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EDITORIAL

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Dear Editorial Board Members, editing assistants, readers, authors, reviewers, and users, we are pleased to present the Brazilian Journal of Public and International Policies (RPPI) first issue of 2021 (vol.6, n.1, 2021). We are happy for being able to start the year with a new volume despite the challenges posed by the pandemic in the years 2020 and 2021. We had to deal with operational problems that affected our work, from our article receipt system, to find reviewers able and willing to the activity (unpaid and in times of work overload) to delays (understandable and justified) in returning opinions. Therefore, presenting the first volume of 2021 can be considered a victory in the face of so many challenges.

Keeping the proposal of an academic-scientific dissemination medium with an interdisciplinary profile, the RPPI brings to the academic community, researchers, students and other interested parties, a contemporary debate on subjects associated to and integrated with public policies and international cooperation.

The issues of 2021 has articles published in two languages, Portuguese and one version in a second language (Spanish or English), chosen by the authors. In the same direction, the new journal system allows access in three languages (Portuguese, English, and Spanish). Thus, we now meet the criteria of internationalization, accessibility, and international dissemination to authors and readers of scientific work published in the RPPI. With these improvements, we hope to increase the reach of our publications and comply with of the indexing bases of national and international academic and scientific productions (Web of Science, Scopus, Scimago, index h, among others). The improvements on our system also aim to expand our collection of international publications, as well as to contribute to the dissemination of the public policy debate at the domestic and international levels.

Given the accessibility, security, and trust requirements of the documents published in the RPPI, all are available in PDF / A, as informed in the editorials of the year 2019.

We, the editors and editing assistants, wish you a good reading, happy holidays and, a great 2021!

Alexandre César Cunha Leite
Editor-Chefe da Revista Brasileira de Políticas Públicas e Internacionais

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China's Belt and Road Initiative: A Transnational Development Model?

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Abstract: The Belt and Road initiative announced by China's President Xi Jinping has introduced a novel economic model that seeks to shift the site and purpose of development outside China. The initiative proposes the construction of a series of transportation platforms along the ancient Silk Road that connected China with Central Asia, Europe and West Asia. This outward thrust of investment and capital construction envisages significant reduction of distance and in spatial barriers between and China and the world that will form the road traversing different geographies of nations, territories and cultures. I call China's Belt and Road initiative a transnational development model as it aims to coordinate factors of economic circulation across different national spaces controlled by different governance models, legal norms and political contingencies. Centuries ago, when the original trading route of the Chinese Silk Road was formed, this overland route was a contiguous territory where boundaries remained too fluid for any authorities to impose its will. But today the Silk Road is an imagined geography as this route is controlled by sovereign national territorial states having effective authority structures over each of these units. The initiative then requires China to entail a broad-based economic coordination with a diverse governance system. My paper will explore how the transnational scope of the Belt and Road initiative come to negotiate diverse authority structures in particular national contexts.

Keywords: Belt and Road; Development.

1. Introduction

The Belt and Road initiative announced by China's President Xi Jinping has introduced a novel economic model that seeks to shift the site and purpose of development outside China[2]. The initiative proposes the construction of a series of transportation

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[2] An earlier version of this paper was presented in International Symposium on One Belt One Road: Vision and Roadmap for China – India Cooperation, The Faculty of Social Development and Western China Development Studies, Sichuan University, Chengdu, China.28 – 30 November 2015.

platforms along the ancient Silk Road that connected China with Central Asia, Europe and West Asia. This outward thrust of investment and capital construction envisages significant reduction of distance and in spatial barriers between and China and the world that will form the road traversing different geographies of nations, territories and cultures. I call China's Belt and Road initiative a transnational development model as it aims to coordinate factors of economic circulation across different national spaces controlled by different governance models, legal norms and political contingencies. Centuries ago, when the original trading route of the Chinese Silk Road was formed, this overland route was a contiguous territory where boundaries remained too fluid for any authorities to impose its will. But today the Silk Road is an imagined geography as this route is controlled by sovereign national territorial states having effective authority structures over each of these units. The initiative then requires China to entail a broad-based economic coordination with a diverse governance system. My paper will explore how the transnational scope of the Belt and Road initiative come to negotiate diverse authority structures in particular national contexts.

The debates on the Belt and Road initiative focus on and anticipate possible policy convergence between China and other sovereign national governments along the road. In this framework the nations are given primary attention as the key actors participating in the initiative. But this paper will elaborate on three interrelated questions. Firstly, it will look at the social actors at sub-national levels and their possible responses and motivations as decisive factors. I will argue that the transnational policy convergences between China and other nations will be depend on how the social constituencies at the sub-national level respond to specific projects such as a highway construction or a port etc. The second issue pertains to the relation between the social constituencies along the territories of the Silk Road and the economic projects. The policy literature suggest that the Belt and Road initiative is not a need-based development model where local social actors aspire for a road, bridge or a factory as means to improve living standards. China's initiative is driven by the substantial production capability of the some of the state-owned companies. I will argue that the need-based development aspirations and capacity-based capital construction can produce different kinds of social outcome and therefore can produce different responses from local social constituencies. Thirdly the paper will examine how the transnational scope of the initiative would negotiate with the national specific legal norms and achieve compliance standards.

2. The Belt and Road Initiative: a novel economic model

Ever since President Xi Jinping’s Nazarbayer University speech in September 2013, the Belt and Road initiative has received global attention. Perhaps no other economic idea has captured the imagination of the world as it did in recent times. The Chinese President’s call for the creation of a continuous economic belt along the ancient Silk Road prompted animated debates in countries of Central Asia, Russia and Europe. The ancient Silk Road, otherwise forgotten by the rest of the world, but continued to be the subject of historical research, has now been brought back to the sharp focus of contemporary economic, and geopolitical debates. It revived the intellectual interest on a cultural past of trans Asian trade, East-West cultural exchanges and above all China’s ancient genius and riches. It has become popular topic for many academic symposiums in Universities across the world. The Silk Road has kindled a new wave of literature both academic books, as well as popular accounts. Even in New Delhi which lies far away from the proposed overland route and economic belt, the books on Silk Road was sold out fast. This interest was not confined to the government elite, or financial executives, but was diffused widely in social imagination so much so to become a catchphrase in contemporary idioms.

What makes the idea of Silk Road so compelling for government elites and academic alike? How do we explain the popularity of an economic idea? Is it because of the utilitarian scope or in other words the economic possibilities it holds forth for those countries which participate in it? Has it been seen as a salvaging antidote for the otherwise crisis ridden world economy? Or is it because of the general fascination with things from the classical orient? The idea of Silk Road has in fact revived intellectual as well as popular interests in complex different ways. For the economists, it promises the possibilities of large volume of capital infusion through the newly formed Asian Infrastructure Investment Bank (AIIB) itself is an optimistic story. For the western historians, it has kindled fresh interests in the mystique of the orient steeped in a cultural past where nomadic sojourners traversed through the desert, steppes and the lakeshores of China and central Asia. The romance of the pastoral life on camels and horseback, exchanges of commodities, cultural accommodations and religious diversities.

It is interesting to note that President Xi Jinping has brought alive all these elements in his Nazarbayev University speech. He had invoked memories of the lost world, the pristine desert lands, and the emotional bond between Chinese people and Kazakhstan. He was discreetly promising his audience that his economic initiative will take those countries in the route to the riches that they inherited long ago. Xi Jinping used only second half of his address to elaborate the economic part of the Belt and Road initiative. But before elaborating his proposal to create a continuous economic belt along the ancient Silk Road in rather familiar developmental language, Xi Jinping craftily evoked the memories of the past, and offered a promise for shared development in the future.

This section outlines four key features that make the Belt and Road initiative a novel economic idea. In the first place the initiative proposes a locational shift in terms of the site of economic actions. As indicated earlier, China had reversed its inward orientation of the national economy during the socialist planning era to that of an outward leaning economy since the late 1970s. This outward thrust has enabled China to develop a dense interface with the other economic regions of the world in particular to that of East Asia, North Atlantic and Western Europe where the bulk of the international trade is concentrated. However, this outward orientation, for a long time, was in pursuit of foreign capital into China's national territories. The growth of the fourteen "open coastal cities" along the country's eastern seaboard and the rise of Pearl River delta region in Guangdong province as the "factory of the world" is directly related to this strategy of "bringing in" foreign capital. In that sense the purpose of the open-door policy was premised on the development of China's national territory. It also induced integrationist tendencies linking China to other national economies which shared common cultural linkages but for long remained insulated from each other for geopolitical concerns. The emergence of what Xiangmin Chen (1994) called the Greater South China Economic Region can be seen in the light of how capital mobilities can be promoted through open door policies. Therefore, even during the "open door" policy, the site and purpose of economic development still remained the Chinese nation. But the Belt and Road initiative marks a locational shift in the sense that the site of China's economic actions will be locations outside the Chinese nation. It envisages the international arena, not in pursuit of foreign capital, but as outlets for Chinese capital investments. This locational shift of the government capital from inward oriented national economy to outward international space is a key marker of the initiative.

Secondly it aims to create transnational linkages through infrastructural assets. As is now well known the initiative envisions a seamless economic belt connecting China and Europe through an overland route along central Asia and Iran. There is a maritime Silk route, not part of the original proposal but later added to supplement the new grand vision (National Development and Reform Commission, PRC, 2015). In both it essentially a grandiose blueprint for transnational linkages both by overland route and by sea route. The idea of transnational linkages is not novel, but what is novel about Xi Jinping's vision is how this long-distance geographical connectivity is achieved. The Silk Road aims to create a series of physical assets in the form of highways, railroads, and seaports. It is this asset creation or infrastructural construction the cornerstone of the Belt and Road initiative. As is evident the new infrastructures that the initiative is proposing to create are all high value in nature which require significant capital investment and industrial capability. It seems that the initiative is heavily construction oriented. These twin aspects, the capital intensive and construction driven, appears to be the defining feature of the Belt and Road initiative.

The third feature pertains to the consequence it produces in its course. If the initiative takes off with participation from more countries, it will lead to the reduction of geographical distances and travel time between key locations along the route. The ancient caravan route that start from Xian in China to Samarkand in Uzbekistan pass through desert plains and rugged mountain regions. The very physiographic features pose formidable physical barriers to transnational connectivity. The places along the Silk Road today are located in vast geographical distance which are not accessible easily for travelers, tradesmen and any other itinerants. Unlike many other well-travelled routes, the Silk Road is not a familiar journeymen's trails. The spatial consequences of the proposal will be the reduction of these physical barriers and therefore the geographical distance. As Janelle has shown how improvements in transport technology from horse cart to modern passenger to the railways can lead to what is referred to as the annihilation space by time. He argued that the modern transport technologies have the effect of moving human settlements towards one another as 'as the travel -time required between places decreases and distance declines in significance'. Janelle has introduced the concept of time-space convergence to explain how improvements in transport technologies can lead to the reorganization of social life (Janelle, 1968).

In order to create a seamless transnational economic belt, China's initiative hinges on the governments of the territorial states along the route as the key nodes. This 'governmentalism' defines it fourth feature. China envisages and seeks for broader convergence between the Silk Road initiative and the economic policies of these states. While it is plausible to anticipate greater scope for such convergences, it is at the same time beset with complex challenges. A useful starting point to understand this question is to juxtapose the historical states along the ancient Silk Road and their contemporary embodiments. During the classical age of the Silk Road from Changán in Xian to Samarkand, the route was divided among ancient regimes of different kinds, from oasis kingdoms and cities to fragile empires (Hansen, 2012). These historical states had limited control over the territorial borders as they possess meagre infrastructural capacities to enforce anything akin to modern sovereignty. As Hansen has observed the route (s) was frequented by a diverse mix of people including emissaries, merchants, pilgrims, soldiers, and travellers. Who drifted towards the caravan routes in steppes and desert was the cosmopolitan sojourners who are driven by different set of motives rooted in religion, trade, politics and power. In retrospective, we can see that the ancient Silk Road was not about singular economic conceptions and exchanges arising from it, but of diverse interests not necessarily intersecting with each other, yet accommodated each other. In contrast to these borderless cosmopolitanisms of the bygone era, the Silk Road geography today is controlled by modern territorial states which exercise effective control over their land and resources. From the Himalayan plateau and Gobi Desert to Hindu Kush mountain to Kizil Kum desert and till the Caspian Sea, the most daunting physical geography today is controlled by the modern states which command fairly sufficient infrastructural capabilities to govern them the way they want. The policies and institutional practices of the states are sanctioned by the idea of modern sovereignty. As Krasner has defined sovereignty has been understood in four different senses. It encompasses "ability of the government to actually control activities within and across its borders", it is the " organization of authority within a given polity", it is premised on the idea that "the right of the government is independent of external authority structures", and in legal terms it "referred to recognition by one state by another" (Krasner, 1999). Why the question of sovereignty is relevant to the Silk Road initiative is that the convergence between domestic economic policies and the objectives of the transnational economic belt project not always converge. Sometimes the concerns arising from notions of sovereignty can provoke resistance to transnational propensities.

The shifting of capital investments into international spheres entails another set of complexities. The Silk Road today is divided among number of sovereign states which controls jurisdiction over their territories. An apparent incongruity defines the relationship between the territorial states and economic orientations of the Central Asian states. It is pertinent note here that they are deeply identity based territorial formations and are not yet integrated into the flows of economic globalization. From Kazakhstan to Iran are stable political systems, but at the social levels their responses to the forces of economic globalizations are ambivalent. This ambivalence, however, is not really a source of opposition to Chinese capital mobilities into their territories. But at the same time, it is simplistic to think that the government elites in these regions possess political capacity to introduce largescale infrastructural project to their populace. As noted earlier the Silk Road initiative is essentially a government centered approach where any infrastructural project will be decided upon by the governmental elite. While the Chinese government possess that capacity to not only exercise its rational choices in such matters but also has the institutional capability to implement them, even in face local opposition. However, the Central Asian states do not possess such twin political capabilities. The point here is that in the Silk Road initiative, the territorial states are the key node through which the economic belt will be created. Given the international dimension of the initiative, it is natural that the sovereign states are given formal centrality.

3. Nation, state and human needs: the chinese development model before the Silk Road Initiative.

For a long half a century, the idea of development in Asia was anchored around the idea of nation. The nation was seen as the purpose as well as the object of development where the government will coordinate the economic factors towards growth. In Asia this convergence between the nation and development remained as a foundational principle that embodied the collective will of the people ever since decolonization and social revolutions established popular sovereignties. Since the establishment of the Peoples Republic, China presented an imaginative model where nation was seen as both purpose and objective of development. In other words, the idea of development was essentially bounded by national territory. The idea of economic self-reliance was seen as prerequisite to participate meaningfully in international relations. In the PRC's long socialist development model expressed this Asian quest for economic sovereignty. It is useful to note here the distinctive model of development that the PRC charted out for the nation entirely relying on resources available within the nation. During the same historical period, in a faraway continent, the argument for economic autarky was gaining both intellectual and political momentum. The Latin American structuralist perspective articulated by Raul Prebisch through a historical terms of trade analysis concluded that the integration with world capitalist economy will only lead to structural dependence of developing nations. To avoid these pitfalls, Prebisch and his academic collaborators argued for import substitution industrialization as a remedy to stagnant agriculture and autonomous road to development. More radical followers of the school such as Andre Gunder Frank was to suggest a complete severance with the capitalist world economy if developing nations are to become economically independent. It is useful to note here that China's three decades of development since the founding of the People's Republic was aimed at an autonomous path to economic autarky driven by industrialization in conditions of insulation from capitalist external economy. China's twentieth century leaders both the Republican leaders such as Sun Yat-Sen and the Communist revolutionaries shared a strong striving for nationalist industrialization. The period between the early 1950s and the late 1970s marks a distinctive epoch. In comparison to the preceding historical period including the ancient Silk Road era and the succeeding decades of the twentieth century, it was during the above period, China insulated from global economic flows. This insulation from the capitalist world economy was in fact a political choice rather than that imposed by any peculiar historical contingencies such as the Cold War. The important point here is that it was during this period when China was able to chart out, despite serious difficulties, an economic model based on the idea of self-reliance.

A salient feature of this model was its inward orientation. The Chinese nation remained both the source of development including human resources, capital and technology and the object of development as these resources were rationally mobilized to improve the living standards of the people. Here not only that the state became a source and an instrument of fiscal coordination including taxation, allocation and planning, but it also functioned as a redistributive agency regulating wages, creating economic opportunities and at the same time committing to equity. The convergence between state, development and nation was most deeply felt during this period. Since the late 1970s, China has reversed this inward economic orientation and began to pursue an active participation in global economic circuits. Economic historians have identified this moment as the origins of China's global rise. In the prolific writings on the subject both by the Chinese scholars and by the western analysts have presented a familiar explanation crediting the rational choice expressed in the policy of "reforms and opening up". While this explanation does have some merit, alluding to the rational choices of the late 1970s as the sole reasons for China's global rise will not reveal the full story. From an internal perspective, it is plausible to argue that the reform policies have ended the economic insulation thus creating new interface between Chinese national economic actors and the global economy. But during the early decades of the new century the idea of development became increasingly contingent upon factors outside the nation, in particular the global economic flows, commodity market, currency exchanges etc. Nonetheless the nation still remained the object and the site where the processes of development realized their social outcomes.

4. Belt and Road initiative, sub-national actors and clashing models of development in India

The Belt and Road initiative is a classic example of development from above where the government leadership of a country uses it's owns reasons, rational choice and political will to formulate and carry out an economic objective. In its origins and orientation, this initiative epitomizes an elite economic vision. It is borne out of a range of surplus capacities China possess in terms of fiscal reserve and techno-industrial capabilities in infrastructural construction, For China the initiative opens up economic opportunities for outward investment and export of industrial capacities. As mentioned earlier, the belt and road initiative is not based on any collective human needs nor it can be seen as state economic intervention responding to spatial inequalities between regions in China. It appears that the initiative is derived from a concept of development from which social questions are largely excluded. The elite economic orientations of the government policies and the social aspirations of the people, if they do not converge upon each other, can sometimes create social discontents. While China has become a moderately developed society and perhaps it is possible that an elite economic vision of the government and social aspirations of the people can complement each other. But this model of government –society complementarity is not applicable to other countries like India which is still at a very different stages of development.

Why India has not yet joined the Bet and Road initiative has usually been explained in terms of geopolitical concerns that is primarily a government discourse. Since the initiative envisages the territorial states as the key agency through which this transnational project can be accomplished, objections premised on geopolitical anxieties can well be considered legitimate from official perspective. But it is equally pertinent to look beyond the narrow framework of state-centered discourses to understand the Silk road project as a transnational development model. Because ultimately the project is depended upon how each of the participating governments coordinate land and social forces within their territory. This coordination can be complicated and perhaps prove too portent as it involves the acquisition and conversion of farm land and securing social compliance from farmers, peasant cultivators and labor for the project.

India is an interesting case where the popular conceptions of development has clashed with the development model articulated from above by the government. In this section, I will argue why the Belt and Road initiative as a development model will not be attractive to different social groups in India. What I present here are a purely speculative proposition. Because till date no infrastructural project has been conceived under the initiative and therefore, I have no empirical evidence to measure the possible social responses of the local people. The government of India has not elaborated its position on the Silk Road initiative in clear terms, except non-committal remarks from the foreign secretary. The public knowledge about the initiative is still confine largely to the educated sections of the urban population. It is relevant to note here that has been a demonstration effect of China's global rise in India as evident from the popular interest in the Chinese cities and higher living standards of the people. But in the vast expanse of rural India where the agrarian economy has already under severe economic crisis, the term 'development' has acquired a rather portent meaning and any infrastructural project that involve largescale land acquisition can potentially exacerbate social anxieties locally.

Before explaining the growing popular discontents towards elite notions of development in the rural India, let us return to the question of diversity of governing norms along the Silk Road economic belt and how to understand India in that context. The fact that India represents a different political model from that of China need no further elaboration here. The question that needs serious attention is how that difference affects the policy formulations concerning largescale infrastructural project. In countries where the governmental system is vertically organized as in case of the PRC the governmental elite enjoys some amount of autonomy in policy formulations. In India the organizational system of government is horizontally spread with the central cabinet, parliament and the judiciary having exclusive domain of power. At times each of these institutions can come into conflict before a particular policy is finally agreed upon for implementation. In contrast to China, there are no convergence or complementarity between these key institutions in terms of interest articulations. Therefore, policy making often becomes a terrain of lengthy negotiations and even conflict that entails prolonged consultative processes.

In the post-reform India the economic interests of different social groups are often articulated from below which at times compel the government to either to revise an existing policy or to formulate a new one. Contemporary Indian history is replete with such periodic eruption of social discontents in rural India by farmers, small cultivators, and indigenous people. Although rural communities often register strong opposition to government's economic policies, through social mobilization, collective actions and confrontations, not always they succeed in forcing the government to revise a policy or restrain it from implementing controversial project. But the regular and periodic outbreak of such agrarian resistance has brought to the fore the question of what kind of development people really want. The social critique of the government's elite economic models as expressed through these oppositional movements has also present to us an alternative vision of development by the rural people of India.

Would the Belt and Road initiative as an economic model be attractive to the rural people of India? This question is purely hypothetical, but perhaps useful to pose to understand the alternative conceptions of development evolving in India. As I indicated earlier China's initiative is primarily an infrastructural project involving high value capital construction including highways, railway lines, bridges, sea ports etc. Such an idea may appeal to government elites, infrastructural firms, construction companies, equipment manufacturers and labor contractors. But for the vast farming communities of rural India such a proposal holds forth not much of promise. For example, a long stretch of eight lane highway connecting two commercial metropolis may be an attractive economic proposition as it will greatly help freight transport, connectivity and people's mobility between the two cities. But what are the economic benefit it will bring about to rural people? India's recent experience in highway constructions and the local economic and social outcome they produced are disconcerting. From an Indian farmers' perspective, large highway projects often bring with them far reaching economic adversities. In the first-place largescale infrastructural project does involve land acquisition from the farmers or local communities. For the local people it means displacement, relocation and an uncertain future. Development projects in India are increasingly been perceived by the rural communities as synonymous with displacements from their own land habitat, and cultural memories. Above all from the very source of livelihood. Once evicted from their farmland, a small cultivator will never be able to return to a condition of economic survival. In contemporary rural India, stories about the development induced displacements have become a familiar social experience (Lancy Lobo and Shashikant Kumar (2009), Anthony Dias (2012). Secondly, a large highway typically cut through rural communities disrupting the collective economy life they shared earlier and effectively divide them into two separate spatial boundaries without any scope for social and economic interactions. It hardly generates any local employment nor does it create economic opportunities for the cultivators, artisans, or the rural poor in general. Far from creating new economic avenues in the hinterlands, the large highways have in fact led to the contraction of agrarian employment. In recent years the rural areas along some of these largescale highway projects in India such as the Delhi – Agra express way and Delhi- Jaipur national highway is witnessing extreme forms social vulnerabilities such as high unemployment, distress migration, poverty and increasing crime rates. For economic survival many small cultivators who have lost land for these projects are now engaged in all forms of wage earing activities like roadside hawking, seasonal migration, and daily wage work. In different parts of rural India, largescale development projects have transformed small cultivators into new proletarians. Economic survival in rural India has become a desperate human struggle than ever before. In this context the government's land acquisition has provoked deeply rebellious responses from the small cultivators and the rural poor. And it is no surprise that the government's land acquisition processes have become a contentious political problem (Chakraborty, 2013). It has become plainly clear that any government which attempt to acquire land for infrastructural projects against the will of Indian farmers will definitely provoke ever more popular protests. The passage of a new land acquisition law by the former United Progressive Alliance (UPA) and the parliamentary stalemate over its revision by the Modi government are signs of how deeply contested this 'eminent domain' has become in India.

5. Concluding remarks

China's Belt and Road initiative has stimulated a global policy debate where academic analysts, national governments and financial institutions used vastly different perspectives to grasp the full scope of the proposed economic belt. Although it is primarily an economic initiative, the debates were largely dominated by perspectives of geopolitics, economic diplomacy, market integration and national interests. These perspectives have limited analytical scope as they largely leave the questions of social outcomes from their framework. This paper, therefore, posit the idea of transnational development model to search for an understanding that will shed light on the social outcome the initiative would produce. The entry point of such analysis is not the nation-state as most perspective tend to use, but social groups who are differentially located within national states and for whom the idea of development is basically meant fulfilment of human needs.

