFiscal}$$

(0,046) (0,001)      $R^2 = 0,766$ ; Durbin-Watson = 1,812.

As shown above, "CFiscal" were responsible for 76% of the variation in the investments. It is therefore possible to infer that there seem to be enough evidences to support the hypothesis that in 2009, the investments were influenced by the fiscal subsidies.

The last test refers to year 2010 data. The following retrievals were returned:

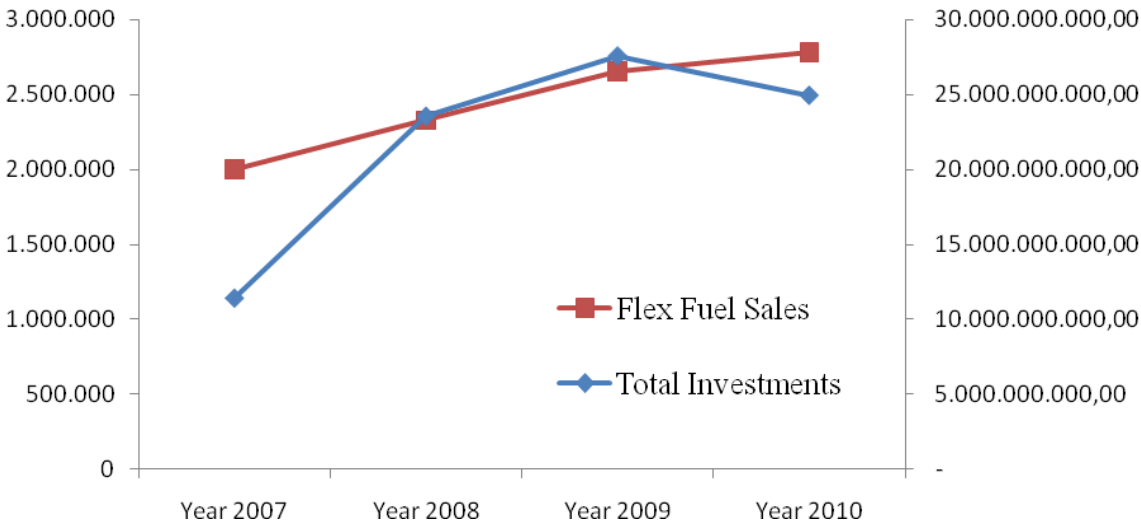
$$\text{Loginv10} = -2,596 + 1,058 \text{ CFiscal}$$

(0,068) (0,001)      $R^2 = 0,724$ ; Durbin-Watson = 1,99.

As seen, the Fiscal subsidies were responsible for around 70% of the variation of the total investments in 2010. Thus, there really seem to be enough empirical evidences to support the hypothesis that subsidies influenced the investments level.

**The third hypothesis** states that the investments are being induced by the variations of the sales of flex fuel vehicles to a national extent. In order to verify it, both 'PRODUZIR' and 'ANFAVEA' records from 2003 to 2010 will be compared.

**Figure 1 – Relations between national flex fuel cars sales x Total Investments.**



Source: PRODUZIR/ANFAVEA.

The analysis supports the following inferences:

Although the sales of flex fuel cars in Brazil started in 2003 and increased in the following years and the investments in Goyaz strengthened since 2007, it is possible to watch symmetrical trends from 2007 to 2010. It is noticeable the 'skip' that the set of total investments perform: from BRL 10 million millions to around BRL 25 million millions as short as in one year interval, when the sales starts from 2 million units and peaks around 2,5 millions. This suggests that there had been an effort to contribute with the sourcing of ethanol. In the next period, the sales records little above 2,5 cars and the investments appears to be somewhat stable around BRL 25 million millions.

A possible explanation is the variability of the data recorded within 'PRODUZIR' sheet, probably because both the Mergers and Acquisitions movements among the firms and the fiscal subsidies contests among the states nearby.

#### **Hypothesis #4:**

Autonomous investments are supported on Fiscal Subsidies and on technical change; they represent the technological diffusion (R&D) as well as an anticipation of future demands. Such investments can be determined either by corporate strategies or any other reason. The literature has treated them as being associated with the technological diffusion and the anticipation of future demands, i.e., strategic investments.

In order to verify such a hypothesis, it will be needed to collect empirical evidences supported by neoschumpeterian literature, as follows: in the first hypothesis, the findings were that, in general, the fiscal subsidies influences the investments in the recorded projects, and the respective credit (CFiscal) does not stand for a loan fund.