As a developmental model, the Belt and Road initiative is subjected to two different tendencies, that between the transnational economic scope and national specific compliance standards it is expect from multiple governing norms associated with different authority structures along the route. Transnational policy convergence between China and India will not depend entirely on the central government's rational choices, but much on how social actors at the sub-national level such as small cultivators, farmers and the rural poor will respond to specific infrastructural projects. I would argue that the sub-national level social actors are important for the future of the initiative. Because participation in the economic belt does require a national government to coordinate and micro-manage capital, land and labor. The initiative is premised on the view that the participating governments do possess the political and institutional capacity to perform this role. While the Chinese government has demonstrated that it does possess that capacity, it is to be noted that there exists considerable variation in in these capacities in different countries owing to the different governing models, and stages of development.

The Belt and Road initiative will have limited appeal to the rural social actors in India because of the inherent clash of models between China's capacity-based investment purposes and Indian people's human needs-based development aspirations. China is a moderately developed society and therefore the human needs that the people of rural India long for may not be felt as compelling as in India. But in China there exist an acute sense of economic and social deprivation among different strata of the society in particular farmers in rural areas and migrant workers in construction sector, coal mines and export manufacturing. Therefore, the idea of human needs can never be completely excluded from the idea of development or economic progress as it defines a fundamental human aspiration that will continue to exist in all societies. Since the establishment of the People's Republic, China had embarked on a development path exemplary in the Asian context where the purpose of the China's public policy was to address the acutely felt human needs of the people. During the long six decades since the early 1950s, this model of development has produced remarkable social and economic outcome. But in the new millennium, with the announcement of the Belt and Road initiative it appears that China is charting out a different economic model that marks a rupture with its own historical legacies. Human needs are the missing link in the imagination of Belt and Road initiative. Will it ever again become part of China's public policy objectives? or who will restore the concept of human needs into the future economic imagination of China? Perhaps the long-term outcomes from the Silk Road economic belt investment will provides a fortuitous opportunity for it come back.

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Solidary Economy in Governmental Agenda in Brazil, Argentina and Uruguay: Analysis of Recent Period

A economia Solidária na Agenda Governamental no Brasil, Argentina e Uruguay: Uma análise do Período Recente

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Abstract: In this paper, we point the characteristics of Solidary Economy present in three Latin American countries: Brazil, Argentina and Uruguay, under the prism of public policies institutionalization and of public policies directed to the development of solidary enterprises in their different modalities. We search to visualize the presence of Solidarity Economy in the governmental agenda of these three countries during the period they were under governmental management considered as progressive, and would commit themselves to stimulate actions aimed at the Solidary Economy. An effort to propose public policies for Solidarity Economy was verified in Brazil, Argentina and Uruguay, but these public policies took place more as government policies than as State policies, compromising their permanence.

Keywords: Solidary Economy; Governmental Agenda; Brazil Argentina and Uruguay.

Resumo: Neste artigo, serão abordadas as principais características da Economia Solidária presentes em três países da América Latina: Brasil, Argentina e Uruguay, sob o prisma da institucionalização das políticas públicas elaboradas e direcionadas para o desenvolvimento dos empreendimentos solidários em suas diferentes modalidades. O que se busca é engendrar um levantamento da presença da Economia Solidária na agenda governamental destes três países no período em que estiveram sob uma gestão governamental tida como progressista, e que em tese se comprometeriam a estimular ações voltadas para a Economia Solidária. O que se verificou foi que embora tenha havido esforço para proposição de políticas públicas para a Economia Solidária no Brasil,

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Argentina e Uruguay, estas se deram mais como políticas de governo do que de Estado, comprometendo sua perenidade.

Palavras-chave: Economia Solidária; agenda governamental; Brasil Argentina e Uruguay

1. Introduction

The Solidarity Economy rescues a communal premise that subsidized the performance of consumer, credit, and agricultural cooperatives, operating since the 19th century in South America. Also recovers the labor dimension, linked to rural and urban workers' movements, as unions, sharing the same tensions and ideologies. However, during the 20th century these experiences abandoned their solidary principles, taking on the competition dynamics of hetero-managed organizations. This distancing from solidary principles and adherence to competitive principles was largely supported and financed by government (Singer, 2000; Laville, 2004).

In order to keep solidary enterprises configuration, was necessary to include Solidarity Economy in the South America governmental agenda, promoting their development and continuity. From the beginning of the 21st century, we can observe the efforts of governments with progressive profile to promote greater development of Solidarity Economy in South America.

Examples of the effort: 2000 - creation of an Institute of Social Economy in Argentina; 2003 - creation of a National Secretary for Solidarity Economy – SENAES in Brazil; 2005 - creation of institutions as INACOOP and specific laws for Solidarity Economy in Uruguay; 2008 - inclusion of Solidarity Economy as an economic system in Ecuador Constitution; 2008 - inclusion of Solidarity Economy into Venezuela's Constitution with an Organic Law of Common Economic System; 2009 - Solidarity Economy was contemplated in Bolivian's Constitution, with governmental protection to collective activities by indigenous peoples (Coraggio, 2014). Guerra (2012) analyzes two different forms of Solidarity Economy institutionalization into legal-normative in South America, based on their political guidelines: a) public policies creation for the promotion, development and control of Solidarity Economy sector through specific actions; b) Solidarity Economy inclusion under new legal and constitutional frameworks as an economic sector into the national economic dynamic.

This paper objective is comprehend how Brazil, Argentina and Uruguay proposed the inclusion of Solidarity Economy in their governmental agenda, through its institutionalization and specific public policies elaboration. We don't seek to compare the three countries agenda, but just show the contributions in terms of public policies elaboration, directed to Solidarity Economy. The period of analysis covers the progressive management at the three countries, what was expected after inserting Solidarity Economy in their agenda: Lula da Silva and Dilma Rousseff administrations in Brazil (2002-2016); Tabaré Vásquez and Pepe Mujica administrations in Uruguay (2005-2020); Nestor and Cristina Kirshner administrations in Argentina (2003-2015). Therefore, the paper is structured with this introduction, a section with the inclusion of Solidarity Economy in South American governmental agenda in recent period; a section with the public actions and its limitations in Brazil, Argentina and Uruguay to Solidarity Economy public policies implantation; the final considerations.

This study's methodology is qualitative-quantitative - Quali-Quanti - or Mixed. The paper begins with a qualitative approach, followed by a quantitative one. A 'Quali-Quanti' study uses different methods, in which the qualitative and quantitative information complements each other (CRESWELL, 2010). To Sampieri et al (2013), the Mixed method implies the collection and analysis of quantitative and qualitative data, their integration and joint discussion, for a better understanding of the phenomenon. Here a literature about governmental agenda and Solidarity Economy institutionalization in South America represents the qualitative step. The quantitative step shows the most important public policies for Solidarity Economy in Brazil, Argentina and Uruguay, illustrating the efforts and gaps to Solidarity Economy Institutionalization.

2. Solidarity economy in the governmental agenda

The governmental agenda formulation is an important point to elaborate public policies. The agenda constitutes a set of issues considered important by policy makers and other actors. According to Capella (2017), the government agenda elaboration consists on listing priorities in each area, as health, education, economy, agriculture and social welfare, proposing public policies to improve their situation. In methodological terms, we can cite the Multiple Streams analysis model (KINGDON, 2003), with a sequential approach to public policies, analyzing the processes of establishing the governmental agenda, the alternatives chosen to public policy formulation, and the decision making. Through the public policies profile, we observe the government orientation and its priorities, the resources directed, the time of implementation and results, in other words, the management core. We can also note if public policies are directed to economic and social transformation, or for the status quo maintenance.

Still about Solidarity Economy inclusion in the governmental agenda, Serafim and Dias (2011, p.305) point that “A Análise de Política, ao focar no comportamento dos atores sociais e no processo de formulação da agenda e da política, busca entender o porquê e para quem aquela política foi elaborada”, including the ideological basis for its conformation. Thus, public policies do not start solely from an economic rationality, but from the superposition of many agendas. In Serafim and Dias (2011), it is essential to define a governmental agenda that includes the Solidarity Economy, which should emphasize the values, interests and interaction of actors who participate in the political game, their conflicts and negotiations into the decision-making process by Policy makers. The agenda construction begins with real problems identification, for the public policies definition. In this regard, Capella (2007) teaches that changes usually occur in governmental agendas composition, especially when problems and issues that have not emerged yet are highlighted among the problems that the governments have to solve. The reality of Solidarity Economy, from the beginning of the 1990s, illustrates this theoretical reflection.

In South America, since the 1990s, solidary enterprises expanded in number and activities, indicating both historically dissociated notions - economy and solidarity (França Filho, 2002). Theoretical contributions of South American authors indicate that these enterprises must increase their dimension and build consistent network. They would adopt some guidelines into their internal organization and socio-economic processes: a) production of many goods and services, under self-management of production means, sharing knowledge about work processes ; b) equitable distribution of production results; c) reciprocity in trading systems at familiar, local, regional and national levels; d) responsible production and consumption, preserving the environment; e) democratic coordination of economic activities, combining collective forms of decision and operational efficiency. (Singer, 2002; Gaiger, 2004; Coraggio, 2016).

Solidary enterprises are usually undercapitalized, what difficult their collective production valorization. Further, the enterprises face difficulties to trade, especially when dealing with monopolistic or monopsonic market (Eid et all, 2015). In this scenario, public policies are important to give them enough capacity to improve the production development, promote training of their staff to management, increasing economic benefits to their associated workers.

Coraggio (2014) argues that a legal framework for the Solidarity Economy institutionalization is essential to build specific public policies. However, shows a problem about the timing of this institutionalization. Coraggio (2014) admits the urgent needs of public policies to Solidarity Economy survival, but considers that some parsimony is required to articulate a more permanent and consistent agenda, with collective appreciation to economic structures construction based on solidarity values. Caruana (2016) and Chavez (2012) observe many challenges to the effectiveness of public policies designed for Solidarity Economy, because of it's institutional, economic and political situation. In addition, the authors show divergent views about Solidarity Economy: 1) if represents just an economic sector able to participate into the capitalist economic system, creating employ an income, or 2) if represents a social, political and economic real transformation. In both cases, Solidarity Economy needs an institutional framework.

3. Solidarity economy institutionalization in Brazil, Argentina and Uruguay: advances and limitations

The recent political scenario in Brazil, Argentina and Uruguay was marked by progressive managements, instead the South American traditional. The Solidarity Economy was received in their governmental agenda, with higher institutionalization.

Brazil had progressive administrations from 2003 to 2010, first with Luiz Inácio Lula da Silva (2003-2010), and then with Dilma Rousseff (2011-2016), both linked to the Workers' Party – PT. The social participation and the support for social movement is a PT mark. In 2003 SENAES was created and Solidarity Economy finally incorporated into the governmental agenda. Since the impeachment of President Dilma Rousseff in 2016, but especially from 2019 onwards, the progressive platform lost importance and the Solidarity Economy presence in governmental agenda decreased.

In Argentina, progressive administrations began with Nestor Kirchner, from 2003 to 2007, succeeded by his wife, Cristina Kirshner, from 2007 to 2015, both from the Justice Party, linked to Peronism. From 2016 to 2019, Maurício Macri's administration adopted a liberal agenda, and in 2020 Alberto Fernandes began a new progressive administration.

In Uruguay, the administrations of Tabaré Vásquez, from 2005 to 2010; 2015-2020, and of Jose Mujica from 2015 to 2020, both from the Frente Amplio party and progressives, bring the Solidarity Economy into the governmental agenda. Mujica is even an emblematic figure in Latin American left wing. In 2020, Lacalle Pou, from the National Party, with a center-right inclination, was elected.

The Solidarity Economy path in the three countries shows differences and similarities that must be observed to understand singularities of public policies for Solidarity Economy in each case, which will be done next.

3.1 Brazil

In Brazil, public policies indirectly contemplated Solidarity Economy projects since the 1990s. But a Solidarity Economy agenda consolidation started in the 2000s, pressured by social movements adherent to workers interest. The SENAES actions were marked by transversal approach on public policies elaboration and execution, structured into a special governmental program: Solidarity Economy in Development. Many Federal agencies contributed with budged resources. From 2004 to 2011 the program was present in different areas, supporting Solidarity Economy activities with specific resources lines to technical capacitation, access to markets, production development, public purchases (Faria and Sanches, 2011; Cunha, 2012).

As from 2012, the Solidarity Economy activities came to be seen as a tool to extreme poverty combat, a Brazilian historic problem. Solidary Economy was no longer expressed in a particular Program, but included into territorial, local and integrated approach, mapping diverse demands and themes. The Regional Sustainable Territorial Development and Solidarity Economy Program incorporated most Solidarity Economy actions (Mota, 2017).

With a more transversal and decentralized proposal, Solidarity Economy pubic policies composed the general government strategies for local and territorial development, establishing some initiatives: a) give support to solidary enterprises and their networks, offering knowledge, credit lines and public resources access, besides organizing fair trade; b) strengthen Solidarity Economic policies institutionalization to promote initiatives in sustainable and territorial development processes (Mota, 2017).

Since 2016, the inclusion of Solidarity Economy into the governmental agenda took place at the Forum Dialoga Brasil Interconselhos, but not contemplated by a specific program. It was only mentioned by the Promotion of Decent Work and Solidarity Economy Program, with few actions. However, the budgetary actions of this Program were suppressed along the years, with a drastic reduction. In 2016 SENAES was disfigured and in 2019 extinguished, representing the `sunset` of Solidarity Economy government agenda in Brazil.

After a brief presentation of the scenario, paying attention to the period between 2003-2015, the Table 1 shows the most important public policies implemented in Brazil.

Table 1: Main Solidarity Economy public policies in Brazil 2003-2015

2003
- Creation of SENAES; - Beginning of Solidarity Economy mapping
2004
- Project Solidarity Economy Etnodevelopement at Quilombolas community - Solidarity Economy Sectorial Plan implementation (PLANSEQ/ Ecosol).
2005
- Aquaculture and Fishing development sustainable plan managed by SEAP
2006
- Project for the Promotion of Local Development and Solidarity Economy (PPDLES); - Support for projects of companies recovered by self-managed workers; - Public Solidarity Economy Centers implementation; - National Solidarity Economy Fair Program Implementation.
2007
- Planseq 2008/2010 implementation, which incorporated issue of fair trade trade into organization strategy of networks and production chains; - launch of a Public Call for partnerships of five Regional Centers and National Center for Training in Solidarity Economy implementation; - Technical Assistance to EESs and Economic Cooperation Networks.
2008
- PPDLES had a new identity, named Programa Brasil Local; - Technical Cooperation Agreement signed between the Ministry of Labor and Employment - MTE, through the National Secretariat for Solidarity Economy - SENAES, and the Ministry of Justice to carry out Solidarity Economy actions to prevent violence and crime, within the scope of PRONASCI; - National Program for Social Cooperativism creation (PRONACOOP SOCIAL); - participation in the Citizenship Territories Program; - Enterprises and Support Entities Registration for the Maintenance and Expansion of Solidarity Economy Information System – SIES; - Solidarity Finances promotion, based on Community Banks and Solidarity Funds and Contributions in the 21 Agenda Program of MMA.
2009
- Centers for Technical Assistance in Solidarity Economy (NEATES) Implementation and technical assistance projects in Cooperation Networks;

- Projects to promote and strengthen Associations and Cooperatives of Recyclable Material Collectors (CATAFORTE), through training actions and technical advice; - Solidarity Economy Training Centers (CFES) Implementation; - Second PLANSEQ/Ecosol.
2010
- Decree No. 7357, of November 17, 2010, which regulates PRONINC; - National Organization for the Marketing of Solidarity Economy Products and Services project.
2011
- Support to Community Development Bank initiatives; - Support to Solidarity Revolving Funds organizations, to make associative and sustainable productive actions viable, including more than 250 Solidarity Funds.
2012
- Family Agriculture Program implementation; - Regional Development, Sustainable Territorial and Solidarity Economy Program implementation, with actions aimed at local development with a focus on territories and Solidarity Economy.
2013
- support for economic organization and promotion of citizenship for rural women into Family Agriculture Program - Solid Waste Program implementation.
2014
- National Association and Social Cooperativism Program (PRONACOOP Social) creation.
2015
-National Register of Solidarity Economic Enterprises – CADSOL creation, established by MTE Ordinance 1,780 of November 19, 2014.

Source: Mota (2017); Brazil (2019)
Elaborated by author

A legal framework had to be designed to the elaboration and execution of Solidarity Economy public policies. The urgency of a legal framework had always been reinforced by National Conferences on Solidarity Economy resolutions and by National Council of Solidarity Economy – CNES. They established two important needs: 1) recognition, formalization and fair tax for solidary enterprises; 2) more access to public policies, removing legal and bureaucratic obstacles to implementing programs and actions, especially investments for the structuring projects (Brasil, 2019).

The public policies construction presented here comes from a long path of discussions and collective assessments of Solidarity Economy segment demands, applied by progressive governments. The Solidarity Economy insertion in the governmental agenda, in Brazil, as Argentina and Uruguay, was only possible by many actors efforts, as unions, public institutions, researchers, students, and others.

3.2 Argentina

During the 2001 and 2002 crises, Argentine had lots of experiences of Solidarity Economy in many sectors. Argentina already had public policies to cooperativism and associativism along 20th century (Hintze, 2011). After the crisis, a common effort by Solidarity Economy actors and governments took place, at national, provincial and municipal levels, to promote collective activities, generating work and income (Gandulfo, 2012).

Coraggio (2011; 2014) points populist practices at governmental participation in development of Solidarity Economy in Argentina, so usual in South America. For the author, a populist style of management aims to solve popular problems, including unemployment and poverty.

According to Coraggio, Solidarity Economy insertion in governmental agenda respond to immediate concerns, without integrated policies, decentralizing its execution. In this way, government has only a technical function, with low popular participation in public policies conception, implementing a top-down system.

From 2003, even under a populist approach, Argentine government adopted Solidarity Economy public polices, but only to promote self-managed enterprises, focused on poor sectors, unemployment people and market insertion (Coraggio, 2014).

Nation Social Development Ministry- MIDES -, created in 2003, was the first Federal entity to promote initiatives to solve poverty and unemployment. Contributed to new forms of citizen participation, searching for local development, job inclusion and access to goods and services. (Caruana, 2016).

Solidarity Economy integration with public policies was clearly accompanied by new regulations, under a hybrid perspective, but still keeping tensions and lacking articulation with other economic, cultural and social policies (Snerc, 2019).

Blasco and Garcia (2017) argue that many cooperatives were created by public policies, including the peculiar experience of recovering broken factories by their workers, under self-management, that also established networks. For the authors, from 2000 to 2015, the government gave official support, through public purchases, tax facilitation, technical and administrative training programs in partnerships with Universities, in an effort to strengthen the solidary enterprises.

Table 2 presents the main initiatives to insert Solidarity Economy in the government agenda in Argentina.

Table 2: Main Solidarity Economy public policies in Argentina 2003-2012

2003
- Social Economy and Local Development Secretary criation; - "National Plan for Local Development and Social Economy 'Manos a la Obra'" implementation, for social inclusion through socio-productive projects based on associative and self-managed work in projects with at least 5 people; - Integration of National Institute of Asociativism and Social Economy - INAES, created in 1996, in charge of legislating, controlling and promoting the Solidarity Economy, to MIDES.
2004
Creation of the National Registry of "Local Development ans Social Economy Effectors" with Law 25865, registering social micro-entrepreneurs to leave informality.
2005
- Administrative decision to expand debit cards, streamlining business for small producers, including Solidarity Economy.
2006
- National Law 26,117 promulgation, "From the promotion of microcredit to the development of the social economy", and National Microcredit Commission – CONAMI creation; - Education Ministry promoted technical training programs; - Turism Ministry, through the program Red Argentina of rural and communitarian tourism, articulated community organizations in associations to promote and carry out rural tourism activities to generate employment and income.
2007
-Pro-Huerta Program Implementation, of the National Institute of Agricultural Technology - INTA- and the Social Agricultural Program - PSA/Ministry of Agriculture.
2008
- Expansion of Pró-Huerta Program, with territorial capillarity, as a Solidarity Economy development and promotion policy; - Institute of Industrial Technology – INTI - and the Ministerio de Trabajo begin to provide training and assistance programs; - Ministry of Federal Planning, Investment and Services created the Federal Plan of Social Integration by Cooperatives.
2009
- Promulgation of Law 26,355, of 'Collective Brand', which would allow products and services produced by design associations.
2010
- Social Inversion Program – PRIS implementation, which encouraged the creation of cooperatives to carry out small municipal public works; - Social Ingress Program by Work - PRIST – Creation, with Argentina Works and Ellas Hacen actions.
2011
- bankruptcy Law, establishing priorities for workers to acquire credit to continue activities.
2012
- Establishment of many training and advisory programs by INTI and Ministry of Work, Employ and Social Security.

Source: Coraggio (2014); Caruana (2016); Blasco & Garcia (2017)
Elaborated by author

In terms of legal framework, Torres (2019) shows the need for a National Law to regulate public policies for to Solidarity Economy. The author emphasizes that during the last decades, the Solidarity Economy segment was absent of national legal framework.

Analyzing the provincial laws, Both Torres (2019) and Blasco & Garcia (2017) noted an advance of Solidarity Economy in provinces governmental agenda at, but with an asymmetrical development. In addition to the fact that some provinces have regulations for Solidarity Economy and others not, their particularities accentuate this asymmetry.
Despite the Solidarity Economy actions and programs insertion in public policies, and government effort to institutionalization, the fact is that Argentina doesn't have a Federal Law for Social and Solidarity Economy. This discussion about the need of a National Law has been addressed for years, but didn't advance (Torres, 2019). The Argentine Constitution doesn't even mention Social or Solidarity Economy on its text, appearing only at provinces constitution. It is also demanded a new law to regulate cooperatives activities – the actual one dates from 1973, it in order to contemplate collective enterprises particularities.

But, according to Caruana (2016), the main obstacles to Solidarity Economy strength do not come from legal limitations, but from economic, social and political ones. According to Snerc (2019), the Solidarity Economy has been seen as a utopian project. In this way, Government uses Solidarity Economy on a top down system, to increase the enterprises number, generate some work and income, but don't really their development.

3.3 Uruguay

In Uruguay, at 2005 Frente Ampla administration faced an economic crisis that had begun in previous years, with more than 30% of people living in poverty situation, besides a wide social inequality. In this context, government prioritized this delicate situation reversion, creating in 2005 a Social Development Ministry – MIDES – and implementing the National Assistance Plan for Social Emergency – PANES. From then on, Solidarity Economy began to be more intensely discussed in governmental agenda, as a tool for job and income generation, as the inclusion of the most vulnerable workers.
In this way, Solidarity Economy could partially mitigate negative externalities, as exclusion and informality. The public policies for financing programs of production and self-employment, cooperatives and associativism really took place, but without continuity perspectives (Rieiro, 2016).

The main public policies were oriented to urban and rural solidary enterprises. Were also linked to action plans, projects and programs, applied singly or under integration. This represented some ambiguity, as several public policies were implemented with a few or a lot of resources, including since small local until large projects with a strong impact on the development of collective enterprises. However, as noted Torrelli et al (2019), the resources allocated to Solidarity Economy public policies represented in most cases around 1% of the budget of the government entities.

Between 2013 and 2015 a large mapping of Solidarity Economy in Uruguay was carried out, with more than 600 enterprises. The project "Mapping, characterization and challenges of Solidarity Economy", was based on the demand of Solidarity Economy Coordination, an organization focused on individual and family small businesses (UEC, 2016). During this period, the National Institute of Cooperativism – INACOOP was also established, based on articulation between Solidarity Economy actors and the government, including Solidarity Economy into public policies, even at the international level. The General Law on Cooperatives, of 2008, establishes that "el Estado promoverá la aprobación de políticas públicas orientadas al sector cooperativo y de la economía social en general" (Art. 185), and it's up to INACOOP "impulsar el estudio y la investigación de otras formas de la economía social y solidaria y realizar propuestas sobre su alcance y regulación, de modo de favorecer la formación de un marco jurídico que facilite su desarrollo y promoción" (Art. 187).

Table 3 presents the main public policies directed to Solidarity Economy from 2003 to 2014.

Table 3: Main Solidarity Economy public policies in Uruguay 2003-2014

2003
- Ministry of Livestock, Agriculture and Fisheries - MGAP – actions for agricultural development to generate financing for small rural producers, including cooperatives;
2004
- Rural Microcredit Program, actions of the Ministry of Livestock, Agriculture and Fisheries (MGAP), providing rural population access to credit, fostering community organizations of credit committees;
2005
- Program Social Economy Support, from Canelones department; - Action for Land Regularization, promoted by the National Colonization Institute (INC);
2006
- Uruguay Classification Program, developed by MIDES, contributed to social integration and inclusion of recycled materials collectors in urban areas; - Action Support to Enterprises, prepared by MIDES, sought to strengthen productive integration; - Program for Strengthening Productive Enterprises, linked to MIDES, contributed to the integration of autonomous production; - Social Cooperatives, also linked to MIDES, offered a legal instrument for collective urban organizations formalization.
2007

- Local Development Project, promoted by the Montevideo Department; - Organizational Institutional Strengthening – Montevideo Rural, linked to MGAP.
2009
- Strengthening and Implementation of Productive Specialization Policies, promoted by Ministry of Industry, Energy and Mining (MIEM);
2010
- Local development, promoted by MIEM, to reinforce local urban capacities through the promotion of collective enterprises; - Mipymes, promoted by Canelones department, to strengthen individual and collective urban enterprises; - INACOOP, training and research program to promote associative processes.
2012
- Fundes (technical unit), technical advice on projects for solidary and self-managed enterprises formation in urban and rural areas; - Paeyc – Artigas Entrepreneur and Cooperative Program, promoted by Artigas department, sought to promote collective entrepreneurship in urban and rural areas.
2013
- Rural Strategy, linked to MIDES, sought rural population's access to goods and services, thus strengthening local and associative networks, with the objective of promoting collective purchases, production and services provision.
2014
- Social Brand – PROVAS subprogram – promoted by MIDES; - Uruguay Más Cerca (local economic development), linked to the OPP, aimed reducing economic territorial imbalance between urban and rural areas, strengthening economic development processes.

Source: Torrelli et al (2019); Mapeo EcSol Uruguay 2014/15
Elaborated by author

Most of the mentioned public policies were implemented along first Frente Amplia governments, between 2005 to 2014, but most ripping from 2005 to 2009 in terms of implementation, although from 2010 to 2015 we observed the higher resources directed to Solidarity Economy. According to Torrelli et al (2019), public policies became more present from 2005, seeking to reduce poverty and exclusion through initiatives to generate work, income and local development.

Guerra & Reyes (2019) point out the construction of an entire legal framework for regulating associative activities in Uruguay since the beginning of the 20th century. But just after 2005 we observed a new legal framework to cooperative system, with the creation of social cooperatives and more legal support to Solidarity Economy. The authors point the relevance of articulation between executive and parliament to overcome party and ideological barriers to include of Solidarity Economy in legal framework.

One of the most important normative constructions was the Law 17978/2006, named 'Social Cooperatives' Law, within a set of social policies led by the newly created MIDES. The Law 17,978 presents some characteristics of Social Cooperatives: a) at least 75% of its members must be classified as socially vulnerable; b) are free from national taxes and social security contributions; c) the members remuneration must be equal to the labor market levels; d) management activities cannot be remunerated differently than operational activities; d) its services can be directly contracted by public sector; e) its constitution and operations must be authorized by MIDES.

As a recent effort to advance towards unifying the Solidarity Economy legal framework, in September 2019, Cooperative Special Commission of Parliament received a General Law Project. The Project defines, in its articles: a) the principles of Solidarity Economy; b) the solidary enterprises modalities; c) the government support forms; d) the enterprises organization and their representation within the government; e) the national registration and control of Solidarity Economy entities.

In the Law Project elaboration, the legal framework can better characterize the solidary enterprises, contributing to specific public policies. Can bring a budget and social visibility increase, strength the enterprises, contributing to solidary and collective activities in Uruguay.

4. Final Considerations

In this study we tried to present reflections about the construction of Solidarity Economy in South America, as the historic and the recent demands of collective initiatives in the region. In general, progressive governments in the beginning of the 2000s onwards included Solidarity Economy at the governmental agenda, resulting in public policies elaboration. But these public polices took place only as moment government policies, not permanent policies.

In the Brazilian case, SENAES creation represented institutional insertion of a policy platform focused on Solidarity Economy. For more than 13 years, SENAES spearheaded, under transversal approach, the Solidarity Economy agenda, having own budget, which grew from 2004 to 2013, but decreased year after year, until SENAES extinction in 2019. During this time, a legal framework has been established to support solidary enterprises and public policies directed to them. However, even with greater institutionalization and regulation, Solidarity Economy demands was only part of the governments of that moment agenda, without a long-term perspective. The sad proof of this, SENAES just disappeared and Solidarity Economy public policies were abandoned by the current government, with ultra-liberal inclination.

In Argentina, Solidarity Economy public policies were elaborated to decrease effects of 2000s crisis, linking Solidarity Economy to work and income generation programs, as a temporary strategy to reduce poverty. At Kirchners governments, Solidarity Economy was included on the agenda, through Social Economy Secretary and actions aimed at local development, microcredit, finance and support for recovered companies.

There is a perception that Solidarity Economy in Argentina orbited in the political sphere as a mechanism for mitigating the economic crisis and as an electoral populist platform, without a real institutionalization advance.

There was also a low participation and interlocution between government, workers and society about public policies definition, on a top down perspective.

However, different from Brazil, even after a center-right orientation government, public policies for Solidarity Economy didn’t disappear.

In Uruguay, associative and cooperative organizations, especially in rural areas, were supported by the state since a long time ago. The Frente Amplia governments introduced Solidarity Economy in their agenda, to reduce the economic crisis, like Argentine, and generate work and income, but also to sophisticate the legal framework, with a General Law of Cooperatives, to qualify public policies to Solidarity Economy, on many levels as technical improvement, microcredit, marketing and local development. The Government's actions tried to expand the scope of solidary enterprises, regulating their activities with public support. Transversal approach was also verified with the participation of several government entities elaborating public policies, including partnership with the provinces. Even with this greater integration, the demands of the Solidarity Economy segment in the country were just partial satisfied. A short note: Frente Amplia government lasted until 2019, a new government begun and the question is if there will be continuity of Solidarity Economy presence in the governmental agenda.

At least, the three countries peculiarities must also be considered on Solidarity Economy agenda composition in Brazil, Argentina and Uruguay. Here we point out the lesson that institutionalization, regulation and an intense dialogue between government and solidary enterprises, their workers, with all of society, is essential. It makes possible that Solidarity Economy became an everlasting government public policy itself, seeking for the work generation, income and citizenship, as a strong economy sector. Can even help to surpass contradictions of work, production and distribution of wealth under the capitalism hegemony.

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Positive Externalities, and Economy to the Treasury: Pro-activities of the Social Observatory in Maringá

Externalidades Positivas e Economicidades ao Erário: Proatividades do Observatório Social de Maringá

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Abstract: In economics, positive externalities express benefits generated to people who do not participate in the original action of the activity or work that generated them. The mission of the Social Observatories is to carry out social control activities related to the use of the public fund. But how to evaluate if the economic impact generated by the Social Observatory's work provided the economy to the Treasury? This research analyzed the work developed by the Social Observatory in Maringá (SOM) over a ten-year period starting in 2007, to better understand the economic contribution its activities provided to the local society. Through collected data, sought to describe and explain the qualitative attributes of the work carried out and to quantify the significance of the monitoring of municipal public expenditures in the various modalities of purchases and acquisitions. The irregularities were listed, as well as the amounts of economic income generated to the municipal coffers. It can be observed that the amounts recovered have a small nominal representation, but great economic relevance. Considering that the functional costing of the activity performed by the SOM is low, since a large part of its staff consists of volunteers, it can be concluded that, given the results achieved, the SOM is a generator of positive externalities.

Keywords: Positive Externality; Economy to the Treasury; Social Control; Social Observatory of Maringá.

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Resumo: Em economia as externalidades positivas expressam benefícios gerados às pessoas que não participam da ação original da atividade ou trabalho que as geraram. Os Observatórios Sociais têm por missão realizarem atividades de controle social relacionadas ao emprego do orçamento público. Porém, como avaliar se o impacto econômico gerado pela atuação do Observatório Social proporcionou economicidades ao erário? Esta pesquisa analisou o trabalho desenvolvido pelo Observatório Social de Maringá (OSM) ao longo de dez anos a partir de 2007, para melhor compreender a contribuição econômica que suas atividades proporcionaram à sociedade local. Por meio de dados levantados, buscou-se descrever e explicar os atributos qualitativos do trabalho exercido e quantificar a significância do acompanhamento dos gastos públicos municipais nas diversas modalidades de compras e aquisições. As irregularidades foram relacionadas, assim como os montantes de proveitos econômicos gerados ao cofre municipal. Constatou-se que os valores recuperados possuem pequena representatividade nominal, mas grande relevância econômica. Considerando que o custeio funcional da atividade exercida pelo OSM é baixo, uma vez que grande parte de seu quadro de colaboradores é formado por voluntários, conclui-se que diante dos resultados alcançados, o OSM enquadra-se como gerador de externalidades positivas.

Palavras-chave: Externalidade Positiva; Economicidade ao Erário; Controle Social; Observatório Social de Maringá.

1. Introduction

The literature that deals with externalities distinguishes them in two polarities and considers them as problems arising from economic activities with markets that are not yet properly structured. When several damages are generated to those who are not directly involved in the activities, such as harmful byproducts to humans and the environment, they are classified as negative externalities. On the other hand, when individuals or the environment benefit from the action of other people in the exercise of a particular productive activity, such advantages are characterized as positive externalities.

When considering that social development encompasses the notion of belonging to a place or community and the understanding of the word citizenship, through the enjoyment of full democratic rights, we come to understand the important task of social control. Although it is present in the 1988 Constitution, it has a slow but positive evolution.

The Ethically Responsible Society (ERS) was established in 2004 in the city of Maringá/PR, as a non-profit civil society with administrative and financial autonomy, whose mission is to promote the active participation of society in the Control of Public Management. In 2006, it received the denomination of Social Observatory of Maringá

(SOM), incorporating itself to the national network of observatories that share the purpose of awakening the spirit of Tax Citizenship in the organized society, by means of locally social awareness.

One of the main lines of action of the Social Observatories, including SOM, is directly related to the search for economy in public administration, since it acts preventively in the processes of acquisition of goods and services, aiming objectively at management efficiency through social surveillance of budget implementation.

In this sense, it is important to assume that the efforts undertaken by this type of civil society, mostly composed of volunteers, promote positive externalities for the benefit of society as a whole, characterized by their proactivity and commitment in their actions, favoring, among the benefits, possible savings to the public funds. Such savings allow the use of scarce budget resources to be expanded by simply increasing their availability, given a better and optimized use.

The understanding of the contributions of positive externalities has been expanding, and can be observed in several areas of knowledge, such as: sports, mobility, culture, education, health, recycling, sanitation, environment/legal reserve, shared management, biofuels, public policies for investments in infrastructure and social development.

This article uses descriptive and explanatory research in a case study that aims to investigate whether the performance of the SOM can be classified as a positive externality, due to its operating characteristics and the results obtained. It was chosen to conduct a broad general analysis (2007 to 2016) and in a more detailed manner for the years 2015 and 2016.

The Social Observatory of Maringá, headquartered in the city of Maringá, state of Paraná, is a non-profit civil society organization, of indefinite duration, with administrative and financial autonomy. It is registered with CNPJ No. 06.161.227/0001-03; Municipal Public Utility - Law 8.483/09; State Public Utility - Law 16.613/10; Federal Public Utility - Ordinance 2.090/12.

Among other research objectives, considered secondary, is to identify the profile of the most recurrent errors committed by the municipal public administration in relation to bidding processes for purchases and acquisitions, as well as to estimate, for the period, the contribution of the SOM's performance to the economy of the Treasury of the Municipality of Maringá.

A mixed semi-structured questionnaire was used to obtain specific answers about SOM's activities, since both the Observatory and the Municipality have websites with a variety of public information. This is essentially a qualitative research work, but with some data receiving quantitative treatment, in order to favor a better analytical understanding.

2. Theoretical Framework

Public administration is conducted by means of constitutional norms, laws, and codes that establish procedures that delimit the actions of public agents. The reforms undertaken in the public sector since the end of the last century have modernized management and the mechanisms of control and accountability. The increased power of citizens over public administration represents a significant advance, with emphasis on accountability.

In a broader view, accountability translates into the responsibility of the government (i.e., career civil servants, contractors, and those holding elected office) to meet management objectives and be accountable to the public for their actions. For the United Nations, according to Armstrong (2005, p. 4) the concepts of integrity, transparency and accountability have been identified as founding principles of modern public administration. Integrity refers to the "honesty" or "trustworthiness" of the public official to perform official duties, and is therefore an antithesis of "corruption" or "abuse of office." Transparency refers to unrestricted public access to timely and reliable information. While accountability is the obligation on the part of officials to provide information pertinent to the use of public resources and accountability for failing to meet stated performance objectives.

The literature deals with some interpretative forms of the mechanism, scope and dimension of accountability. These include: the vertical, the horizontal and the social. O'Donnell (1998) points out the characteristics of two perspectives of accountability: the vertical format refers to the democratic use of the vote in choosing or not choosing representatives, while the horizontal format concerns the institutional mechanisms of evaluation and inspection of the public agent's conduct - relevant to the purpose of public agencies specifically created for the purpose of control and inspection.

Peruzzotti and Smulovitz (2002, p. 7) say that social accountability is a sum of interests of civil society and the media in favor of providing control over the government and, in certain situations, compensating for some deficits of the public power towards society. They act by providing an external monitoring of the acts of the public administration and, when necessary, trigger the legal channels (official agents of horizontal accountability) of control.

According to Abrucio and Loureiro (2005, apud Schommer and Moraes, 2010, p. 4), Social Observatories do not have the power to exercise a direct sanction on managers; however, their action can mobilize and influence other accountability mechanisms, such as judicial, parliamentary or administrative controls or even influence elections and intertemporal state rules.

However, it is not enough to monitor public administrative procedures without a purpose that supports the efforts of several people. The 1988 constitution incorporated the principle of efficiency to the public administration, being, therefore, one of the goals to be pursued by public managers. This principle is directly related to results-based management, characterized by the delivery of value to society.

From the perspective of accountability for results, Barrados and Mayne (2003, p. 4) state that it is necessary to establish accountability for the results of public administration, with accountability being a relationship based on obligations to demonstrate, review, and assume commitment for the performance achieved - based on expectations and the means used.

But result orientation will never exempt human beings from making mistakes and errors, given the competition and influence of several intrinsic and extrinsic factors to individuals and organizations. This aspect reinforces the importance of social control, which, despite being insufficient, is representatively relevant to the necessary morality of the agent - public servant, and of expressive significance with regard to the efficient and effective use of scarce treasury resources.

Barrados and Mayne (2003, p. 11) further ask about the values that a public organization should exhibit to "embrace mistakes" and extract lasting learning. In this context, they suggest that for active learning based on the errors revealed, one should consider: a search for explanations of the error; accept and discuss the facts discovered with integrity, problem orientation, and transparency; and, adopt new approaches as a result (accountability).

Social observatories are part of the set of institutions that have the characteristic of occupying the organizational and social space called the third sector. Normanha Filho

(2006, p. 129) adopts the conceptualization of the term third sector as being that which gathers organizations constituted and regulated by the legislation in force, structured, managed and sustained by private initiative, but of public interest, namely of a social nature and that aim to overcome the absence or deficiency of the state.

The creation of the Social Observatory of Brazil occurred through the transformation in 2010 of the already existing Tax Citizenship Institute, headquartered in the city of Maringá – state of Paraná / Brazil, but with a broader scope of action from the mission of "awakening the spirit of Tax Citizenship in the organized society, making it proactive, through its own Social Observatory, exercising social surveillance in its community, integrating the Social Observatory System of Brazil" (OSB, 2019).

Assis and Godoy (2012, p. 7) put that the SOM presents a new form of social control and that its main characteristic is the strengthening of local governance by the effort of making the bidding process more transparent, acting in a preventive and effective way, differently from the corrective process of the Courts of Account and Legislative Power. According to Grau (2000, apud Assis and Godoy, 2012, p. 2) social control occurs when it forces the state to be more transparent and provide information about its actions and decisions to society, thus providing the opportunity to measure the consequences and evaluate whether social interests are being respected.

The local public administration has, among its duties, that of seeking to promote local development. For Buarque (1999, p. 10), the promotion of local development results from a favorable political and social environment, through an important convergence of interests of the social players or community in favor of certain priorities and basic guidelines.

The Permanent Bidding Commission - PBC is a body created by the public entity, supported by the Federal Law 8.666/93, which is responsible for receiving, examining, and judging the documents and procedures related to public bids in the modalities: competition, price taking, and invitation. It is through the performance of the PBC that the procedures of purchasing and contracting goods and services by the public administration are carried out.

In most organizational environments, full of processes, deadlines and shared responsibilities, failures and mistakes are more common than one can imagine. Bidding processes require the straight conduct of legal procedures, organized sequentially with the perspective of avoiding errors that can contribute to making them unviable.

In the case of vices and irregularities observed in bidding, the "Court of Audit of the Union" (2013) lists the most common problems observed, such as: missing or insufficient preliminary technical studies; members of the bidding committee not exercising their responsibilities; unsubstantiated indication of brand; poor preparation of the object description in the work plan or terms of reference; and, price research not performed or performed improperly. Among the frauds, the following stand out: overpricing or overbilling; cartel agreements or ties between stakeholders; and, fractionation.

Edmondson (2014, p. 8) addresses the challenges of seeking to avoid errors, since emotional and cognitive factors act against the will and interest in conducting a clean conduct. In this sense, the importance of analyzing the causes of errors is added to the relevant role played by leadership. For when a failure is detected, it is essential to go beyond the obvious and superficial causes, where one must seek to understand the root cause of the problem. This requires discipline and enthusiasm, as well as the use of sophisticated analysis to ensure that the right lessons are learned and the right solutions are adopted.

Errors can be sorted in various ways. Here we will consider the terms reprehensible and not reprehensible. Condemnable errors stem from voluntary deviations from rules and ethical conduct, while non-condemnable errors have a wider range of classification, from simple lack of attention to situations that require extreme skills and knowledge. Edmondson (2014, p. 3) presents a spectrum of reasons for making mistakes, where it is noted that mistakes may not be solely the responsibility of the employee, as issues concerning the object of the activity and the environment sometimes actively interfere.

Mankiw (2014) says that externalities represent the impacts of the actions of one person or organization on the welfare of others who are not directly or indirectly related to the action. In this case, when they are harmed, they are subjected to negative externality, and when they are benefited, they are subjected to positive externality.

Externalities (negative and positive) are treated by the microeconomic literature as market failures. It assumes that the market economy is the ideal mechanism for the efficient allocation of resources. But, there are situations where inefficiencies are observed. Economic studies, in general, show a prevalence of negative impacts, where production costs do not reflect the indirect costs caused to the potential harmed by the manufacture of a certain product and/or its by-products. It is then up to the state to establish sanctions or compensation. This approach can be better understood in the works of Arthur C. Pigou (Welfare Economics - 1932), Ronald Coase (The Social Cost Problem - 1960) and Edgar K. Browning (External Diseconomies, Compensation and Measurement of Damages - 1977).

Simpson (2007, p. 124) explains and exemplifies the concept of positive externality: when a person is not involved in the production or consumption of a good or service and receives a benefit for which he has not paid he is said to be the recipient of a positive externality. An example is the immunization of individuals not involved in the vaccination who benefit without paying for someone else's initiative. He benefits because the more people get immunized, the less likely it is that individuals not directly involved will be exposed to infection, and consequently fewer people will contract the disease.

In general, positive externalities are less present in our daily lives than negative externalities, which according to Simpson (2007, p. 125) is due to the non-payment by external beneficiaries. Therefore, these beneficiaries of positive externalities do not provide incentives for more positive situations to occur.

In the concept implicit in the relationship between public administration and society, according to Andrade (2004), the externality has always been relevant in economic regulation focused on education issues, where social costs and benefits are at stake. Ortiz and Ferreira (2004), in turn, relate public authorities to environmental issues, and emphasize that when the social benefit is greater than the private benefit, it can be considered representative of a positive externality.

In this theoretical conception, the positive externality relationship in education grants representative gains not only for the individual but for the entire society. Amorim and Neto (2012, p. 6) note that if a higher educational level makes the population skilled at a more technical level, then the entire society is benefiting (and indirectly the state itself). According to MCmahon (2018, p. 4) external benefits include the direct benefits of education for the development of civic institutions that slowly, over long periods of time, contribute to the rule of law, democracy, human rights, and political stability.

Returning to the basic principle of efficiency in public administration, which considers the adoption of legal and moral criteria necessary to achieve the best use of public resources in order to avoid waste and provide the highest social return, Mazza (2016) notes that among the values embedded in the principle of efficiency are: economy, quality, speed, and productivity. Therefore, it is inferred that it is a duty of the public administration to seek for its achievement to thus deliver the best results to society.

As stated by Bruno (2008, p. 69, apud Araújo e Rodrigues, 2012, p. 48), the principle of economy is related to the cost-benefit analysis that ensures no waste of public resources. There is a close relationship between efficiency and economy, but, as Araújo and Rodrigues (2012, p. 49) note, in matters of public procurement, meeting only the requirement of low costs does not imply full compliance with economy, since efficiency standards are also required to configure an economically satisfactory action.

The website of the Social Observatory of Brazil (https://osbrasil.org.br/) reports on several initiatives from various observatories that report "estimated or obtained savings" through control actions with public administrations.

The OSB Code of Conduct (2018, p. 13) records that the work developed has the preventive character, with a focus on the efficiency of public management and without issuing value judgment. Thus, it reinforces the fundamental principles involving the responsibility to promote transparency, the exercise of citizenship, and the efficiency of public management.

3. Methodological Procedures

This research has a qualitative purpose, with descriptive and explanatory characteristics, seeking to provide comprehensive support for the impact of positive externalities arising from the activities performed by social observatories with respect to the contribution to the economy of the Brazilian municipal government's public funds.

Gergen and Gergen (2006, p. 367) state that "the field of qualitative research provides some of the richest and most rewarding explorations available in contemporary social science".

Therefore, a bibliographic research about the profile of the social observatories organized by the SOB System (*Observatório Social do Brasil*), which is present in 150 cities and 17 Brazilian states, was undertaken. As a non-governmental and nonprofit institution, SOB disseminates a standardized methodology that is implemented throughout its network.

As an explanatory resource for the confrontation of the formulated general objective - to verify whether Maringá's Social Observatory is a generator of positive externalities to society - a case study was employed. The data collected was by means of a semi-structured questionnaire and documents concerning the organization's management reports for the years 2007 to 2016.

For Gil (2007), when using the case study, it is advisable to use explanatory research, also known as causal, because it aims to identify, under the reason of the events observed, the factors that contribute to the contextualization of a given phenomenon. According to Yin (2005, p. 32), "the case study is an empirical investigation that investigates a contemporary phenomenon within its real-life context [...]".

4. Data Analysis and Discussion

The Data was made available by members of the Management Committee of Maringá's Social Observatory by means of a mixed questionnaire (open and closed questions), in addition to the forwarding of official data files processed by the SOM for the purpose of accountability for the years under analysis.

The Social Observatory of Maringá has promoted, since 2008, the accountability of its activities to society, making the public dissemination of its work in social meetings and specific events. The data are available on the "Supervision" tab on its website (www.observatoriosocialmaringa.org.br), under the title: SOM Reports.