Anyway, subsidy can be seen as a component of the investment because it works as stimuli and indirect savings that creates a power of purchase, thus the firm has the capability to invest. The subsidy can thus make the capability of investing feasible by indicting the company to a Project Funding, whose credits can be borrowed from the ordinary bank system.

Equally important is that the Schumpeterian theory states that innovations depend upon access to credits. In the second hypothesis, the investments have its inductive component given by the national sales of flex fuel, which are a derivative innovation from the use of sugarcane ethanol as a fuel under 1970's 'ProAlcool' programme.

Thus, come up here two forms of credit: the Fiscal Credit and Finance Credit (Banks): the first stimulates the investments and the latter makes it happen.

In Goyaz, the projects of investment have three different dynamics concerning this matter: the local companies, of a minor size, that are not exactly innovative; larger companies, usually subsidiaries of national groups, specially from São Paulo and Minas Gerais; and the global players, even the 'Brazilian multinational' firms like ETH, a branch of Odebrecht. The autonomous investment of the first ones are related to keep the production running without expecting to enhance their businesses; if this is the case, the common is the acquisition by larger ones. The second type of companies are closer to the definition because they come from a region where the 'original' innovation, so to say, started, since it was there that the ethanol industry arose. It is inside the Alcohol Industry that the technology will be generated and adapted; and the more that technology is applied, the more the Technological Paradigm of sugarcane ethanol becomes consolidate. The last set of companies - Global Players (or multinationals) ally both the capability of investing and of learning (fast) the technology of sugarcane ethanol. Besides learning the Paradigmatic technology, they make an effort to enhance the available knowledge and invest to expand the production capability, once ethanol is turning to be an international commodity.

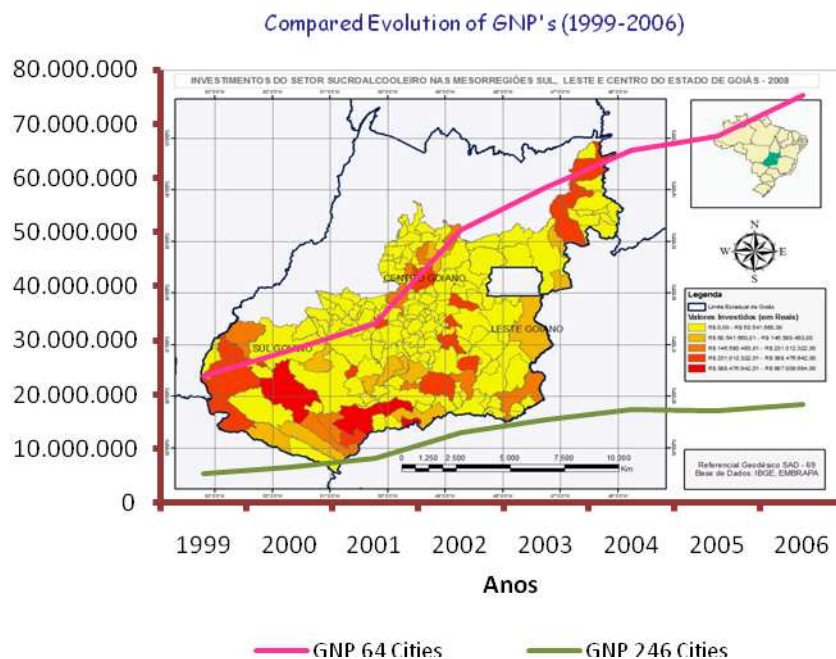
Therefore, it can be inferred that there seem to be evidences that in Brazil the productivity has been greater than in Goyaz (12,45% x 11,82%, 1990-2009) and a possible explanation is that there is an homogeneous increasing of the productivity, to a national



extent, because of the narrow differentiation of the technological packs, because, inter alia, the areas where those firms come from are very near and even make boundaries with Goyaz, which would not account for extraordinary innovations. Thus, there is a movement of technological diffusion.

**Hypothesis #5:** there seem to be evidences that the economic increasing of sugarcane activity is exerting influence on the Gross State Product of Goyaz.

The verification of the hypothesis will be made through a descriptive analysis watching the graph. With the elements for analysis at hand, the Gross National Product for Goyaz can be compared watching the evolution of this indicator both for the cities with projects and all other ones. As follows:



Source: FCO/PRODUZIR.

Thus, there is not such a change itself, but changes at a higher speed. There seems not to be any doubts left that it is the investments for ethanol that are pulling this change.