Among the works of dissemination of SOM's activities are "Education for Citizenship" and "Monitoring Public Spending". According to SOM, the aim is to awaken in society the interest in monitoring the use of public resources, as well as to make the population aware of its importance. The data, based on technical, substantiating, and legal criteria, are presented biannually and reported annually for information dissemination.

4.1. Education for Citizenship

The premises of this action are: the understanding of the social function of the tax and the inspection for the correct application of public money.

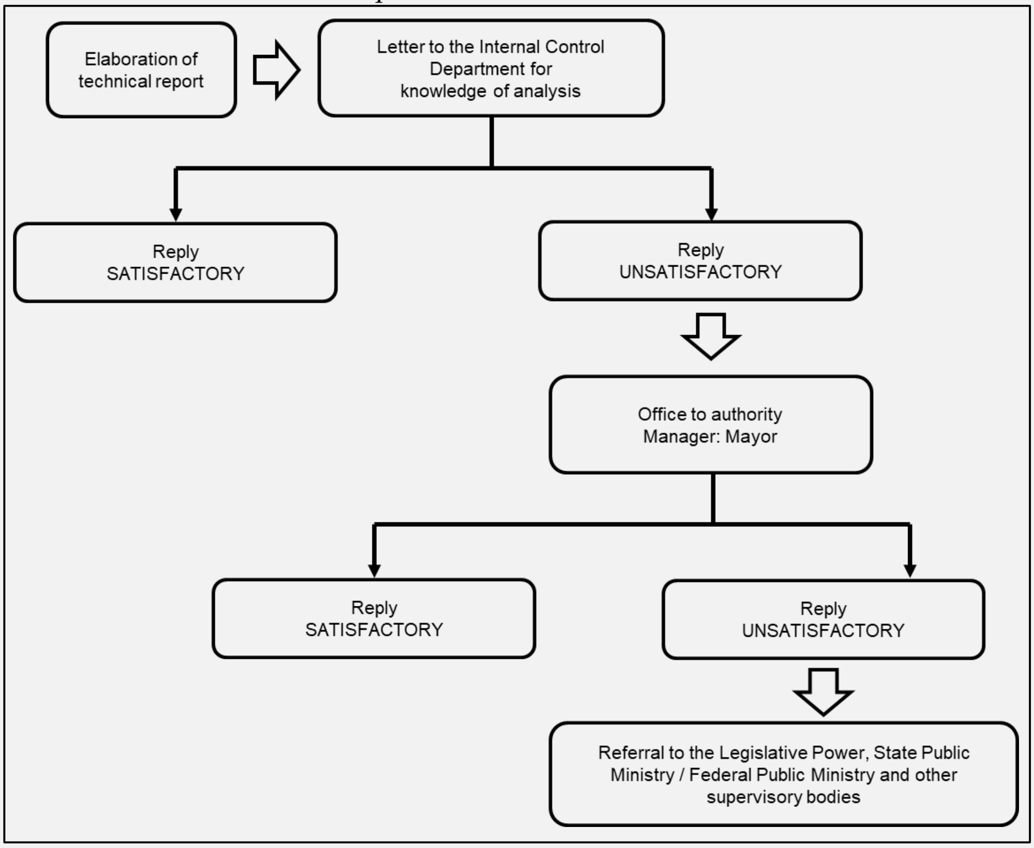
As for the awareness of fiscal citizenship, the following issues stand out: the existence of a social observatory that acts effectively in inspection, which is only feasible through society's awareness of the importance of social control; a proactive attitude towards what is public; the perception that the tax burden is high and that there is inefficiency in public spending - thus the need to monitor the correct application of taxes collected.

The target audiences for this action are elementary and high schools, universities, service clubs, businessmen, and public agencies in general. To deal with this theme, scenic, ludic, and didactic resources are used, such as: theater plays; songs and poetry that talk about citizenship; practical workshops; essay, article, and monograph contests about fiscal citizenship; lectures, seminars, and training courses.

4.2. Monitoring of Public Expenditures

The SOM uses a methodology based on the city of Maringá's Organic Law (Art. 11 §10 and Art. 78) to challenge the city government's acts. Figure 1 shows the flow chart of the applied method.

Figure 1: *Flowchart of the methodology for monitoring public expenditures related to purchases or services*



Source: adapted from the OSM (2019).

In the years 2015 and 2016, 244 administrative processes were analyzed by sampling in the amount of BRL 258,390,663.09. These represented 5.3% of the processes in execution in the period, amounting to around 21% of the expenses incurred by the Municipality of Maringá. Table 1 shows the quantities of processes according to the bidding modality and their participation in values.

Table 1:
Statement by category / value of processes evaluated by the SOM in 2015/16

Modality	Participation %	Nominal Value (BRL)	Participation %
Auction	62	106.069.583,51	41,06
No-bid acquisition	13	2.437.892,81	0,94
Competition	11	132.034.144,20	51,10
Sole-source	6	10.860.313,32	4,20
No-bid contract	4	4.816.600,00	1,86
Solicitation of price	4	2.028.249,25	0,78
Invitation	0,4	143.880,00	0,06
Representation	100	258.390.663,09	100,00

Source: adapted from activities developed in 2015-2016, OSM (2019).

The Federal Audit Court and the State Audit Court classify the types of errors in bidding processes into defects or irregularities, which may occur due to mistakes and inattention, and the deviations are considered intentional frauds.

From the set of 244 processes analyzed in 2015/16, 35 processes with irregularities classified as of direct economic benefit were separated. In these processes SOM detected 13 types of errors that are listed in Table 2. It is noted that sometimes more than one error is found in the same process.

Table 2:
Statement of procedural errors in public procurement analyzed in 2015/16

Typology of Irregularity	Participation %
Payment made without performing the service	27
Targeted bidding	11
Maintenance priced higher than new equipment	11
Bid amount without justification	9
Absence of unit price	9
Limitation of competition	6
Official publication missing information	6
Existing bid with lower price	6
Overprice	3
Bidding method	3

Quantities without justification	3
Irregular Additives	3
Error in official publication	3
Representation	100

Source: adapted from activities developed in 2015-2016 OSM (2019).

When the SOM detects an irregularity and receives a satisfactory response from the municipal authority, the following steps are normally taken: return to the public coffers of the amount of the irregularity observed; bid corrected and republished with adjustments (value and/or quantity); bid revoked, cancelled or nullified.

In the absence of satisfactory answers to the letters of clarification sent to the City Hall or in the absence of adjustments and corrections, when the irregularities are confirmed, complaints are reported, according to the characteristics of the case under analysis, to several higher official instances, including accounting controls.

4.3. *Tax Activities of SOM*

The Frame 1 was structured based on the questionnaire answered by the SOM Management Committee in September 2019 and is intended to better understand its organizational, physical and operational cost structure.

Frame 1: *SOM human resources framework*

<table>
<tr><th colspan="4">General Structural Aspects of SOM</th></tr>
<tr><td>Gender</td><td>Masculine</td><td colspan="2">Feminine</td></tr>
<tr><td>The amount</td><td>33</td><td colspan="2">25</td></tr>
<tr><td>Age range</td><td>20 to 78</td><td colspan="2">18 to 65</td></tr>
<tr><td rowspan="4">Staff</td><td>Employees</td><td>6</td><td>10,3%</td></tr>
<tr><td>Volunteers</td><td>48</td><td>82,8%</td></tr>
<tr><td>Others (for example: interns)</td><td>4</td><td>6,9%</td></tr>
<tr><td>Total</td><td>58</td><td>100%</td></tr>
<tr><td rowspan="5">Training areas</td><td>Law</td><td>15</td><td>25,9%</td></tr>
<tr><td>Accounting</td><td>10</td><td>17,2%</td></tr>
<tr><td>Management</td><td>8</td><td>13,8%</td></tr>
<tr><td>Economy</td><td>5</td><td>8,6%</td></tr>
<tr><td>Others: teachers; agricultural engineer; students; healthcare professionals, consultants.</td><td>20</td><td>34,5%</td></tr>
</table>

Source: own elaboration.

The Management Committee was questioned about the average time of the processes it analyzes and the number of people involved in each process. In response, the organization's management informed that the average time it takes to analyze a process depends on its object and other factors that may contribute to the period it is active, but on average it takes two months, and there are cases in which the execution of the contract is followed up, reaching up to a year; on average, 10 people are directly involved in the analysis of a process, but other people occasionally contribute indirectly or sporadically.

According to the Management Committee, the processes to be analyzed are selected taking into account the history and the total amounts involved.

As for the SOM operational costs involved in the analysis of a single process, the Management Committee estimated the amount of BRL 550.00 per month. This amount is related to expenses with office supplies, vehicle costs and general expenses with the physical space used (energy, water, cleaning, and others). According to the organization, the cost of maintaining the SOM is approximately BRL 35,000.00 per month of expenses (salaries, charges, general administrative expenses, etc.).

Considering the pioneering work of the SOM and its years of experience, the question was asked about which initiatives adopted by the Municipality of Maringá, in particular the Permanent Bidding Commission, were fostered by the work of the SOM. According to the organization: the bidding rooms became computerized, with recording/transmission of the bidding sessions in real time (any citizen can watch the sessions through the internet) and automatic protocol was implemented, as before it was manual. The minutes, which previously did not contain the Social Security Number and the National Register of Legal Entities numbers of the entrepreneurs, are now informed in all the documents of the processes.

4.4. *Economic Income Generated from Public Safes*

In addition to the work performed with the Municipality of Maringá - PMM, SOM also acts in the social control of public spending with the City Council of Maringá - CMM and the State University of Maringá - UEM, which is a public institution of higher education based in the city and maintained by the Government of the State of Paraná.

Table 3 presents the amount of economic benefit generated by the SOM between 2007 and 2016 with the three public agencies (PMM-CMM-UEM).

Table 3: *Values calculated from economic income between 2007 and 2016*

Year	Economic Benefit (BRL)	Value Corrected by IGP-M* (BRL)
2007	8.210.201,85	16.667.525,39
2008	3.902.207,25	7.214.816,37
2009	14.377.103,75	27.044.379,56
2010	6.611.197,19	11.171.526,73
2011	3.299.154,00	5.304.856,18
2012	7.225.313,43	10.776.275,14
2013	9.625.026,18	13.604.391,36
2014	12.883.968,40	17.565.205,02
2015	3.878.710,23	4.783.596,66
2016	13.115.662,04	15.090.483,85
Total	**83.128.544,32**	**129.223.056,40**

* IGP-M (General Price Index – Market) of September 2019.

Source: economic income of agencies monitored by the OSM (2019).

With reference to the economic benefits generated specifically by the actions of inspection and monitoring of municipal purchases of the Municipality of Maringá, Table 4 shows the values for the years 2015 and 2016. It should be noted that the calculation of the economic benefit, according to the SOM Management Committee, is performed using the value of the municipality's budget execution in the year, subtracting the values of personnel expenses.

Table 4: *Analyzed City Hall of Maringá processes and generated economic benefits*

Year	Processes Analyzed	Total Values (BRL)	Irregular Processes	Economic Income (BRL)	Economic Income (BRL) Corrected by IGP-M
2015	120	67.645.159,07	11	3.500.308,64	3.869.392,08
2016	124	180.169.767,80	21	5.799.575,25	6.216605,31
Total	**244**	**247.814.926,87**	**32**	**9.299.883,89**	**10.085.997,39**

Source: Own elaboration based on data on the amount of economic benefit arising from irregular processes of the City Hall of Maringá (OSM, 2019).

It should be noted that Maringá City Hall maintains various data and information already processed in the form of tables and graphs on its website (http://www2.maringa.pr.gov.br/), including the Transparency Portal with tab options and links, where it is possible to access various documents from the year 2014.

4.5. *Evaluation and Analysis of Collected Data*

- The initiatives and effective actions related to citizenship and fiscal education represent the most important long-lasting elements for sustaining the community's citizen awareness towards public money, and consequently, towards all public goods in general;
- The Social Observatory of Maringá has a robust and multifunctional team, which integrates youthful strength, enthusiasm, knowledge and maturity. The dedication to the public and social cause involves everyone, and 83% of the workforce is made up of volunteers;
- SOM's operating costs are low when compared to the economic and social income generated;
- The economic income generated in the years 2015/16 is significant in absolute values, but its relative share in the municipality's budget amount is not expressive, representing approximately one percent (≈1%) of total expenses, or approximately five percent (5%) excluding civil service costs;
- The amount calculated for the years 2015/16 reaches the figure of 10 million BRL, which is equivalent to the budgets of many municipal departments, as shown in Table 5.

Table 5: *Expenses by City Hall of Maringá bodies in the years 2015/16*

Municipal Agency	Administrative and operating expenses - amounts paid in 2015 (BRL million)	Administrative and operating expenses - amounts paid in 2016 (BRL million)
Municipal Department of Planning and Urbanism	4,06	4,93
Municipal Secretariat for the Environment	3,35	3,64
Municipal Secretariat for Women	2,37	1,89
Municipal Secretariat of Basic Sanitation	0,62	0,63
Municipal Secretariat of Social Interest Housing	1,52	2,45

Source: Own elaboration, adapted from the City Hall of Maringá (OSM, 2019).

- Considering the value of 10 million BRL in economic gains generated to the public funds by the monitoring and evaluation actions of the SOM along with the use of public resources, in accordance with the law, it is observed that it can be directed to various investments of social interest, such as:

→ Construction of 10 Basic Health Units type I - UBS I, of 250m2, in the unit value of approximately BRL 850,000.00, according to the spreadsheet of the National Confederation of Municipalities (CNM, 2017);

→ Construction of 4 standard Full-Time School units for 1,500 students, in the unit value of approximately BRL 2,200,000.00, according to the National Confederation of Municipalities (CNM, 2017);

→ Acquisition of 22,625 units of food baskets (according to the value ascertained of the basic food basket in Curitiba-PR in the months of July/August 2019 by the Intersindical Department of Statistics and Socioeconomic Studies (DIEESE, 2019).

5. Final Considerations

The characterization of the positive externality is not always objectively or directly measurable, since in some cases it is a long-term growth, such as investments in education and basic sanitation, the formation of local productive arrangements, and the tripod: research, development, and innovation.

As for the positive externalities, the first one that stands out due to SOM's performance is the education for fiscal citizenship, through the wide formative promotion for students, teachers and all the citizens of Maringá. The external control exercised by its integral members, either instituted or voluntary, is applied democratically with the primary purpose of watching over the money, which is public. The sagacious disposition for a fair response, which is not limited to merely pointing out legal improprieties or non-conformities, aims to see the scarce resource being applied with efficiency, efficacy, and effectiveness for the good of all citizens without any kind of discrimination.

In turn, the economy is continuously expanding, first by learning and improvement in the handling of public resources provided by the cycle: plan - execute - verify - learn. Second, by continued education and vigilance, aiming to provide the best use of scarce money and a competent use for the benefit of citizens. The amounts recovered, arising from procedural errors or omissions, whether reprehensible or not, show that there is still much to improve in local public management, which, without any reservations, can be extended to the entire Brazilian public organization.

The consideration of the performance of the Social Observatory in the generation of positive externalities is perceptible and relevant for bringing together all the characteristics required for its framework. This observation can be extended to all Brazilian social observatories that use similar methodologies and equivalent procedural conducts.

Considering that in economics, when an externality is identified and proven to be positive, there is a tendency for the government itself to confer recognition and incentives, given the extension of the nature of the benefit to the public. This line of reasoning, however, clashes with the basic premises of the "social observatory" entity, especially with regard to independence and autonomy. However, the merit of the contribution to society is in itself rewarding and motivating for the improvement of Brazilian public institutions and for society.

The expansion of the understanding and scope of positive externalities in economics is a finding that can favor and encourage the expansion of this line of study to many other social initiatives, still little explored in the literature of economics and public management.

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Social Indicators of Food and Nutritional Security in Municipalities in Consad Jiquiriçá Valley, Bahia, Brazil

Indicadores Sociais da Segurança Alimentar e Nutricional em municípios do CONSAD Vale do Jiquiriçá, Bahia, Brasil

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Abstract: Objective**:** to evolue the food and nutrition security situation and determinants in municipalities of Bahia state that are part of the CONSAD *Vale do Jiquiriçá*, Methods: Applied a Protocol with 19 Indicators distributed among its four dimensions (food availability, access to food, food consumption and biological use of nutrients) was applied in the 9 municipalities studied. Results: Mild food insecurity was identified for the entire territory in terms of availability for consumption and biological use of nutrients and identified moderate food insecurity in the dimension of access, making it possible to indicate which variables define the situation. Conclusion: Food insecurity was a condition present in all the municipalities studied. It was possible to identify which variables were compromising the best performance of the CONSAD municipalities in the different dimensions, therefore, the method applied generates guidelines for public action in the direction of food and nutritional security.

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Keywords: Food and nutrition security; Indicators; Social Determinants; Nutrition assessment.

1. Introduction

Food and Nutritional Security – FNS is understood as a complex and multidimensional phenomenon that develops in a continuous process, at different levels (Bezerra, 2015). It is a strategic and permanent objective of public policies guided by the principles of the Human Right to Adequate Food – HRFN and food sovereignty. Thus, the objective of FNS encompasses and qualifies the eradication of hunger, malnutrition and more serious manifestations of food insecurity (Maluf, 2006). FNS contemplates at least, four dimensions: food availability; food consumption, access to food and biological use of nutrients. It expands by incorporating into the spheres of agricultural production and supply, the dimensions of access, nutritional deficiencies and food quality, guaranteeing the conservation and control of the genetic base of the agro-food system (Anchau, 2007; Nascimento et al., 2019).

FNS, as defined by Law, contemplates interventions in various fields of public action (Ramos, 2020). Given this scope, the FNS concept was adopted in Brazil in 2006, according to the Organic Law on Food and Nutritional Security (LOSAN - Law no. 11.346, of September 15, 2006) after the Second National Conference on Food and Nutritional Security and Consists of:

> *The realization of everyone's right to regular and permanent access to quality food in sufficient quantity, without compromising access to other essential needs, based on health-promoting eating practices that respect cultural diversity and that are social, economic and environmentally sustainable (*our translation*, BRASIL, 2010)*[6].

Data from the National Household Sampling Survey (PNAD) carried out by the Brazilian Institute of Geography and Statistics (IBGE), show an improvement in the population's FNS results, with a reduction in the Food Insecurity (FI) situation. However,

[6] *A realização do direto de todos ao acesso regular e permanente a alimentos de qualidade em quantidade suficiente, sem comprometer o acesso a outras necessidades essenciais, tendo como base práticas alimentares promotoras de saúde, que respeitem a diversidade cultural e que sejam social, econômica e ambientalmente sustentáveis (BRASIL, 2010).*

despite this situation, 14.7 million private households still live with situations of deprivation and hunger (IBGE, 2014).

The approval of the National Food and Nutritional Security Policy – PNSAN, in 2010, guided by the parameters established in LOSAN (Law no. 11.346/06), with the objective of ensuring the HRFN and food sovereignty so that they have regular and permanent access to quality food, in sufficient quantity (BRASIL, 2010). There is an understanding that FNS policies and systems must have a strong territorial link, in order to maximize the application of resources that are always scarce in the face of ever-increasing and complex demands. Many studies have adopted territorial approaches to assess the extent of food storage for the self-sufficiency of the communities served (Galli et al., 2020). That is, there is a tendency to analyze the problems and target interventions not only for individuals or families, but for territories, which is understood to be a way of promoting a greater impact on changing people's living conditions.

The territorial approach and decentralization of public policies contributed to the definition of the proposal for a new pattern of state intervention, in which, instead of sector-wide investments, it would be up to the latter to support initiatives with a broader scope, territorial development, intersectoral and locally rooted (Oliveira et al., 20017).

In Bahia, rural territories came to be called Territories of Identity formed from the federal and state territorial development policy. Among the 27 Identity territories in that State, The Jiquiriçá Valley Identity Territory – TIVJ is located (Santos, 2017). State Law no. 13.214/2014, provide for the principles, guidelines and objectives of the Territorial Development Policy of the State of Bahia and Decree no. 16.792/2016 institutes the Territorial Agenda of Bahia with the purpose of providing opportunities for the development of the Identity Territories of the State of Bahia. (BAHIA, 2014; Bahia, 2016)

In this perspective, territorialization proposals for public policies were built, such as the creation of the CONSAD (Food Security and Local Development Consortia). With the objective of promoting the association between municipalities with a low Human Development Index - HDI, in a partnership between public authorities and civil society, in the wake of No Hunger Program, The CONSAD were created in 2004, as an initiative that aims to promote Food Security through a territorial policy. The creation of these consortia in Brazil follows the direction of valuing the space in which subjects live to improve public action in favor of FNS and development. The creation of Consortium follows the direction of enabling joint actions, with the main objective of making permanent the articulations to promote actions in an institutionalized manner, aiming primarily to integrate the spheres of production, marketing, consumption and credit in the poorest regions of the country that face greater risk of food and nutritional insecurity. It is, therefore, an efficient modality of cooperation that makes it possible to discuss, plan, decide, and implement local development actions to improve the population involved (BRASIL, 2009; Bonnal, 2011).

This study aimed to assess the situation of FNS and its determining factors related to occurrence of food insecurity among member municipalities of CONSAD Jiquiriçá in 2012.

2. Methodological Aspects

2.1 Study setting

The Jiquiriçá Valley Territory is one of the 27 Identity Territories in the State of Bahia, formed from the federal and state territorial development policy, and corresponds to 21 of the 25 municipalities that make up the Jiquiriçá River watershed, located to the west from the Recôncavo Baiano, approximately 150km from the city of Salvador (Connap, 2002). This study was carried out with CONSAD Jiquiriçá Valley, which is part of the Jiquiriçá Valley Territory.

In Brazil, 40 CONSAD were implemented, in Bahia two were implemented: Brumado and Jiquiriçá Valley, with the purpose of coordinating the implementation of agri-food actions and projects aimed at reducing poverty (Olalde et al., 2010). The consortia, as of Law no. 11.107/05, started to have legal personality, assumed obligations and acquired rights, following an operating structure proposed in the CONSAD Guide, created by the Brazilian Institute of Municipal Administration (IBAM) in 2004.

The Consortia seek to compose integrated actions for the specificities of each region, aiming to build an institutional design of different policy, involving both the federal, state and municipal spheres as well as civil society. They are associations between municipalities and their mission is to carry out joint actions with regard to local problems related to the promotion of food safety. The action of the Consortiums is institutionalized through the creation of deliberative councils, in which the municipalities that are part of the Consortium are represented by the government and civil society. In short, the proposal of a CONSAD is to strengthen the local sphere, through a permanent policy of generating employment and income, thus ensuring access to regular and adequate food, corroborating the notion of food security (Bidarra, 2012).

The research was carried out in samples of municipalities belonging to the CONSAD territory of the Jiquiriçá Valley, comprising nine small municipalities[7] (Amargosa, Brejões, Cravolândia, Jiquiriçá, Laje, Maracás, Mutuípe, Nova Itarana and Ubaíra). This territory has a shared social and geographic identity as a result of common location, landscape and environmental characteristics, internal communications and service infrastructure, and history of production of a range of commercial cultures oriented to regional markets. Interconnecting with the main regional centers through a road infrastructure of five federal and 16 state highways. Despite its small extension, its space is quite heterogeneous, harboring internal diversifications, exemplified by geoclimatic and, consequently, socioeconomic differences existing in its subspaces (PTDRSS, 2017).

Municipalities in general have a low degree of social development, especially when considering the average information for the State of Bahia, as well as many indicators present values close to or lower than those presented for the State. According to the 2016 estimate, five of the nine municipalities in CONSAD Jiquiriçá Valley surpass the level of 20,000 inhabitants, namely: Amargosa, Laje, Maracás, Mutuípe and Ubaíra. These municipalities have 129,236 inhabitants, therefore 74.52% of the territory's population. Two of the nine municipalities have less than 10,000 inhabitants: Cravolândia and Nova Itarana (PTDRSS, 2017). The municipalities of Maracás and Amargosa are the largest in the territory according to the number of inhabitants with more than 30,000. Really municipalities with a high urbanization rate have a concentration of almost all of their economic activities and labor directly/indirectly correlated with the agricultural/livestock sector. Since 48.5% of these are in the urban area and the remaining 51.5% in rural areas.