If, at one hand, accordingly to theory, the Institutions (markets and organizations) exist to supply market failures and, specially, diminish uncertainties; maybe it's time to think once again or, perhaps, improve those institutions.

The change is getting faster because the organizations (particularly firms) are turning into Global Players, which implies that they are learning faster. This fact should be highlighted because the main strategy, besides Merger and Acquisitions that target the systemized knowledge worked out within an elder firm in the global marketplace, and, also, for transmitting knowledge out of its core competence, is the Skills Transfer at minimum marginal cost, represented by the *greenfields*. Such companies will be skilled for coordinating global chains and to produce at lower costs, since they almost won't face asymmetric information. *Greenfields* are not only newer sites, machinery or factories; they are above all an organizational innovation.

Attention should be paid to the fact that a concentration of investments within the ethanol agribusiness and in greenfields at Goyaz signals a future trend. Possibly, for all thinkable reasons for paying attention to ethanol, specially for its market potential, the fact that it is not so important anymore the oscillations of prices between sugar and ethanol, allows

to think that organizations are “anticipating the future”, i.e., foreseeing a global market structure for ethanol and its competitiveness factors.

The strongest investments are in ethanol because it is which aggregate more value, since it demands a more efficient coordination, which involves innovations, infra-structure, quality, logistics and the product can be traded like *tie and bundle*, i.e., one can sell both the final product and the embedded technology (mills and distillers), engines, cane varieties, and, customized contracts with governmental agencies and other companies, besides running a great deal of money with financial services.

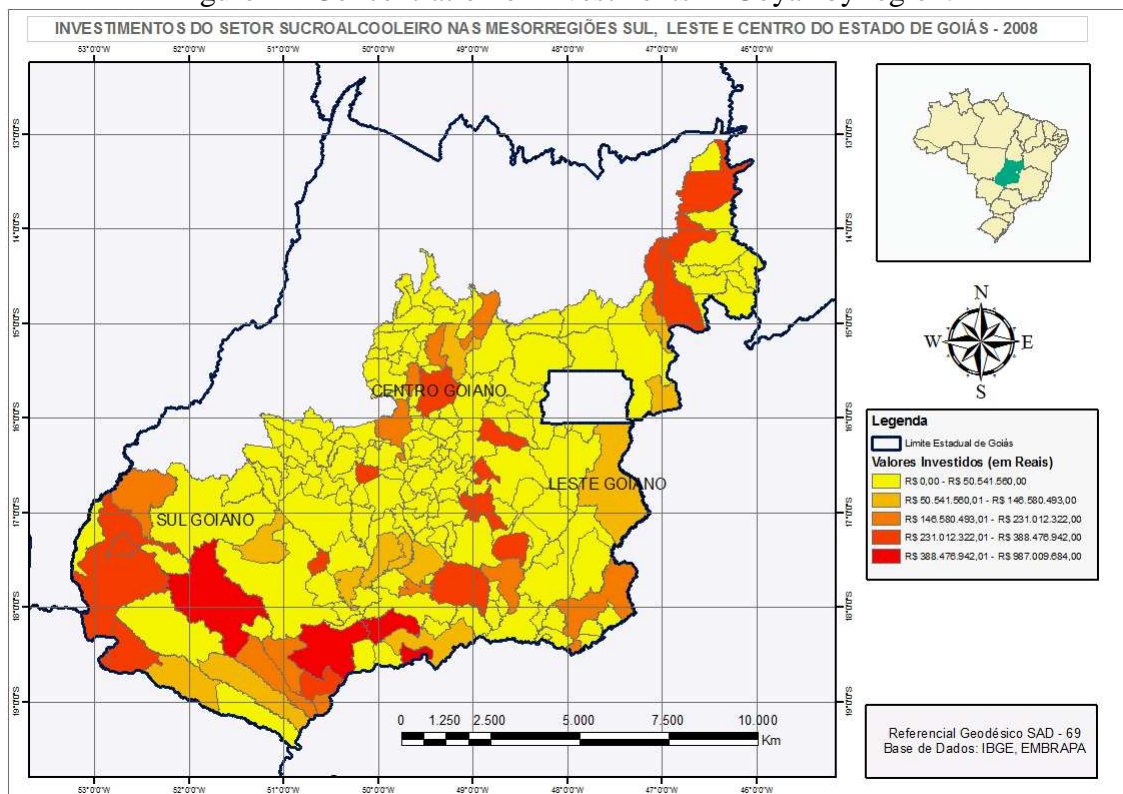
It is worth watching that not all approved projects are running, and, furthermore there are projects whose records are repeated in the enrollment of ‘PRODUZIR’, since there are companies that enter into the fruition of the subsidy, then leave, and come into once again, keeping the original values. An example of such instability is Usina Porto das Águas, located at Aporé, Goyaz South Region.

Regarding Direct Investment, in between the years 2005 and 2007, there is only one record of Foreign Direct Investment into the ‘Approved Projects’ roll. In 2009, 5 FDI’s occurred in ‘Approved’ roll. And the news involve a particular dynamics in this arena, for instance, Shell establishing a merger process with Cosan, so as to rival and compete with British Petroleum (BP) that made a Joint Venture with Maeda Group, Santa Elisa Vale; this one, in its turn, has made another with Global Foods, and Dow Chemical.

With all that bore, it is now possible to chart how the investment project are shaping Goyaz by concentrating in some regions, and, also, select areas, although it is not possible to make proof of any correlation between regions and areas.

The following figure shows the concentration of projects of investment in Goyaz by region. The stronger the color is, more expensive is the investment.

Figure 2 – Concentration of Investments in Goyaz by region.

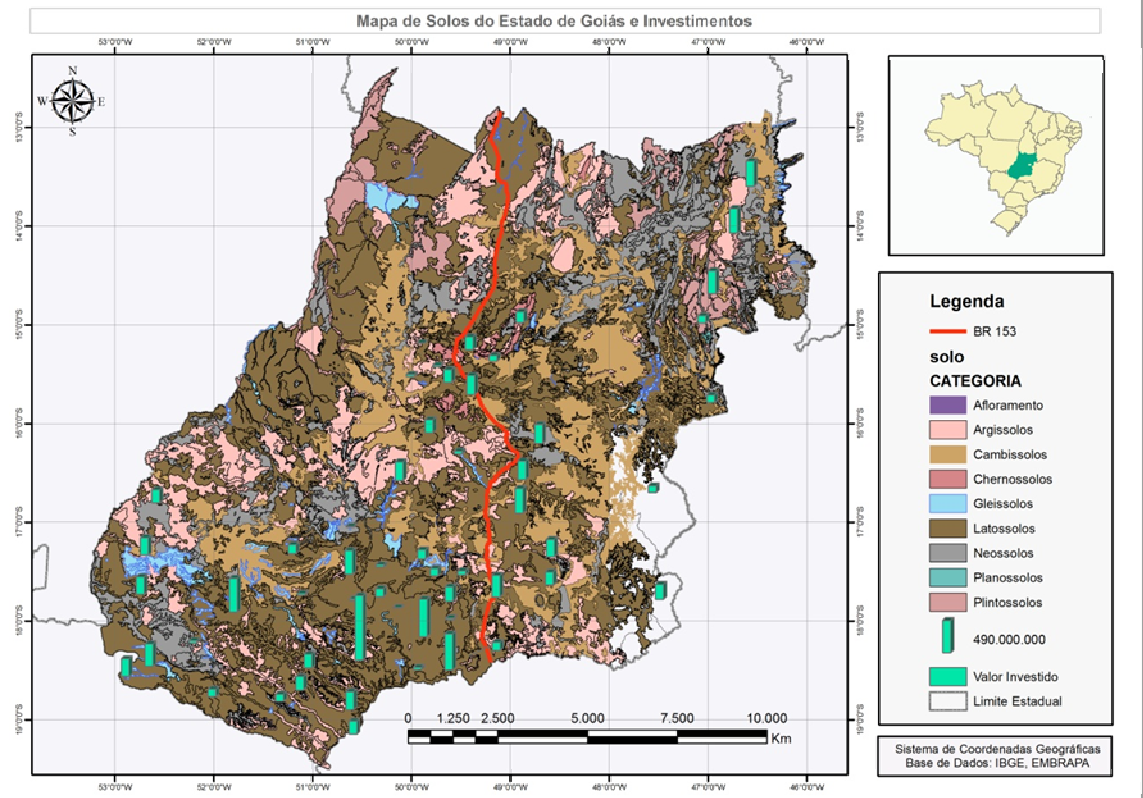


Source: PRODUZIR. Organized by the author.

Another determinant for the investment is the selection of areas.