Despite the evolution of the HDI in recent years, in the municipalities of the Jiquiriçá Valley, it is still below Bahia's average of 0.660. Only three of the nine municipalities in the territory have an HDI above 0.600, especially Amargosa (0.625), Maracás (0.607) and Mutuípe (0.601). The lowest numbers were found in Jiquiriçá with (0.553) and Nova Itarana (0.524).

Low monthly family income per capita and inequality in the distribution of income among households in the same municipality was highlighted in previous studies and

[7] Small municipalities are those with less than 50,000 inhabitants (IBGE, 2019).

revealed factors that were increasing the chances of families in households living in food insecurity: per capita household income < ¼ the minimum wage; number of residents in the household > 4 people. These data showed that the Jiquiriçá Valley is a territory at risk for FNS, demonstrating that the results can collaborate with public management to know the problems in the territory and guide the direction of actions necessary to intervene effectively and efficiently.

The decision to develop the project in the Jiquiriçá Valley considered, in addition to the above, better accessibility, the existence of other projects coordinated at the time by the State Secretariat for Social Development - SEDES for the same territory and the possibility of joint work in the FNS field with professors from the Federal University of Recôncavo of Bahia – UFRB. This choice considered the set of research projects developed in the municipalities by researchers from the School of Nutrition of the Federal University of Bahia - UFBA. In addition, the acceptance of municipal managers to carry out the study was decisive.

2.2. Indirect assessment of food and nutrition insecurity

2.2.1. FNS Assessment: Brief Review of Methods

Since the National Conferences on Food and Nutritional Security and the creation of LOSAN, new and better methods for evaluating FNS at the municipal level have emerged. The municipality became the most important sphere for carrying out the FNS assessment, with a view to decentralizing social public policies, aiming at the implementation of actions aimed at promoting FNS (Panelli-Martins et al., 2008).

FNS, however, is a complex phenomenon, and its assessment represents methodological challenges in view of the multiple dimensions involved. Burlandy (2007), analyzing the dimensions of FNS, for example, states that there is no way to promote adequate consumption without focusing on the production system that determines how food is produced, marketed and made available. According to the author, facing this process requires an integrated approach of programs that focus on the multiple determinants, since it is essential to articulate the food dimension (production, marketing and consumption) and the nutritional dimension (use of food by the body and its relationship with the health). Rose (2008) states that for most Latin American Countries' food insecurity is less a problem of availability and more a matter of access and biological use. This also implies adequate stocks, food flows and enough money to meet basic needs.

Since the 1996 the World Food Summit, Food and Agriculture Organization - FAO has emphasized the relevance of implementing systems for monitoring and evaluating FNS in countries. The FAO also released a municipal guide aimed at assisting governments in building the action plan. This guide proposes a simplified protocol of indicators divided into four dimensions of FNS, namely: food availability, access to food, food consumption and biological use of nutrients (Móron, 2001). To these dimensions that can be considered classic in the evaluation of FNS, it is highlighted that some authors (Gross et al., 2000 and Kepple, 2010) add the dimension of stability, related to the degree of permanence of use, access and availability.

Thus, measuring the municipal FNS represents a challenge due to the complexity and vast number of factors associated with this phenomenon. Perez-Escamilla and Segall-Corrêa (2008) recommend the development of a regional instrument that can be adapted to local contexts.

In view of the above, Panelli-Martins (2008) researcher at the Nucleus of Nutrition and Public Policies developed an Indicator Protocol for the evaluation of the municipal FNS.

2.2.2 Indicator Protocol

The protocol implies the collection of information available in official and public databases such as the Information Technology Department of the Unified Health System - DATASUS, Brazilian Institute of Geography and Statistics - IBGE, The Primary Care Information System - SIAB, which are the main sources cited by Brazilian or international studies, because they represent information of easy access and wide coverage. The sources, together with other information on the assumptions, formulas, criteria, parameters and scores of the indicators were used as detailed in Table 1 and 2. The collection was carried out from March to December 2011.

The protocol used in this study is composed of 19 indicators, grouped into the four dimensions of the FNS assessment: 1) Availability of food, which refers to the transport, production, storage and marketing of food in the municipality that can limit the supply of food the population; 2) Access to food, referring to social, economic and cultural factors that interfere with food consumption; 3) Food consumption, which includes aspects related to health and nutrition conditions that reflect food consumption and; 4) Biological use of nutrients, which is related to conditions of access to social, sanitation and health services that may limit the use of nutrients present in the food consumed. For each indicator, there is a premise that aims to establish the link between the result obtained by the indicator and the concept that guides the FNS assessment.

Details of this protocol, such as the indicators distributed among the different dimensions, are shown in Table 1. To read the results obtained, a scale of values divided into four parts was adopted, so that the sum of the results per dimension can correspond to percentages different performance in the dimensions, which refer to different situations of Food and Nutritional Security-FNS and Food and Nutritional Insecurity - FNI (Mild, Moderate and Severe), as shown in table 2.

In this study, the protocol was applied to the nine municipalities of CONSAD Jiquiriçá Valley (Amargosa, Brejões, Cravolândia, Jiquiriçá, Laje, Maracás, Mutuípe, Nova Itarana, and Ubaíra) and obtained results for each of the dimensions. It is observed that with the protocol it was possible, in view of a certain result, to return to the indicators and verify in which aspects the problems that compromise food security in the municipality and in the territory refer.

Table 1: *Indicator Protocol by Dimension*

Availability Dimension		
It is related to the production, storage, transport and marketing of food and other factors that interfere with the availability of food for the population of the municipality.		
1.Existence of food warehouses in the municipality	2. Existence of access roads to the municipality	3. Existence of intra-municipal roads with good access conditions
4. Existence of strategies to bring the small producer closer to the consumer	5. Existence of small producer cooperatives	6. Diversity of source lines for small producer credit
Access Dimension		
It encompasses social, economic and cultural factors that interfere with food acquisition		
1. Average income of the head of the household	2. Distribution of households according to years of study of the head of the household	3. Average number of residents per private household
4. Percentage of female-headed households		

Food consumption dimension		
It is related to the dietary pattern of a population and the social, economic and cultural factors that interfere with it.		
1. Percentage of exclusive breastfeeding	2. Percentage of children with low birth weight	3. Percentage of children <5 years old with weight deficit for age
Biological use of food Dimension		
It is related to the conditions of access to social, sanitation and health services and their impact on the diet and nutrition of the individual/population.		
1. Infant Mortality Coefficient	2. Percentage of households served with treated water	3. Percentage of households served with household garbage collection
4. Percentage of households with domestic sewage collection	5. Family Health Program - PSF coverage	6. Population served by Community Health Agents - ACS

Table 2: Scoring scale (percentage) and category:

POINTS	CATEGORY	DEFINITION
0 to 24.9%	SEVERE FOOD AND NUTRITIONAL INSECURITY – SEVERE FNI	Situation in which a greater number of factors would compromise the full realization of the concept, characterizing a situation of deprivation and hunger.
25 to 49.9%	MODERATE FOOD AND NUTRITIONAL INSECURITY – MODERATE FNI	Situation in which a greater number of factors would compromise the full realization of the concept, characterizing a situation of greater vulnerability to deprivation and hunger.
50 to 74.9%	MILD FOOD AND NUTRITIONAL INSECURITY – MILD FNI	Situation in which some factors would compromise the full realization of the concept, with relative vulnerability to deprivation and hunger.

≥75%	FOOD AND NUTRITIONAL SECURITY - FNS	Ideal situation in which a set of factors would act to ensure the full realization of the concept of food and nutrition security.

3. RESULTS AND DISCUSSION

3.1 The situation of local municipal of FNS

Considering the municipalities studied using the Indicator Protocol, it was possible to identify for CONSAD Jiquiriçá Valley the result of 53.7% of FNI (and of these, 55% of Mild Food and Nutritional Insecurity – Mild FNI and 45% of Moderate Food and Nutritional Insecurity – Moderate FNI). Studies carried out by Pereira et al. (2019) in municipalities of a territory in Bahia applied with the same protocol found global results, in which they were classified as FNI, being 24.6% Mild FNI, 71.9% Moderate FNI and 3.5% in Severe FNI.

The evaluation results for each municipality, represented by dimension, revealed that the favorable or constraining conditions for achieving FNS differ according to the categories (Graphs 1, 2, 3 ,4). The municipality of Brejões draws attention, which presented a Moderate FNI situation in two of the four dimensions analyzed (Availability and Consumption), which is the worst result in the territory (Graphs 1 and 3). In this, the following results were revealed: inexistence of warehouses for food stock; lack of small producer cooperatives; high percentage of children with low birth weight; low percentage of exclusive breastfeeding; poor coverage of basic sanitation, such as: lack of access to treated water, collection of household waste and sanitary sewage, so that family exposure to adverse conditions of basic sanitation directly influences the family's health, therefore, its food and nutritional security.

The municipality of Nova Itarana obtained the result (33%) Moderate FNI in the Availability Dimension (Graph 1). It can be seen through the results in the Availability Dimension the inexistence of warehouses for food stock, inexistence of intra-municipal roads with good access conditions, inexistence of cooperatives of small producers and diversity of sources for credit to the small producer.

The municipalities of Cravolândia and Maracás had the same results (33%) Moderate FNI in the Access Dimension (Graph 2). With regard to the low results in the Access Dimension in these two cities, attention is drawn to the distribution of households according to years of study by the person responsible for the private household with 4 years of education (IBGE, 2010). It is known that education influences not only the chances of getting better pay at work, but also the selection and preparation of food.

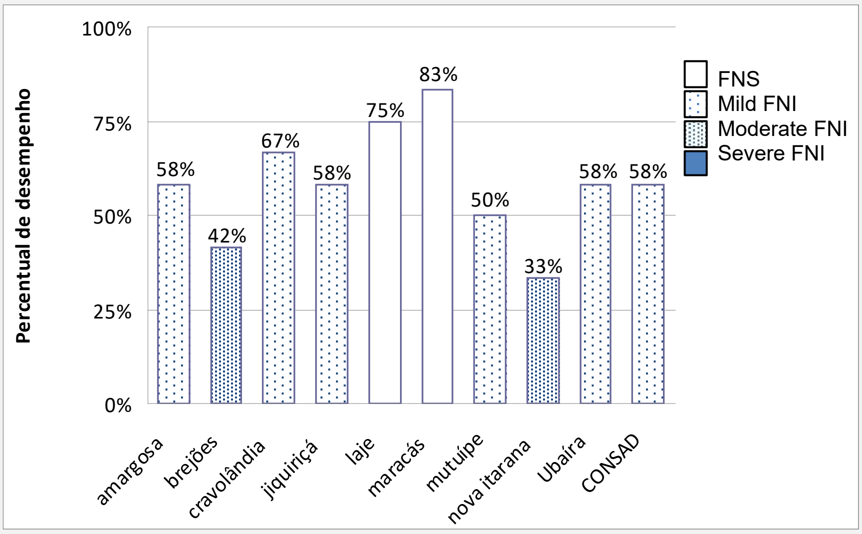
With regard to food consumption, the same results were identified in the municipalities of Brejões and Mutuípe (33% and 33%) showing a Moderate FNI situation (Graph 3). It is believed that due to the low percentage of exclusive breastfeeding that was observed in these cities.

Overall, it should be noted that no situation of severe food and nutritional insecurity was observed in any of the municipalities studied in any of the dimensions considered (Graphs 1, 2, 3 and 4). This result differs from that obtained by applying the Brazilian Scale of Food Insecurity - EBIA applied in the municipalities of CONSAD, which recorded food insecurity in 70.3% of private households, and this result was divided into three levels of severity, with 34 .3% in mild FNI, 23.3% in moderate FNI and 12.7% in severe FNI (RIBEIRO, 2012). It must be considered that the EBIA and protocol methods presuppose measuring the same phenomenon, but from different perspectives.

It can be admitted, for example, that in a region where food availability is potentially adequate, the population's differentiated income compromises access to food. The Jiquiriçá Valley has natural resources and other conditions that explain good results in terms of food availability, but the Average Per Capita Income – RMMPC is low, and the monthly family income per capita is relevant to the definition of food insecurity. In another study by the same author, it was found that moderate and severe FNI was present in 46.5% of CONSAD households with Average Family Income Per Capita - RMFPC lower than ¼ of the Minimum Wage - MW. This prevalence decreased to 24.1% among households with income between half and ¼ of MW and to 8.4% among those with RMFPC higher than half the minimum wage (RIBEIRO, 2012).

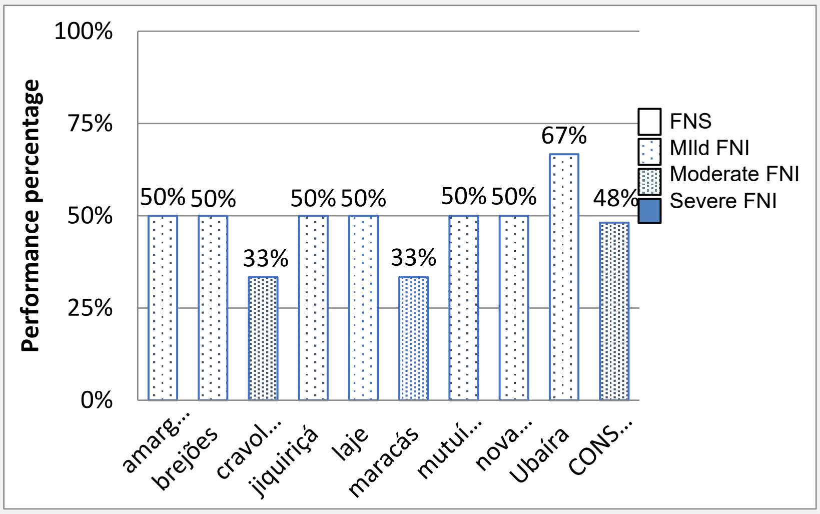
It is observed that the income variable is included in the construction of an indicator for the Access Dimension, and this was the only one in which moderate insecurity was obtained in the territory. Studies carried out by Rossi (2017) in Montevideo on the influence of socio-demographic characteristics on the different dimensions of household food insecurity indicate that family income had greater influence in all dimensions, which indicates a strong relationship between income and insecurity.

Graph 1: FNS evaluation by indicator protocol - Food Availability Dimension



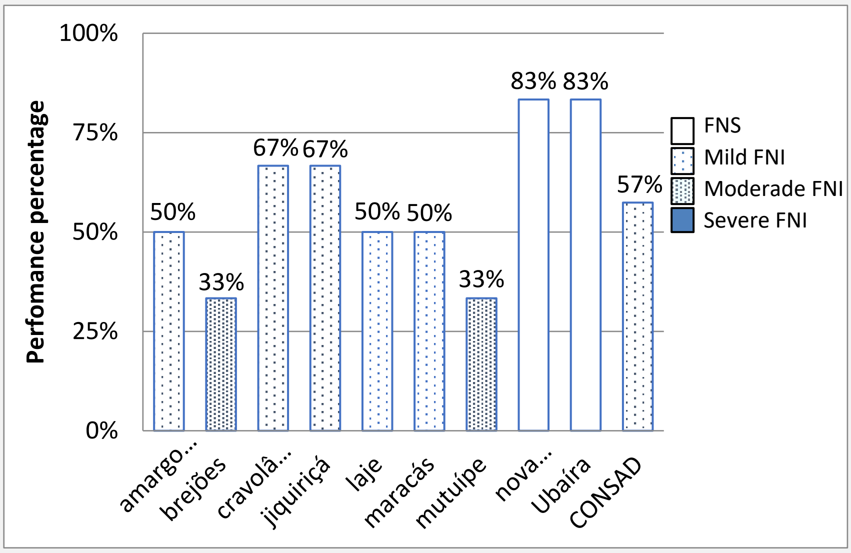
Source: Prepared by the Authors, 2012

Graph 2: FNS evaluation by indicator protocol - Food Access Dimension



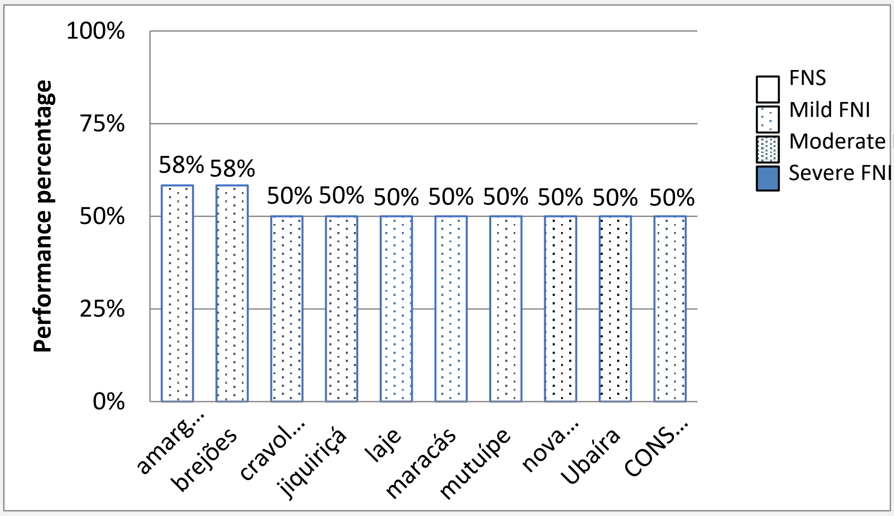
Source: Prepared by the Authors, 2012

Graph 3: FNS evaluation by indicator protocol - Food Consumption Dimension



Source: Prepared by the Authors, 2012

Graph 4: *FNS evaluation by indicator protocol - IV Biological Use of Food Dimension*



Source: Prepared by the Authors, 2012

Considering the definition for the FNS assessment categories, it is highlighted that mild food and nutritional insecurity, measured by the indicators used, in any of the dimensions, represents the existence of factors that express vulnerability and deprivation, so it is a result that requires action on the part of managers.

The number of people affected by hunger around the world has been increasing slowly since 2014. FAO data shows that the burden of malnutrition in all its forms remains a challenge, the FNS assessment report with projections of how it could be in 2030 show that the world is not on track to reach Zero Hunger by 2030. (FAO, 2020).

3.2 Overall Territory Results

3.2.1. FNS in the dimension of food availability

It is related to aspects related to the local production and marketing of food. This means that, in view of the indicators used, there are no major problems for the population's food supply in terms of food production and distribution.

Factors that contributed to these results were: The existence of access roads to the municipalities and between the Rural and Urban Zones in good conditions, thus facilitating the flow of products produced, which can favor a greater supply of food at a lower cost; Existence of strategies to bring the small producer closer to the consumer due to the existence of a weekly open market, facilitating the access of the lower-income population to food; Existence of a cooperative of small producers, thus favoring an increase in the local supply of food and an increase in the income of small producer families; Diversity of credit lines for small producers, positively reflecting on family farming and self-consumption, increasing family income and ensuring minimum conditions for the maintenance of agricultural activities.

Even having obtained good results in this dimension, the inexistence of warehouses that could guarantee the storage of food to supply the domestic market for at least two months was recorded in the municipalities, ensuring that possible problems that affect production, such as climate change, and commercialization, due to the off-season that raises prices, for example, do not compromise the access of the entire population to food. Results shown by Panelli-Martins et al. (2008) after applying this same Protocol in the municipality of Mutuípe at another time highlighted the inexistence of municipal warehouses for food stock, so that municipalities should have food storage capacity to supply the market internal for at least two months.

3.2.2. In relation to FNS according to the dimension of food access

The Brazilian Demographic Census was the main source for obtaining data and information. According to the results found, the score was 14.1 (48.1% of the possible total) revealing Moderate FNI. The main factor that contributed to this result was the low level of education of the head of the household, assessed as years of study, and education influences not only the chances of getting better pay at work, but also the selection and preparation of food. The income factor of the head of the household also contributed to this result, being associated with the possibility of purchasing and using essential goods and services to maintain health status and purchase food. The results of the municipality of Mutuípe with the application of the protocol carried out by Panelli-Martins (2008) in this same dimension showed that the factors that contributed to the result were the income of the person responsible for private households and is associated with the use of essential goods and services for maintenance. health status in particular to the purchase of food.

3.2.3. FNS according to the Food consumption dimension

The analysis was based on the following indicators: percentage of breastfeeding, percentage of children with low birth weight, percentage of children under 5 years old with weight deficit for their age, which mostly reflect the results of inadequate food consumption on the growth and development. CONSAD obtained 5 points in this dimension, representing 50% of the possible total, therefore a situation of mild FNI in relation to food consumption. The high percentage of children with low birth weight is related to the maternal nutritional status during pregnancy, directly interfering with the child's health and survival status; A high percentage of children under 5 years of age with weight deficit for their age indicates a state of current malnutrition, reflecting poor health, income, education, and family conditions; The high percentage of exclusive breastfeeding was an important result of the study in defining a mild FNI picture, based on the assumption that it provides qualitatively and quantitatively adequate nutrients for growth. The study by Panelli-Martins (2008) in the municipality of Mutuípe identified the percentage indicator of children with low birth weight, related to maternal nutritional status during pregnancy and predictive of the child's health status and survival; and the percentage indicator of children under 5 years old with weight deficit for their age, which indicates a state of malnutrition, reflecting poor health, income and family education conditions in the municipality.

3.2.4. FNS according to the dimension of the biological use of food

The analysis includes the conditions of access to social, sanitation and health services. Six indicators were used for this dimension. The territory obtained a result of 30 points (50% of the possible total), having been classified as a Mild FNI in this dimension.

The result obtained is due to the deficient coverage of basic sanitation, such as: lack of access to treated water, collection of household garbage and sanitary sewage, so that family exposure to adverse conditions of basic sanitation directly influences the family's health. The result of the study in the municipality of Mutuípe was not different from the result of CONSAD, which indicated a deficient coverage of basic sanitation, including access to treated water, collection of household garbage and sewage, collaborate with the result (Panelli- Martins, 2008).

It is important to emphasize that the Consortium's infant mortality coefficient contributed to better results in this dimension, based on the premise that this indicator reflects the health conditions of the population in general. It is also worth noting that there is a Family Health Program - PSF implemented and functioning throughout CONSAD and the Community Health Agents (ACS) reach 100% coverage.

Table 3: Assessment of the FNS situation by dimensions in the Jiquiriçá Valley (BA)

Dimension	**Maximum score**	**Score obtained**	**Score scale (%)**	**FNS situation**
Food availability	60	35.0	58.3	Mild FNI
Access to food	30	14.4	48.1	Moderate FNI
Food consumption	30	17.2	56.7	Mild FNI
Biological use of food	60	30.0	50.0	Mild FNI
Total	180	96.6	53.7	Mild FNI

Source: Prepared by the authors, 2012

4. Final Considerations

This study presents results of the assessment of the FNS situation and its determining factors at the municipal level of the territory of the Consortium for Food and Nutritional Security – CONSAD Jiquiriçá Valley. Food insecurity was a condition present in all evaluated municipalities, most of them in the Situation of Mild Food and Nutritional Insecurity. Analyzing the results based on the protocol, it is possible to identify which variables were compromising the better performance of the CONSAD municipalities in the different dimensions. Results indicated the existence of factors that express vulnerability and risk of deprivation, which, if not faced, can generate greater compromise and risk of moderate and severe insecurity with disabilities in some indicators: lack of warehouses, low education, insufficient responsible person's income, high percentage of children with low birth weight, high percentage of children with low weight for age, deficient coverage of basic sanitation.

The application of indicators as summary measures of certain situations under monitoring and evaluation has been a demand in the production of evidence to guide public policies, such as the health-disease process. Criteria have been proposed to improve the indicators, it being understood that, even if methodological challenges persist, the investment in their application must be continued.

Therefore, the applied method presents itself as an important instrument for evaluation and generates guidelines for public action in the direction of food and nutrition security. The protocol proved to be instrumental in the formulation, monitoring and evaluation of interventions by the municipal executive.

The need for frequent updates of FNS assessment protocols is also highlighted, to monitor political, social and economic changes, which allows for a better interpretation of this condition in the municipalities.

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Actividades Innovadoras en Empresas Brasileñas De Saneamiento

Atividades Inovativas de Saneamento Básico Brasileiras

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Resumen: La investigación respondió a la pregunta: ¿Cuáles son las principales actividades innovadoras de las empresas del sector saneamiento brasileño? Se realizó una investigación exploratoria, con estudio de múltiples casos, con enfoque cualitativo, con el objetivo de identificar el grado de importancia atribuido a las fuentes de innovación entre cinco empresas brasileñas de saneamiento que figuran en el Ranking de Valor Económico 1000 *de la* revista. Los datos fueron recolectados por medio de investigación bibliográfica, investigación documental y cuestionario. Como resultado de esta investigación se destaca: la identificación de las principales actividades de innovación del sector de saneamiento brasileño como investigación y desarrollo interno, capacitación y adquisición de maquinaria y equipos.

Palabras claves: Innovación, Actividades Innovadoras, Saneamiento Básico.

1. Introducción

En Brasil, hay un claro contraste en el tema de los recursos hídricos. Si por un lado se encuentran los dos acuíferos más grandes del mundo (Alter do Chão y Acuífero Guaraní), por otro lado, se ha registrado un fenómeno derivado del cambio climático en varias regiones: la escasez de recursos hídricos (ABCON, 2015). El problema no es sólo brasileño. En 2015 las Naciones Unidas basadas en el trabajo de la Agenda 2030 mostraron preocupación por el tema y declararon entre los 17 Objetivos de Desarrollo Sostenible (ODS), el objetivo del No. 6 que es "Garantizar la disponibilidad y la gestión

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sostenible del agua y el saneamiento para todos", mostrando la preocupación de los gobiernos por el tema (Castro, 2016).

Las causas de la crisis mundial del agua están relacionadas con el acceso inadecuado al agua potable y el saneamiento; el uso excesivo de los recursos de aguas subterráneas, lo que conduce a una disminución de los ingresos agrícolas; el uso excesivo de los recursos hídricos con contaminación que daña la biodiversidad; los conflictos regionales por los escasos recursos hídricos, que a veces resultan en una guerra (Kaur & Mahajan, 2016).

Volviendo a Brasil, la reciente crisis de suministro ha sacado a la luz la falta de planificación, gestión e inversión en el sector en los últimos años, especialmente en obras de conservación y contingencia. Los embalses con capacidad por debajo del nivel mínimo en muchas regiones del país se suman al poco incentivo para reducir la pérdida física de agua (volumen de agua disponible que no es utilizada por los clientes) y la pérdida de agua comercial (el volumen utilizado se cobra de manera inadecuada) (ABCON, 2015). Las pérdidas registradas en países como Alemania y Japón no superan la tasa del 11% seguida de Australia con el 16%, mientras que la media nacional supera el 40%. La consecuencia directa de la alta tasa de pérdidas refleja la reducción de los ingresos, impactando en la disminución de la inversión (IFC, 2017).

Así, las organizaciones del sector saneamiento, apalancadas por los recursos públicos, buscan el uso de los recursos escasos de una manera más efectiva, ágil y flexible en respuesta a un escenario diverso o nuevo. El reto no es sólo generar ganancias. Busca agregar valor al precio pagado por la prestación de servicios, aumentando la percepción del cliente. De esta manera, el sector público se beneficia de la innovación para ayudarles a hacer frente a los retos de proporcionar salud, educación, seguridad, etc. (Tidd & Bessant, 2015). Incluso con los autores, la innovación depende en gran medida de la capacidad de encontrar nuevas formas de explorar nuevas oportunidades.

Así, se puede afirmar que la ventaja competitiva es el resultado de la presencia de la gestión de la innovación, identificada a través de la capacidad de la empresa para realizar la evaluación y explotación del conocimiento interno y externo, centrado en cosas nuevas (Mcguirk, Lenihan &Amp, 2015). En el caso del sector del saneamiento, el concepto de ventaja competitiva está relacionado con los controles establecidos en los contratos de concesión que se revisan periódicamente entre municipios y empresas. El monopolio natural de la empresa se pone bajo análisis con cada revisión con la posibilidad de intercambio de operadores.

El problema de investigación seleccionado como tema de este artículo son las actividades innovadoras en el sector del saneamiento brasileño. Se entiende que la relevancia económica del sector del saneamiento por sí sola justifica esta investigación y que es en el interés de la sociedad que haya una mejora significativa en el saneamiento básico brasileño. La investigación que ayuda a enfrentar este desafío traerá beneficios para el bienestar de los brasileños, la productividad laboral, el medio ambiente, la apreciación de las propiedades de la población más pobre y el desarrollo del sector industrial (CNI, 2014).

Así, la pregunta del problema es: ¿Cuáles son las principales actividades innovadoras identificadas por las empresas del sector saneamiento brasileño? El objetivo general de esta investigación es identificar las principales actividades innovadoras para el sector brasileño del saneamiento. Se busca el siguiente objetivo específico: caracterizara las empresas del sector de saneamiento básico en Brasil, con respecto a las actividades innovadoras.

2. Revisión de la literatura: Desafíos y oportunidades del sector del saneamiento en Brasil

La elaboración de una visión general del sector es posible a partir de los datos del Sistema Nacional de Información de Saneamiento (SNIS), que desde 2005 ha destacado su importancia como fuente de información relevante para el sector y sus partes interesadas (proveedores, gobierno, organizaciones de desarrollo e instituciones educativas y de investigación). De un total de 5.561 municipios brasileños, el sistema obtiene información de 5.088 municipios (91,4%), siendo una importante fuente de información para la caracterización del sector (SNIS, 2015).

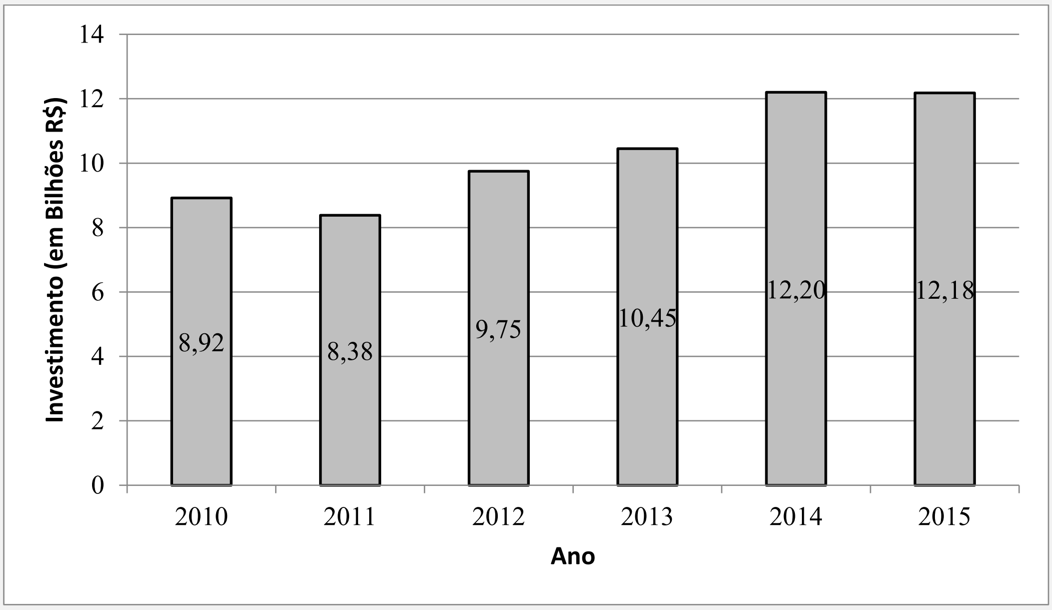
La participación en el sector tiene predominio de empresas estatales y municipales, con tímida participación del sector privado. Los costos fijos son altos y existe la necesidad de un capital específico, que caracteriza a un monopolio natural. La regulación se lleva a cabo por una agencia específica, la Agencia Nacional del Agua (ANA). La prestación del servicio se realiza a través de contratos de concesión de treinta años con los municipios (Gava & Zilber, 2014). En cuanto a los datos financieros de los prestadores de servicios participantes en el SNIS en 2015, tenemos un ingreso operativo de R$ 47,3 mil millones para inversiones realizadas por el orden de R$ 12,18 mil millones, con una ocupación de 213.000 trabajadores (SNIS, 2015).

En cuanto a la forma de capital, hay representantes del sector privado que aportan al saneamiento una visión empresarial que se hace necesaria para asegurar la adecuada gestión de los recursos hídricos (ABCON, 2015). El sector privado no parece ser más eficiente en la prestación de servicios que el sector público (PRASAD, 2006). Conclusión también llegan Scriptore y Toneto (2012) que en su investigación comparó el comportamiento de los proveedores públicos y privados de servicios básicos de saneamiento brasileños, con base en la encuesta del SNIS del año 2010. Para los autores, no se encuentra superioridad entre los grupos, con la política de altas tarifas y la menor tasa de pérdidas por parte de los agentes privados y una mayor atención social (sin fines de lucro) por parte de partes de las organizaciones públicas.

En Brasil, actualmente, la inversión en el sector que es insuficiente también depende del Plan Nacional de Saneamiento Básico. Este plan preveía recursos financieros de aproximadamente R$ 16 mil millones por año, hasta 2033, con el objetivo de la universalización de los servicios de agua y alcantarillado en el país. En este sentido, es esencial asignar un monto expresivo de cerca de R$ 250 mil millones en los próximos años en inversiones (SNIS, 2015).

En los últimos tres años (2013-2015), el sector saneamiento recibió considerable atención y obtuvo un aumento de las inversiones del orden de R$ 2,4 mil millones (19,9%) en relación con el inicio del período, incluida la participación de los sectores público y privado (Figura 1). (SNIS, 2015).

Figura 1: Evolución de la inversión en el sector del saneamiento en Brasil



Fuente: SNIS (2013, 2015).

En Brasil, el servicio con red de agua llega al 82,4% de la población total, y aproximadamente 35 millones de personas no tienen acceso a una red de distribución. En el caso de la recolección de aguas residuales, sólo 48,1% de la población brasileña es atendida, lo que representa 104 millones de personas sin acceso a una red de recolección. El tratamiento de aguas residuales sirve sólo al 37,5% de todas las aguas residuales generadas. Hay 5.8 mil millones de metros cúbicos por año de aguas residuales que se vierten directamente en la naturaleza sin ningún tratamiento (CNI, 2014).

La innovación es el proceso de transformar las oportunidades en nuevas ideas que tienen un amplio uso práctico, por lo que, para el sector del saneamiento básico, la innovación es el producto de oportunidades para la oferta y la demanda (Tidd & Bessant, 2015). El empeoramiento de la escasez de recursos hídricos, verificado en los últimos años, ha llevado a centrarse en la gestión de la demanda y la garantía de la oferta como factores importantes para agravar o mitigar su ocurrencia (ANA, 2014).

En los Países Bajos, el desarrollo de nuevos productos y servicios más sostenibles ha venido reflejando los cambios en las relaciones entre los servicios públicos de saneamiento, sus competidores y clientes. En este sentido, una tendencia actual identificada en términos de consumo es la percepción de los consumidores en relación con las estrategias de innovación de las empresas. Esto se basa en reuniones de grupos focales con la presencia de profesionales de la industria y consumidores, lo que se traduce en la difusión de nuevos roles y productos de las empresas de saneamiento a sus clientes. En estos estudios, se identificó que todavía hay ajustes, así como desajustes en las formas en que los proveedores y consumidores tienden a mirar hacia el futuro del suministro sostenible de agua (Hegger et al, 2011).

La adquisición de tecnología es sólo una fracción de la solución para lograr un acceso sostenible y seguro al agua y el saneamiento en todo el mundo. Los desafíos del rápido aumento de la población, la urbanización, el cambio climático, la pobreza y las enfermedades generalizadas afectarán a las soluciones que se consideren "apropiadas" para satisfacer las necesidades del sector del agua y el saneamiento. Los enfoques tradicionales de ingeniería deben mejorarse con técnicas de prueba y error más flexibles, la participación de los usuarios y el aprendizaje colaborativo multidisciplinario para crear soluciones innovadoras y empoderar a las comunidades empobrecidas para lograr sus propios objetivos de desarrollo (Murphy, Mcbean & Farahbakhsh, 2009).

3. Innovación en empresas y actividades innovadoras.

A la hora de pensar en innovación, a menudo se hace referencia a cuestiones técnicas, pero este concepto es más amplio, ya que se tiene en cuenta el contexto económico y social generado. A través de la innovación se puede transformar una realidad, creando algo nuevo traduciendo un cambio necesario, yendo más allá de la creación de nuevos productos o servicios (Dornelas, 2003). En este sentido, es importante destacar el papel del área de Investigación y Desarrollo, que permite a la empresa asimilar y explorar el conocimiento del medio ambiente, utilizando tecnología sofisticada y actuando de manera eficiente (Andreassi, 2005).

En cuanto al origen de la innovación, Schumpeter (1984) sostiene que es el resultado de la oferta y no de la demanda. Prahalad y Ramaswamy (2004) destacan que surgen nuevos productos en respuesta al cliente, basados en su experiencia y necesidades adquiridas en la compra. En su evaluación se combinan factores como el rendimiento, el funcionamiento, la facilidad de uso, la calidad, la seguridad, el diseño y la compatibilidad para mejorar y mantener la marca y la imagen de la empresa.

Las constantes demandas y cambios del entorno requieren la adaptación de las organizaciones a través de la innovación. El estímulo del conocimiento crea un campo de posibilidades, pero no es toda idea la que tiene un propósito útil, la innovación requiere un modo de exigencia para tener éxito. Las ideas no siempre satisfacen necesidades reales o percibidas (Tidd & Bessant, 2015). Las innovaciones pueden surgir de una demanda inducida. En este sentido, las empresas buscan innovaciones basadas en la insatisfacción de los clientes, lo que las llevaría a buscar competidores (Ferreira & Santos, 2016).

Desde un punto de vista económico, la innovación está asociada al cambio tecnológico. Los impactos económicos y productivos resultantes de los recientes cambios tecnológicos destacan sólo la innovación de productos, lo que lleva a un plan secundario para otros tipos de innovación (Barboza; Fonseca, Ramalheiro, 2015).

Según la investigación de Gava y Zilber (2014) las actividades innovadoras desarrolladas por el sector brasileño de saneamiento básico se limitan a la captura de ideas externas y desarrollo interno, llevado a cabo de manera organizada por el área responsable que genera innovación tecnológica a partir de la demanda operativa, la investigación junto con las universidades o la compra del proveedor.

En el modelo de gestión de la innovación de Tidd y Bessant (2015) la gestión de la innovación comienza con dos acciones relevantes: buscar ideas y seleccionar las mejores oportunidades en función de la estrategia. La mayoría de las innovaciones exitosas son el resultado de una búsqueda consciente e intencional de oportunidades de innovación. Cuatro de estas áreas de oportunidad se identifican internamente en la empresa: sucesos inesperados, incongruencias, necesidades de procesos y cambios de industria y mercado (Drucker, 1998).

También con el autor, destaca los sucesos inesperados como una de las formas más sencillas y sencillas de identificar oportunidades para innovar, pero los directivos no siempre les dan la debida atención. El monitoreo de errores y éxitos, y la documentación de las intervenciones pueden convertirse en una forma estructurada de desarrollo de nuevos productos y procesos. La incongruencia detectada en la lógica de un proceso o en la realidad económica de una empresa puede llevar a una oportunidad de innovación por igual. A su vez, las necesidades de los procesos (suministro y aumento de la producción) pueden deleitar la investigación que resulta en innovación. Los cambios en la industria y el mercado están ligados a las tendencias de consumo, desde su observación por parte del emprendedor que puede identificarlas y aprovecharlas. El precio aquí puede ser alto, porque ser pionero tiene su carga y bonificaciones.

Según la Encuesta de Innovación de Pintec (IBGE, 2014), son actividades innovadoras "las actividades representativas de los esfuerzos de la compañía dirigidos a mejorar su colección tecnológica y, en consecuencia, en el desarrollo e implementación de productos (bienes o servicios) o procesos nuevos o significativamente mejorados".

Pintec tiene como objetivo proporcionar información para la construcción de indicadores sectoriales, nacionales y regionales de las actividades de innovación de las empresas brasileñas con 10 o más personas empleadas, teniendo como universo de investigación las actividades de las industrias extractivas y de procesamiento.

Las actividades que realizan las empresas para innovar son de dos tipos:

- **I+D (desarrollo básico, aplicado o experimental):** que cuenta con la implicación de todas las partes de la empresa, particularmente en el área de marketing, en las decisiones de innovación y en las actividades de innovación.
- **Otras actividades no relacionadas con la I+D:** que implican la adquisición de bienes, servicios y conocimientos externos y la cooperación con universidades e institutos de investigación, fuentes de información técnica y relacionadas con los flujos tecnológicos entre empresas y entre industrias (IBGE, 2011) (OCDE, 2005).

Según Vega-Jurado et al (2008) los proveedores son más significativos en el caso del desarrollo de innovaciones para la empresa, mientras que la Universidad tiene resultados más sólidos cuando se trata de aumentar las innovaciones para el mercado nacional.

En este sentido, las empresas utilizan información de diversas fuentes que, junto con su capacidad de innovación, permiten orientar sus proyectos de innovación. En el proceso de innovación tecnológica, por ejemplo, desarrollan actividades que generan nuevos conocimientos o utilizan conocimientos previamente incorporados (patentes, maquinaria y equipos, software, etc.). En este proceso, sin duda está influenciado por su capacidad para absorber y combinar dicha información (IBGE, 2011).

4. Procedimientos Metodológicos

De acuerdo con Gil (2008), esta investigación es de naturaleza exploratoria que abarca encuestas bibliográficas y documentales, cuestionarios estandarizados y estudios de casos. El protocolo de Miles y Huberman (1994) fue utilizado para el estudio de caso múltiple. En el caso de esta investigación, los resultados financieros obtenidos por las empresas del sector saneamiento, publicados en la revista Valor Econômico, fueron elegidos como criterio para la selección de casos. La publicación en cuestión permitió obtener el orden de estos resultados, permitiendo el dimensionamiento financiero de las empresas.

Miles y Huberman (1994) proponen una serie de preguntas para orientar a los investigadores en cuanto a la correcta selección de la muestra, que fueron seguidas. La identificación de áreas de I+D en las empresas invitadas a participar en la investigación hizo concluir que el fenómeno investigado se puede ver claramente en la muestra. En cuanto al grado de generalización, se entendió que la representatividad financiera de las empresas en relación con el sector y el hecho de que hayan formalizado áreas de I+D contribuyeron a establecer en un primer momento, cierto grado de generalización. Las descripciones obtenidas en la investigación pueden y deben ser probadas para mantener un alto grado de relación con la realidad, evidenciadas a partir del triple método de recolección de datos (Investigación Bibliográfica, Investigación Documental y Cuestionarios).

Después de esta etapa, se inició la planificación de la recolección de datos primarios estableciendo la elección de la muestra por los criterios de relevancia y conveniencia ver Gráfico 1. Las compañías prominentes son contactadas para participar en la investigación.

Tabla 1: Ranking 1000 de la revista valor económico de 2016.

	EMPRESA	**RECEITA LÍQUIDA (em milhões)**	**LUCRO LÍQUIDO (em milhões)**	**ATIVO TOTAL (em milhões**
1	**SABESP**	**R$ 11.711,60**	**R$ 536,30**	**R$ 33.706,60**
2	CEDAE	R$ 4.057,30	R$ 248,90	R$ 13.311,30
3	**COPASA**	**R$ 3.834,50**	**-R$ 11,60**	**R$ 10.930,70**
4	**SANEPAR**	**R$ 2.971,20**	**R$ 438,40**	**R$ 8.244,70**
5	**EMBASA**	**R$ 2.596,30**	**R$ 59,00**	**R$ 7.464,00**
6	CORSAN	R$ 2.080,20	R$ 163,90	R$ 3.913,10
7	OCEBRECHET ANBIENTAL	R$ 2.044,90	R$ 210,90	R$ 7.160,70
8	SANEAGO	R$ 1.734,90	-R$ 235,30	R$ 4.473,60
9	COMPESA	R$ 1.590,00	R$ 113,80	R$ 5.546,90
10	CAESB	R$ 1.526,50	R$ 10,00	R$ 2.717,40
11	**AGEGEA**	**R$ 1.103,00**	**R$ 115,20**	**R$ 2.920,00**
12	CAGECE	R$ 942,30	-R$ 129,00	R$ 3.649,90
13	SAAB	R$ 870,10	R$ 73,30	R$ 1.519,40
14	CASAN	R$ 796,90	R$ 10,90	R$ 2.668,20
15	CESAN	R$ 637,80	R$ 65,40	R$ 2.541,70
16	SANASA	R$ 607,70	-R$ 57,90	R$ 1.110,00
17	CAGEPA	R$ 525,10	-R$ 30,30	R$ 1.238,70
18	CAERN	R$ 481,10	-R$ 6,80	R$ 1.080,90
19	CAB AMBIENTAL	R$ 469,90	-R$ 67,00	R$ 1.606,00
20	CAEMA	R$ 438,00	-R$ 12,70	R$ 1.763,40
21	DESO	R$ 403,10	R$ 0,50	R$ 1.455,10
Totais		R$ 41.422,40	R$ 1.495,90	R$ 119.022,30

Fuente: (VALUE, 2016)

Se elaboró un cuestionario con preguntas cerradas buscando profundizar el estudio con apoyo a la percepción de los entrevistados identificados con las empresas que fueron encuestados. La recolección de datos (documental y cuestionarios) ocurrió entre marzo y junio de 2017. Se enviaron 12 correos electrónicos a los encuestados identificados, 2 (16,8%) declinaron responder, 5 (41,6%) no estaban posicionados y 5 (41,6%) Respondió. Los encuestados son los gestores de las áreas responsables de la gestión de las áreas formalizadas de innovación en las empresas brasileñas de saneamiento, caracterizándose esta última como una unidad de análisis.

El cuestionario aplicado fue adaptado de Pintec (IBGE, 2014), estructurándose, teniendo en cuenta el contexto en el que se produce la innovación, utilizando un conjunto de ítems (preguntas) para la verificación, separados por bloques: I - Identificación (encuestado y empresa), II - La caracterización de la innovación. En la aplicación del cuestionario, se pide a los encuestados que identifiquen la importancia (alta, media, baja y no relevante) de las actividades innovadoras realizadas en el período indicado, que son: Actividades internas de I+D; Adquisición externa de I+D; Adquisición de otros conocimientos externos; Adquisición de software; Adquisición de maquinaria y equipo; Capacitación; Introducción de innovaciones tecnológicas en el mercado; Diseño industrial y otros preparados técnicos para la producción y distribución.

5. Análisis De Resultados

En cuanto a la caracterización de los encuestados, todos ellos tienen **un cargo directivo,** trabajan en un área formalmente establecida en sus empresas y que 3 llevan trabajando en el área por más de 10 años, y 2 de ellos trabajan entre 1 y 3 años. En relación con **la escolaridad,** 2 encuestados tienen un máster, 2 tienen especialización/MBA y 1 doctorado.

La unidad de análisis de investigación fue identificada como empresas brasileñas de saneamiento, de las cuales 4 se caracterizan como una sociedad de economía mixta y 1 como privada. Participaron en la investigación las siguientes empresas:

AEGEA: del segmento privado, presente en 48 ciudades de diez estados brasileños. Tiene el 23% del mercado privado de saneamiento en Brasil, atendiendo a más de 5,4 millones de personas en el país, con una ocupación de 2500 personas (AEGEA), 2017).

SABESP: es una corporación de economía mixta fundada en 1973 que atiende a 367 municipios del estado de São Paulo, con 27,7 millones de personas abastecidas con red de agua y 21,2 millones de personas con recolección de aguas residuales. Cuenta con 14137 empleados (SABESP, 2017).