Although there are no empirical evidences that the companies make a careful plan considering the features of the soil and other variants before they hire the areas and start running the project, there is much coincidence with the choice revealed in the map bellow: the higher the bar is, more expensive is the investment, and the darkest the color is, better is the soil for the cane. As follows:

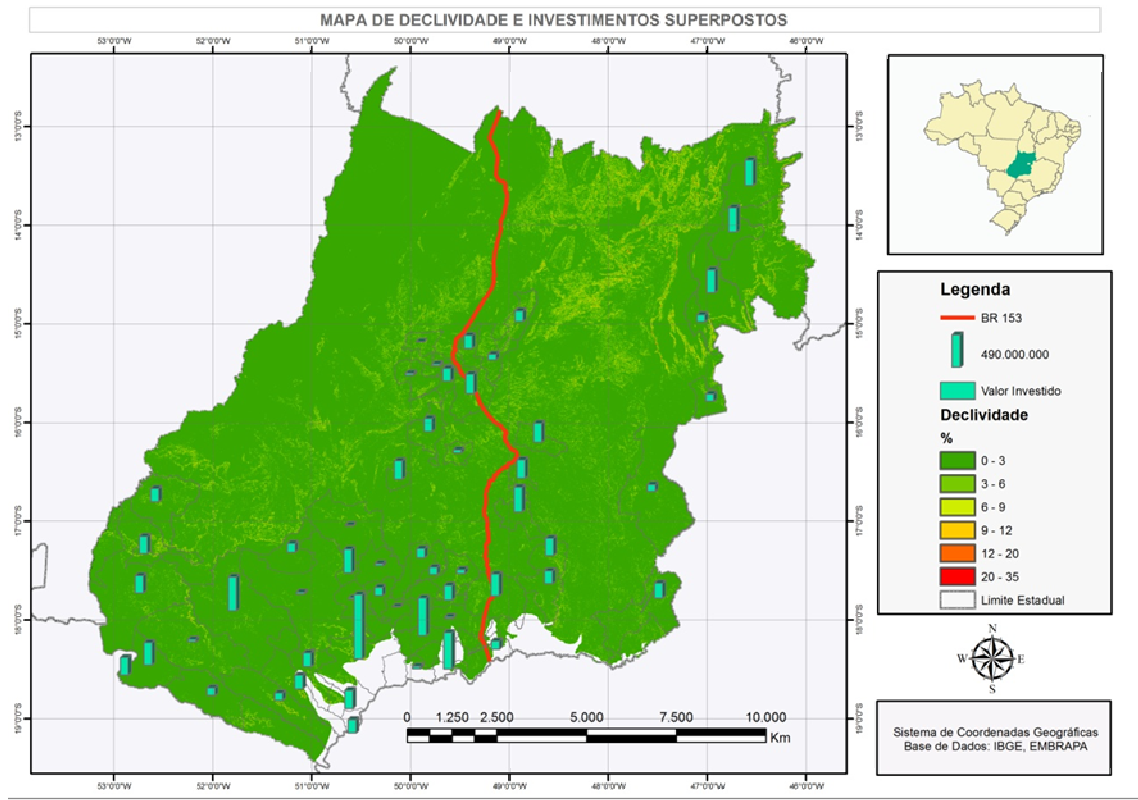
Figure 3 – Chart of soils in Goyaz with investments.



Source: PRODUIR/SIEG/EMBRAPA. Organized by the author.

Last but not the least, there is the matter of slope. Anyway, it should not be viewed as a problem, because, as it is shown bellow, most of the lands in Goyaz are within the strip 0% - 12%, which is recommended for running the business of sugarcane, since it is almost plain. Greenish and yellowish colors are the best.

Figure 4 – Chart of Slopes in Goyaz with Investments within.



Source: PRODUIR/SIEG/EMBRAPA. Organized by the author.

## 6 Final Regards:

The very issue of this article was to find out what is the role that the private investment plays in the reshaping of Goyaz territory in the recent expansion of sugarcane. Nevertheless, the dynamics of Projects of Investment, as seen, could not occur unless the fiscal subsidy was made available. There seem to be no doubt that Goyaz are naturally biased to develop cane and its correlate businesses. The matter, anyway, is that once the subsidies were conceded, the larger companies started a new movement towards a niche that is cane ethanol's. Some companies entered into arrangements and made higher investments in order to *catch-up* and to innovate forecasting bigger and newer demands in the future; some of them began a more fierce competition and ran aggressive merger and acquisition processes so that they could earn from scale and raise barriers to rivals not only in Brazil, but to a global extent. So, as a matter of conclusion, the role of the Fiscal Subsidies was to stimulate the investments and theirs was to positioning the state of Goyaz in the innovative Industry of Cane Sugar and Alcohol in the world.

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