EMBASA: es una empresa de economía mixta fundada en 1971 y atiende a 11,9 millones de personas atendidas con suministro de agua y 4,8 millones con aguas residuales. La compañía atiende a 366 municipios en el total de 417 municipios del estado de Bahía (EMBASA, 2017).

COPASA: es una empresa de economía mixta. Su actividad principal es la prestación de servicios de abastecimiento de agua, alcantarillado y residuos sólidos. Fue creado en 1963 y opera en el estado de Minas Gerais (COPASA, 2017).

SANEPAR: es una empresa de economía mixta fundadada en 1963, presta servicios para el abastecimiento de agua tratada a la población, servicios de recogida y tratamiento de aguas residuales sanitarias, y también de recogida selectiva y disposición de residuos sólidos. Actualmente atiende con agua tratada a 346 municipios del estado de Paraná, beneficiando a 10,8 millones de personas, y a 174 municipios con servicios de alcantarillado, beneficiando a 7,1 millones de habitantes (SANEPAR, 2017).

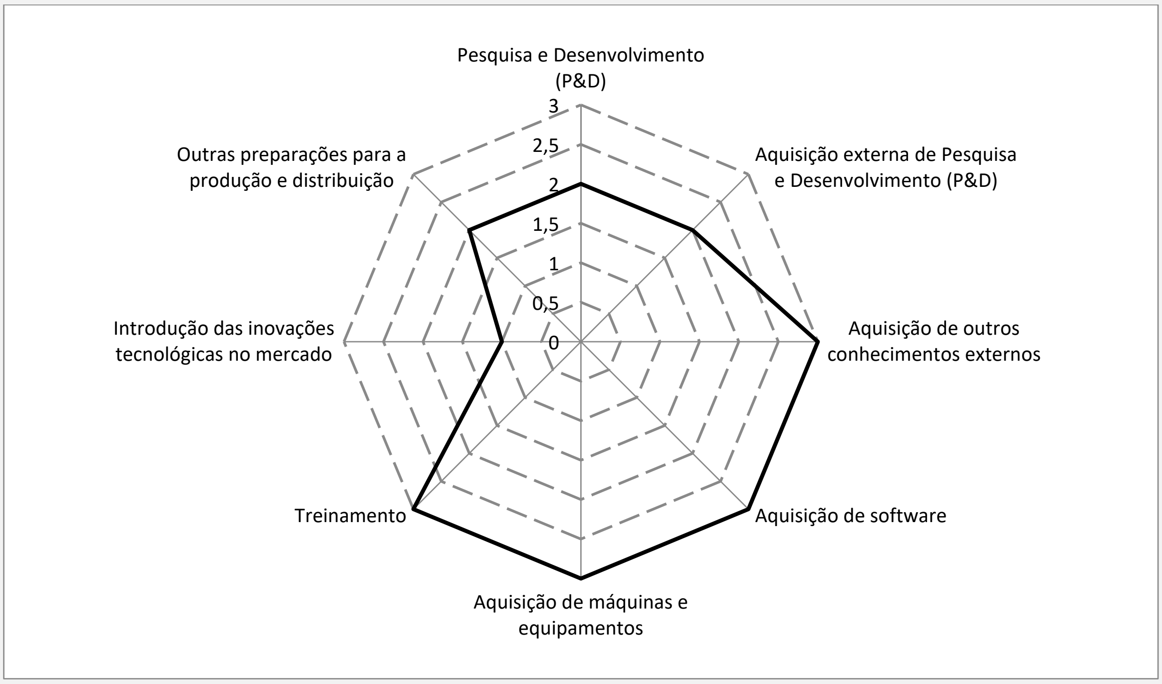
En relación con la **ocupación,** el sector emplea a 213.000 personas, y las empresas estudiadas representan el 21% de la ocupación del sector. Las cinco empresas emplean a 45.169 trabajadores (SNIS, 2015). En relación con los ingresos netos (Gráfico 1), es posible verificar el posicionamiento de las empresas seleccionadas en relación con las principales empresas del sector en la publicación *Ranking* 1000 de la revista valor económico de 2016. Las cinco empresas suman R$ 22.216,60, representando el 53,63% de los ingresos netos totales entre las 21 empresas que cotizan en ella.

Los encuestados afirman unánimemente que las actividades de Investigación y Desarrollo realizadas entre 2014 y 2016 fueron continuas. Para tres de las empresas que fueron encuestados, las innovaciones introducidas fueron predominantemente nuevas (Innovación Radical) y para dos indican un predominio de innovaciones a través de mejoras significativas (Innovación Incremental).

Las figuras 2 a 6 muestran los resultados por empresa participante en relación con la importancia de las actividades innovadoras. En este sentido, se pidió a los encuestados que indicaran la importancia de las actividades desarrolladas por la empresa, para la implementación de productos y/o procesos nuevos o significativamente mejorados, en el período comprendido entre 2014 y 2016. La medición de las declaraciones del cuestionario utilizado representa una puntuación de cuatro niveles (alto, medio, bajo y ausencia), que en las gráficas que se ilustran a continuación corresponden a alto (3), medio (2), bajo (1) y ausencia (0). Para comparar con los datos de Pintec (Figura 7) se asumió la metodología de los mismos, es decir, se aplicó un porcentaje de tratamiento a la escala (0-100) adoptando el 3 de la escala de investigación como 100%. Para la presentación de los datos sumados se utilizó el promedio de los resultados entre las cinco empresas.

En la percepción del encuestado del Egeo, se atribuye mayor importancia a la adquisición de conocimientos externos, software, máquinas y equipos y a la necesidad de formación.

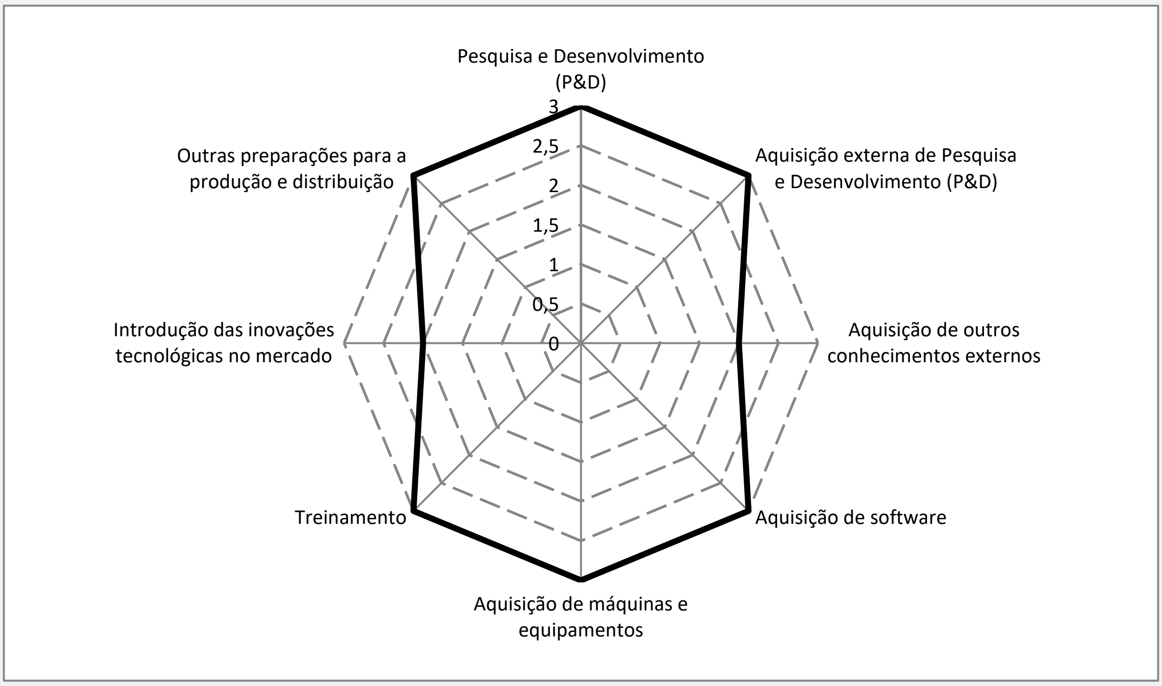
Figura 2: La importancia de las actividades innovadoras desarrolladas por el Egeo



Fuente: datos de búsqueda

En el caso de Sabesp, el encuestado concede gran importancia a casi todas las actividades innovadoras. Se identificaron dos actividades con menor intensidad: la introducción de innovaciones tecnológicas en el mercado y la adquisición de otros conocimientos externos.

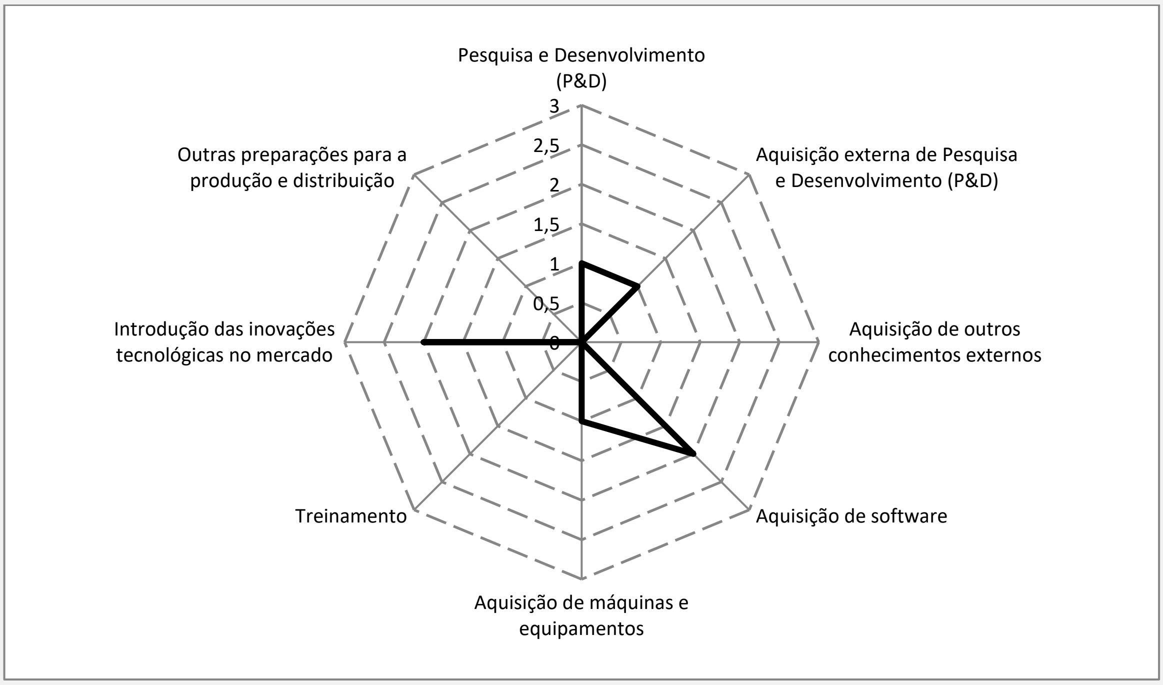
Figura 3: La importancia de las actividades innovadoras desarrolladas por Sabesp



Fuente: datos de búsqueda

Para el encuestado de Embasa existe una percepción de importancia promedio en las actividades de introducción de innovaciones tecnológicas en el mercado y adquisición de software. Informa de una baja importancia en cuanto a actividades de I+D y adquisición de maquinaria y equipos. Por último, identifica que no desarrolla capacitación, adquisición de otros conocimientos externos y otros preparativos para la producción y distribución.

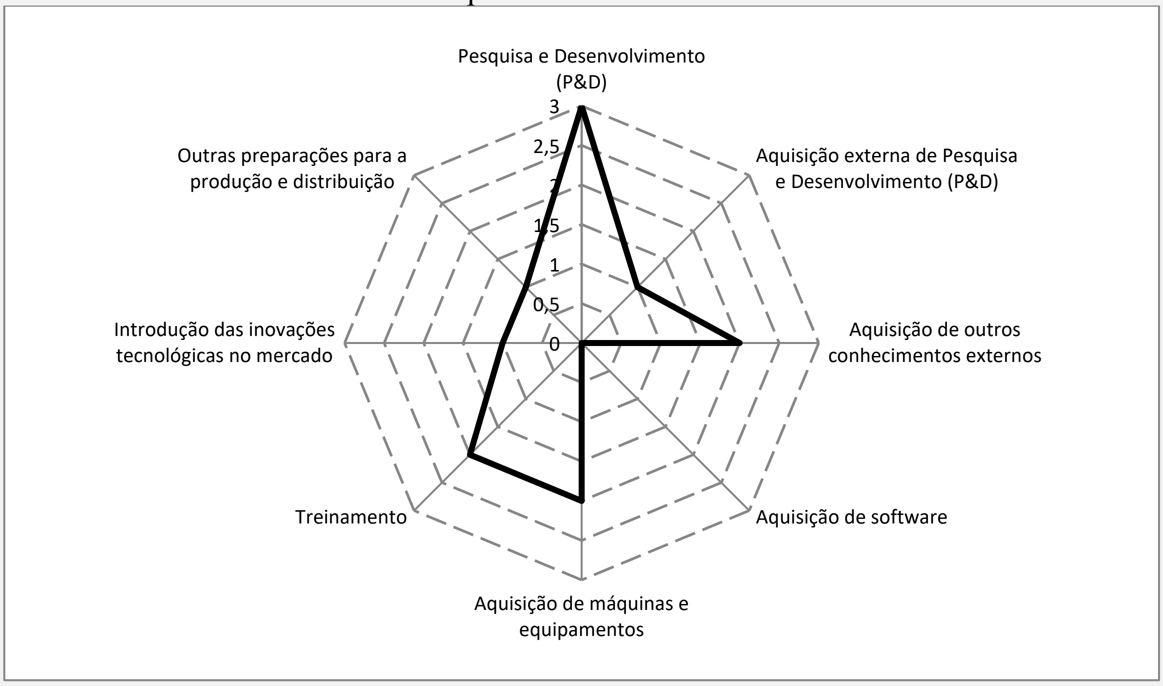
Figura 4: La importancia de las actividades innovadoras desarrolladas por Embasa



Fuente: datos de búsqueda

El encuestado copasa otorga gran importancia a las actividades de investigación y desarrollo, seguidas de la Capacitación y Adquisición de Maquinaria y Equipos y la Adquisición de conocimientos externos con atribución de importancia media.

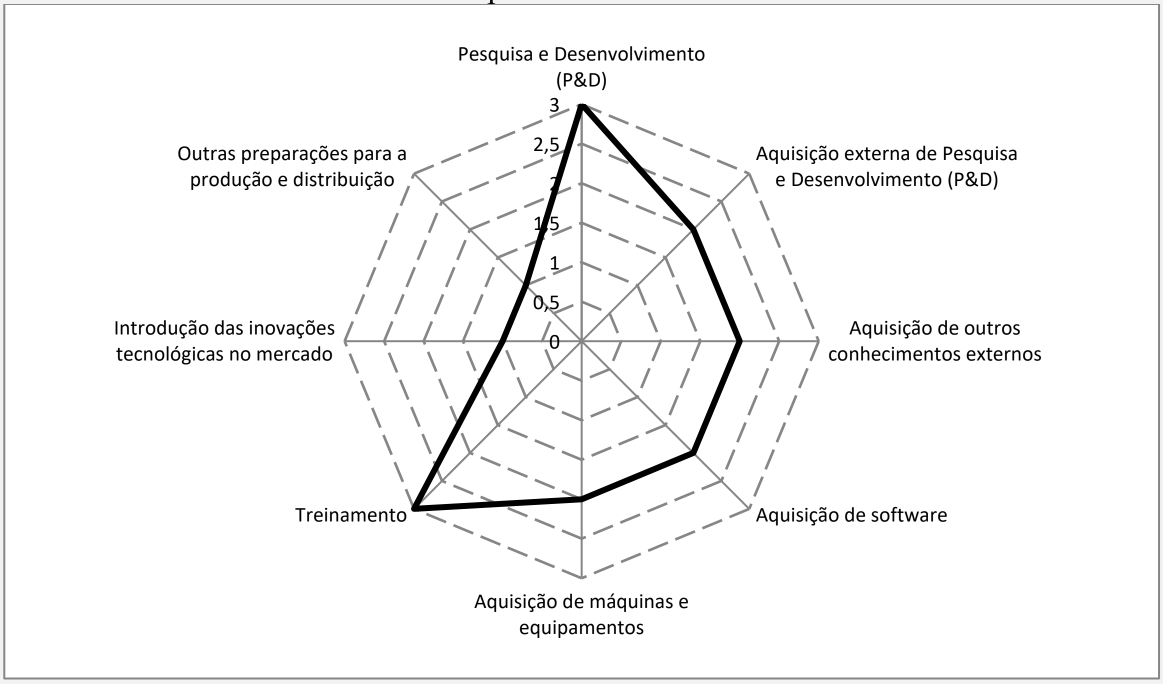
Figura 5: La importancia de las actividades innovadoras desarrolladas por Copasa



Fuente: datos de búsqueda

En la percepción del representante de Sanepar las actividades relacionadas con la formación y la Investigación y Desarrollo son las más importantes (alta importancia) seguidas de las adquisiciones de conocimientos externos, software, máquinas y equipos (importancia media).

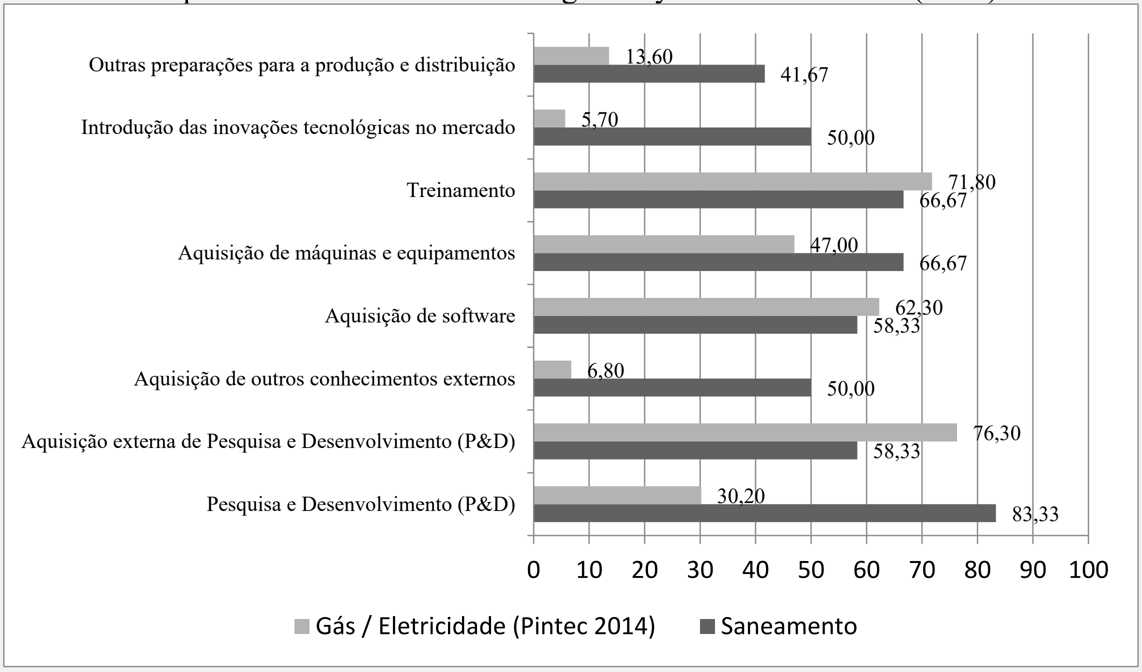
Figura 6: La importancia de las actividades innovadoras desarrolladas por Sanepar



Fuente: datos de búsqueda

La Figura 7 muestra los resultados obtenidos por la investigación con los resultados publicados en Pintec 2014 (Sectores de distribución de electricidad y gas), clasificados como servicios industriales de utilidad pública y, por lo tanto, tienen cierta equivalencia con el sector de saneamiento básico. Destacando las siguientes diferencias: Para la actividad de adquisición externa de Investigación en Desarrollo (I+D) el sector de distribución de electricidad y gas presentó evidencias de atribución de mayor importancia a esta actividad. Es importante señalar que ambos sectores tienen una fracción de la tarifa específica para la inversión en Investigación y Desarrollo, lo que no ocurre en el sector de saneamiento. En la percepción de los entrevistados de las cinco empresas de saneamiento, tiene como actividades innovadoras con mayor importancia atribuidas a investigación y desarrollo, capacitación, adquisición de maquinaria y equipos. En el sector de la distribución de electricidad y gas se destacan las actividades de formación, adquisición de software y adquisición de I+D externa.

Figura 7: La importancia de las actividades innovadoras desarrolladas por la empresa Fuente: datos de investigación y datos de PINTEC (2014)



Fuente: datos de la y datos da PINTEC (2014)

5. Conclusiones

Este trabajo tuvo como tema la importancia dada a las actividades innovadoras en las empresas brasileñas de saneamiento básico, con el siguiente problema de investigación: ¿Cuáles son las principales actividades innovadoras de las empresas del sector de saneamiento brasileño? Al final de la investigación se entiende que tanto se respondió a la pregunta del problema de la investigación como se lograron los objetivos generales y específicos.

El primer aspecto identificado en la realización de esta investigación, aún en el estudio bibliográfico, fue la dificultad de obtener artículos sobre el tema específico. Los artículos del área temática en cuestión se caracterizan predominantemente como estudios de caso sobre implementaciones de innovaciones en empresas del sector saneamiento brasileño, no permitiendo una visión integral de los esfuerzos en relación a las actividades innovadoras en cada empresa. Se entiende que este hecho es el resultado de la singularidad del sector del saneamiento. En este sentido, fue necesario utilizar artículos elaborados con la percepción de actividades innovadoras en otros sectores, para profundizar en el tema teórico/conceptual.

En cuanto a la obtención de información de los encuestados de las empresas participantes, el uso en el cuestionario PINTEC, como referencia, resultó ser correcto. El cuestionario validado por su uso de larga data (diecisiete años) aplicado seis veces (2000, 2003, 2005, 2008, 2011 y 2014), hizo innecesario aplicar una prueba previa.

Teniendo en cuenta los resultados obtenidos, se puede concluir en relación a la comparación entre empresas y la comparación de los resultados sumados con los resultados obtenidos en Pintec 2014. En este sentido, es posible observar que cada empresa se encuentra en un momento diferente en relación a la gestión de la innovación. La importancia de las actividades innovadoras, de acuerdo con la percepción de los encuestados, nos permite ser capaces de entender los esfuerzos identificados en este sentido. Con base en la suma de las puntuaciones otorgadas a las ocho actividades enumeradas en el cuestionario, se encuentra que el encuestado de sabesp atribuye un total de 92% de importancia a todas las actividades innovadoras, Aegea 79%, Sanepar 67%, Copasa 50% y Embasa 29%. Por lo tanto, existen diferencias importantes entre estas empresas con respecto a las actividades innovadoras. Por lo tanto, una buena hipótesis es una buena hipótesis para futuras investigaciones la idea de que hay diferencias relevantes entre las empresas de saneamiento en Brasil en relación con sus esfuerzos y el desempeño innovador

Analizando los comportamientos individuales presentados por las empresas, es posible verificar diferentes percepciones con respecto a la intensidad de las acciones en relación con las actividades innovadoras. Estas diferencias pueden ser el resultado del factor de localización, que infiere en la facilidad o no al acceso y/o práctica de las actividades innovadoras propuestas, en las que la presencia local de actores adherentes permite la creación de una redde colaboración, basadaen la extensión y que además danfruto de diferentes estrategias innovadoras de cadaempresa.

Un factor divergente en los datos y que se puede explorar mejor en futuros estudios es que para tres de las empresas encuestadas (60%) las innovaciones introducidas se caracterizaron como Innovación Radical y para dos indican predominio innovación Incremental.

En relación con las actividades destacadas en la suma de las respuestas obtenidas de las cinco empresas, es posible establecer una comparación con los resultados señalados por la investigación de Gava y Zilber (2014) que atribuye como actividades más relevantes la investigación junto con las universidades y la adquisición con proveedores. Con los resultados aquí presentados, cabe señalar que sólo se confirmó la alta importancia de la adquisición de maquinaria y equipo. La alta importancia de la I+D interna y la capacitación detectada fue diferente de los datos verificados en Gavà y Zilber (2014) que las actividades innovadoras desarrolladas por el sector brasileño de saneamiento básico se limitan a la captura de ideas externas y desarrollo interno, llevado a cabo de manera organizada por el área responsable que genera innovación tecnológica a partir de la demanda operativa, la investigación junto con las universidades o la compra del proveedor.

También en relación con los resultados obtenidos, fue posible compararlos con los de la Encuesta Nacional de Innovación - Pintec 2014, ver Figura 7, y verificar similitudes de los resultados entre los sectores comparados: Pintec (Electricidad y Gas) y la investigación (Saneamiento). Es importante que las entrevistas se realizaron con base en el modelo de investigación Pintec, permitiendo que la metodología de selección de los entrevistados y el uso de las percepciones sea igual entre las encuestas. Cuando se trabaja con sólo cinco empresas, la comparación resultó ser importante como benchmarking, ya que el sector referido también constituye utilidades que permiten verificar la consistencia de los datos obtenidos. Había similitudes, pero también diferencias. Una comparación más consistente entre los sectores requerirá una muestra más amplia de empresas brasileñas de saneamiento.

Este trabajo es sólo el comienzo de un acercamiento a un universo poco explorado. La demanda de una rutina continua de actividades de investigación sobre el desarrollo y la innovación de las organizaciones en el sector del saneamiento brasileño requerirá estudios adicionales.

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The Dimension of Higher Education in the Strategic Partnership between Brazil and the European Union: The Case of the Sciences without Frontiers Program (2007-2016)[1]

A Dimensão da Educação Superior na Parceria Estratégica entre o Brasil e a União Europeia: O Caso do Ciências sem Fronteiras (2007-2016)

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Abstract: The bilateral relationship between Brazil and the European Union began in 1960. In 2007, it reached a new level with the establishment of a strategic partnership between the two international actors. As a result, bilateral ties were strengthened in several sectors, such as renewable energy and the promotion of human rights. The various documents produced during this partnership indicated higher education and technological and scientific cooperation as important vectors of approximation, in addition to a vast field of convergence of interests and values. Therefore, this article has the general scope of presenting the evolution of the relations between Brazil and the European Union from 2007 to 2016. The specific objectives are: (a) to examine the evolution of the theme of the internationalization of higher education in summit meetings between Brazil and the European Union from the beginning of the Brazilian-European strategic partnership (2007) until the end of the Dilma Rousseff administration (2016); and (b) to carry out a case study on the role of the European Union in the Science Without Borders program, from its creation in 2011 to 2016, that is, from the beginning to its total shutdown. The methodology adopted was historical-descriptive, through the analysis of primary sources, such as Brazilian and European official data and documents, and a survey of specialized bibliographies on the topic. A final analysis shows the success of the bilateral cooperation in the area of internationalization of higher education, driven by this strategic partnership.

Keywords: Brazil; European Union; Strategic Partnership; Education; Science without Borders.

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Resumo: A relação bilateral entre Brasil e União Europeia teve início no ano de 1960. Em 2007, o relacionamento galgou a um novo patamar com o estabelecimento de uma parceria estratégica entre os dois atores internacionais. Com isso, existiu o fortalecimento dos laços bilaterais em diversos setores, como energias renováveis e promoção dos direitos humanos. Os diversos documentos produzidos ao longo dessa parceria indicaram a educação superior e a cooperação tecnológica e científica como vetores importantes de aproximação, além de um vasto campo de convergência de interesses e valores. Diante desse cenário, o presente artigo tem como escopo geral apresentar a evolução das relações entre Brasil e União Europeia de 2007 a 2016. Os objetivos específicos são: (a) examinar a evolução da temática da internacionalização da educação superior nas reuniões de cúpulas entre Brasil e União Europeia desde o início da parceria estratégica brasileiro-europeia (2007) até o fim do governo Dilma Rousseff (2016); (b) fazer um estudo de caso sobre o papel da União Europeia no programa Ciência Sem Fronteiras, desde sua criação em 2011 até 2016, ou seja, do início à sua paralização total. Para tanto, optou-se pelo método histórico-descritivo, por meio da análise de fontes primárias, como dados e documentos oficiais brasileiros e europeus; foi feito também um levantamento de bibliografias especializadas sobre o tema. Em análise final, observa-se o êxito da cooperação bilateral na área de internacionalização da educação superior, impulsionado pela parceria estratégica.

Palavras-chave: Brasil; União Europeia; Parceria Estratégica; Educação; Ciência sem Fronteiras.

1. Introduction

The internationalization of higher education is increasingly present in the contemporary world, whether due to the increase in the transnational flows of information, people, goods and services – a phenomenon also called “globalization” – or because of the economic valorization and political appreciation of the knowledge produced by the academic community in the information age, or even due to the development of a global market in the area of higher education (Azevedo, 2015; Amal, Borges, 2015). Nevertheless, the internationalization of research and higher education is increasingly seen as a vector for generating income and wealth in contemporary society (creative economy) and facing global challenges, expressed in the Sustainable Development Goals (SDGs) from the UN.

Among the main players in this scenario are the United States, Australia, the People's Republic of China, Canada, India, Brazil and members of the European Union (EU). Each of the actors has an international strategy, with a view to expanding their participation and power in this arena. For example, in the European Union (EU), internationalization goes beyond academic mobility, as it covers all the transversal development of higher education and encompasses all areas of research, teaching and extension, aiming not only to benefit the academic community, but also to strengthen the European integration project through the effects of spill-over to other economic, social, cultural and political sectors (Hass, 1970).

The promotion of educational reforms by European Union participants (such as the Bologna Process, 1999) has generated important changes, such as the reorganization and encouragement of the internationalization of European higher education via programs financed by European funds such as Erasmus Mundus and Erasmus+, both in the field of international academic mobility and in the creation of joint undergraduate and graduate programs or European educational consortia, among other actions (Costa, 2017).

For its part, Brazil also formulated policies for implementing the internationalization of higher education, led by the Coordination for Improvement of Higher Level Personnel (*Coordenação de Aperfeiçoamento de Pessoal de Nível Superior*, CAPES) and the National Council for Scientific and Technological Development (*Conselho Nacional de Desenvolvimento Científico e Tecnológico*, CNPq). Both agencies encourage and finance the internationalization of education through scholarships and support for joint international projects, among other initiatives (Maués & Bastos, 2017).

In recent years, the main Brazilian program for the internationalization of higher education was the "Science Without Borders" (SwB), which started in July 2011 and ended in July 2016. This program aimed at the expansion and innovation of science and technology in Brazil, by expanding the flow of international outgoing mobility of students and researchers. To this end, the Ministry of Education, through CAPES and CNPq, established cooperation agreements with numerous state and private entities (Miranda & Bischoff, 2018).

SwB served approximately 93,000 Brazilian researchers and students, at a cost of 13.2 billion Reais invested by the Brazilian National Treasury (Marques, 2017), with the European Union being the main destination for these academics. According to the Control Panel of SwB (2016), the countries of the European Union received 44,747 beneficiaries until January 2016, that is, approximately 50% of the scholarships granted by the program.

The European option of SwB must be understood within the strategic partnership between Brazil and the European Union (from 2007 to the present day). In this high-level political dialog, Brazil's and the European Union's authorities raised the level of interlocutions with thematic forums, periodic meetings and the creation of a vast agenda with various themes, such as the fight against poverty and the promotion of regional cooperation, among several others (Tomazini, 2019).

Education – especially higher education –, development and cooperation in the areas of science and technology are present on the agendas of the representatives of both parties. The importance devoted to the area of higher education was highlighted in the Joint Declaration of the 5^{th} Summit, in 2011, in the city of Brussels, when the topic was definitely introduced on the agenda of this partnership (Espósito & Espindola, 2019).

As stated earlier, this article aims to: (a) examine the evolution of the internationalization of higher education in summits between Brazil and the European Union since the beginning of the Brazilian-European strategic partnership (2007) until the end of the Dilma Rousseff administration (2016); and (b) carry out a case study on the Science Without Borders program from its creation in 2011 to its total shutdown in 2016.

Two assumptions are highlighted: (a) Brazil and the European Union are important partners; however, with the evolution of the strategic partnership, there was a change in the focus of the relationship, from themes such as disarmament and peace promotion to others such as education and promotion of human rights (Saraiva, 2019), and (b) education – especially higher education – played an important role in strengthening bilateral ties (Espósito & Espindola, 2019). However, with the end of the SwB program and the resizing of the Erasmus and Horizon 2020 programs, among others, the educational dimension lost its initial impetus; in addition, the Brazilian political-economic crisis (2015-2018) affected the dynamics of the partnership.

Despite this loss of momentum in the bilateral relations, it can be said that the constitution of the strategic partnership between Brazil and the European Union, in 2007, took cooperation to a new level, creating channels and instruments for the realization of dialog, such as the Partnership Instrument (PI). New topics were discussed, such as the internationalization of higher education and the governance of global themes (Cravinho, 2017; Tomanzini, 2017; Espósito & Espindola, 2019), generating a process of feedback of the partnership, with the inclusion of new actors, such as universities and funding agencies, and spilling over to other topics, such as human rights, which ended up strengthening asymmetric interdependence and creating a complex network of bilateral cooperation (Tomanzini, 2018).

In addition, higher education is seen by European and Brazilian authorities as an important soft power instrument to create complex cooperation networks with a view to projecting the image and strengthening the State's position on sensitive issues, such as trade and agriculture, thus reducing eventual "costs" (trade offs) in complex international negotiations (Tomanzini, 2019; Cravinho, 2017). According to Menezes and Paiva (2019), this can be seen in Brazil's role in the recent signing of the trade agreement between Mercosur and the European Union.

For this work, the authors elected the historical-descriptive method (Lakatos & Marconi, 2001). To this end, several primary sources were examined, in particular Brazilian and European official data and documents, and a selected bibliography on the topic was used.

The authors also opted for Robert Keohane's (2001) and Nye's (2009) liberal-institutional theoretical approach, which presents important analytical tools, such as the idea of spill-over – overflowing cooperation for several fields, of complex interdependence, generating the strengthening of the cooperation, trust and mutual dependence ties – and soft power, subtle ways of projecting power and attracting other countries. In addition, the importance of topics such as health, environment and education in international relations was emphasized.

Nye (2004, p. 4) defines soft power as: "country may obtain the outcomes it wants in world politics because other countries – admiring its values, emulating its example, aspiring to its level of prosperity and openness – want to follow it". This power is related to three main power sources: culture, political values and moral authority.

> The soft power of a country rests primarily on three resources: its culture (in places where it is attractive to others), its political values (when it lives up to them at home and abroad), and its foreign policies (when they are seen as legitimate and having moral authority) (Nye, 2004, p. 11).

Historically, universities and the internationalization process of higher education are important instruments of a State's soft power for actively promoting these three dimensions (Wojciuk, 2018, p. 343). Thus, the partnership between State actors – such as international funding agencies – and non-State actors, such as universities, are important to strengthen the sources of a State's soft power.

> It is true that firms, *universities* [grifo do autor]**,** foundations, churches, and other nongovernmental groups develop soft power of their own that may reinforce or be at odds with official foreign policy goals**.** *That is all the more reason for governments to make sure that their own actions and policies reinforce rather than undercut their soft power* [grifo do autor]. And this is particularly true since private sources of soft power are likely to become increasingly important in the global information age (Nye, 2004, p. 17).

Jane Knight (2003) defines the field of the internationalization of higher education as being "the process of integrating an international, intercultural, or global dimension into the purpose, functions or delivery of postsecondary education". Maillard (2019) analyzes the importance of the elements of the international, intercultural and global dimension that refer to the various directions of internationalization, as well as of the elements which are characteristic of the world of interdependence in which countries live. Jane Knight (2004, 2018) and Hans De Wit (2013, 2011) indicate the importance of knowledge diplomacy in international relations:

> Knowledge diplomacy involves the contribution that education and knowledge creation, sharing and use make to international relations and engagement. But knowledge diplomacy should be seen as a reciprocal process. Mutual benefits and a two-way exchange are therefore essential to the concept of international education and research as a tool of knowledge diplomacy (Knight & Wit, 2018, p. 3).

John Hudzik (2011) points out the importance of a "comprehensive internationalization" of the actors according to objectives, values and means. On his turn, Wit et al. (2015) expands the significance of the process to better adapt to contemporary reality:

> The *intentional* process of integrating an international, intercultural or global dimension into the purpose, functions and delivery of post-secondary education, *in order to enhance the quality of education and*

> *research for all students and staff, and to make a meaningful contribution to society* (Wit et al., 2015, p. 285)

Finally, Knight (2004, pp. 14-17) demonstrates that the strategy of internationalization of a higher education institution is conditioned by external factors, such as public policies and foreign funding, and also by internal institutional elements, such as the capacity of bureaucracy, which can lead the internationalization process either at home or abroad/cross-border education (Beelen & Jones, 2015). In the case of Science Without Borders, the option was abroad education, or outgoing mobility, which has higher costs but allows the beneficiary greater cultural, social and scientific immersion in the experience of mobility.

> Soft power of higher education is exercised through influence on the intellectual and scientific life and through spreading ideas worldwide. Attraction of students and scholars from abroad to higher education institutions is considered to be an effective approach to cultivating individuals who will develop an understanding of a given country, and support for it. It also promotes mutual understanding between the countries which participate in an exchange... (Wojciuk, 2018, p. 345).

The selection of Science Without Borders (SwB) is due to the ambitious objectives of the program – such as granting 100,000 scholarships – as well as the amount of resources contributed to the action, of approximately 13 billion Reais. This action placed Brazil at the center of discussions on the internationalization of higher education and showed the importance of mobility in promoting soft power, as highlighted by Nye:

> Soft power rests on some shared values. That is why exchanges are often more effective than mere broadcasting. By definition, soft power means getting others to want the same outcomes you want, and that requires understanding how they are hearing your messages, and fine-tuning it accordingly. It is crucial to understand the target audience... (Nye, 2004, p. 111).

The Science Without Borders program, being a relationship with a double meaning and with win-win characteristics, can also be characterized as knowledge diplomacy, since there was great convergence of objectives, interests and values between the parties.

In addition to the introduction and final considerations, this article is divided into three parts. The first presents the evolution of the strategic partnership between Brazil and the European Union from 2007 to 2016. Thus, it is expected to present the vectors of this relation and the expectations of each of the partners. The second examines the theme of internationalization of education as an element of soft power in international relations, especially from the perspective of Brazil and the European Union. The third part analyzes the SwB Program within the context of the strategic partnership.

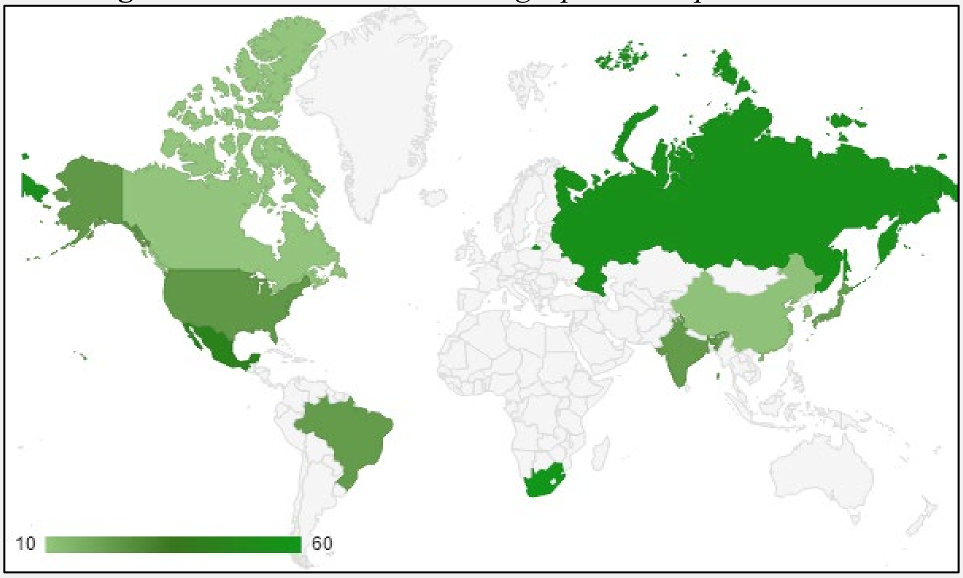
2. The evolution of the relations between Brazil and the European Union: A strategic partnership in construction

Despite the relations between the Brazilian Government and European countries dating back to the time of independence (Gueraldi, 2003) and containing strong economic, political and cultural ties, the relations between Brazil and the European Union began in the 1960s (Cunha, 2014).

Only in July 2007 a strategic partnership was formalized, given the growing importance of both actors on the international scenario (Gratius, 2018) and the convergence of interests and values (MRE, 2018). On the Brazilian side, the goal was to strengthen Brazil's proactive role in global politics in an international system in transition (Saraiva, 2018, p. 278). From a European perspective, Brazil and Mexico have an important role in the relations between Latin American countries and the European Union, either due to their economic weight or their political relations. Thus, in 2005, the European Commission published a "Communication from the Commission to the Council and the European Parliament", in which the importance and the need for a strategic partnership with Brazil and Mexico were emphasized for the construction of a "new" globalized world and a fruitful relationship between the European continent and Latin America (European Commission, 2005).

A strategic partnership is a "singularized bilateral political relationship . . . that the European Union establishes with each of the members of a certain group of third countries, due to the importance of their role on the international scenario'' (Barthelmes, 2008, p. 37). The European Union currently has ten strategic partnerships distributed around the world, composed of the following countries: Brazil, Canada, China, India, Japan, Mexico, Russia, South Africa, South Korea, and the United States (Cravinho, 2017).

Figure 1: *Countries with a strategic partnership with the EU*



Source: Tomazini (2018, p. 65).

The Brazil-European Union strategic partnership was formed at a time of building the Brazilian leadership in South America, driven by the successes of the Lula administration and the rise of leftist governments in the region (Saraiva, 2018, p. 279), which was called "pink tide'' (Lambert, 2010). From this context, in the European perspective, Brazil would have many principles and values in common with the group, such as the fight against poverty and the search for the maintenance of democracy throughout the region. Furthermore, in the period from 1987 to 2006, Brazil had the countries of the European Union as its main foreign investors and commercial partners (Barthelmes, 2008).

With the creation of the strategic partnership, the political dialog between partners rose to a new level of interlocution on diverse topics. And not only through the annual summits at which the relationship is institutionalized, but also through regular meetings between senior officials, technicians and specialists, which took place both in Brazil and in the EU. Among the topics examined at the summits and in political relations are the following: promotion of peace and security, climate change, sustainable development, fight against poverty, promotion of regional cooperation and cooperation in the areas of science and technology (EU Delegation, 2016). The role of the business community must be highlighted during the Brazil-EU Political

Summits (Pereira & Juliano, 2019).

Since 2007 the European Union has become the second market for Brazilian exports, only behind China and ahead of the United States. Brazil is the thirteenth market for exports from the European Union. On the one hand, Brazil is the fifth largest investor in the European Union; on the other hand, the European Union is the largest foreign investor in Brazil (Apex, 2017). Table 1 presents the evolution of the trade chain between Brazil and the European Union from the 2000s to 2017, and shows a continuous growth until the economic crisis in the second half of the second decade of the 2000s. Brazilian exports are centered on agribusiness; on its turn, imports from the European Union are concentrated in high-value manufactured products (Apex, 2017, p. 8).

Table 1: *Commercial exchange between Brazil and the European Union*

Year/month	EXPORTS	IMPORTS	RESULT	
	US$ FOB (A)	US$ FOB (B)	BALANCE (A-B)	TRADE CHAIN (A+B)
2000	55.118.919.865	55.850.663.138	-731.743.273	110.969.583.003
2001	58.286.593.021	55.601.758.416	2.684.834.605	113.888.351.437
2002	60.438.653.035	47.242.654.199	13.195.998.836	107.681.307.234
2003	73.203.222.075	48.325.566.630	24.877.655.445	121.528.788.705
2004	96.677.498.766	62.835.615.629	33.841.883.137	159.513.114.395
2005	118.529.184.899	73.600.375.672	44.928.809.227	192.129.560.571
2006	137.807.469.531	91.350.840.805	46.456.628.726	229.158.310.336
2007	160.649.072.830	120.617.446.250	40.031.626.580	281.266.519.080
2008	197.942.442.909	172.984.767.614	24.957.675.295	370.927.210.523
2009	152.994.742.805	127.722.342.988	25.272.399.817	280.717.085.793
2010	201.915.285.335	181.768.427.438	20.146.857.897	383.683.712.773
2011	256.039.574.768	226.246.755.801	29.792.818.967	482.286.330.569
2012	242.578.013.546	223.183.476.643	19.394.536.903	465.761.490.189
2013	242.033.574.720	239.747.515.987	2.286.058.733	481.781.090.707
2014	225.100.884.831	229.154.462.583	-4.053.577.752	454.255.347.414
2015	191.134.324.584	171.449.050.909	19.685.273.675	362.583.375.493
2016	185.235.400.805	137.552.002.856	47.683.397.949	322.787.403.661
2017	107.710.145.552	71.494.120.474	36.216.025.078	179.204.266.026

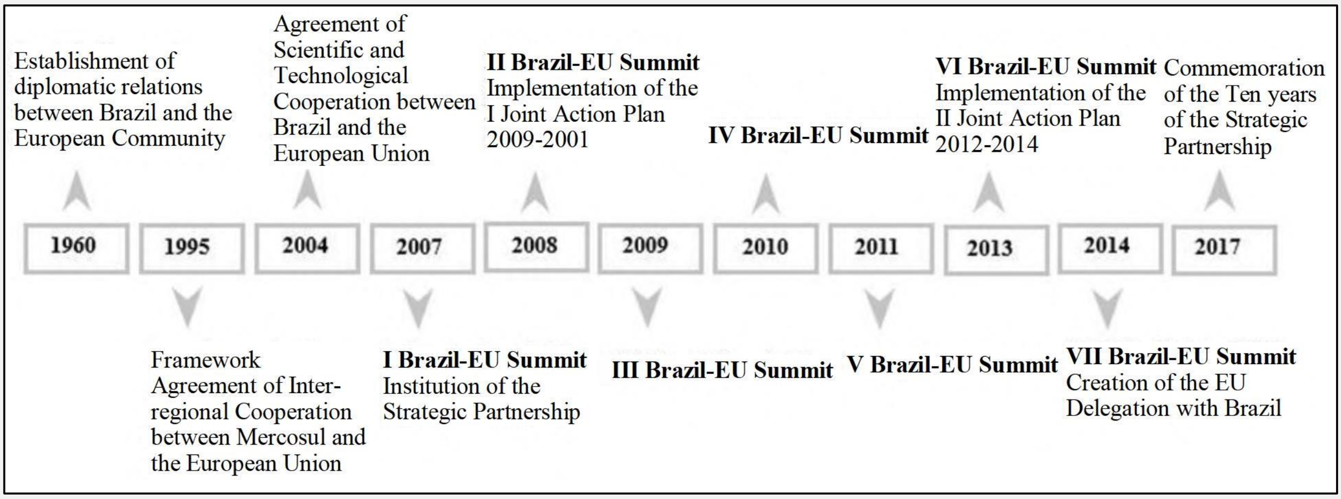
Source: MDIC (2020).

In the first summits, the focus was on an agenda of hard power[4,] with the main themes being security, peace and the arms issue, in addition to topics such as the environment and the fight against hunger. During the summits, this transition of the

[4] Nye (2018) argues that, in this perspective, relationships are based on the use of coercion, that is, the agenda is focused on the instruments of actions such as the armed forces and security.

agenda between the themes of hard to soft power is analyzed, with focus for the fifth summit, in which the themes of soft power took on much greater proportions, with a focus on climate issues, higher education, combating global poverty and development of science and technology.

Figure 2: *Chronology of the bilateral relationships between Brazil and the EU*



Source: Brazil, 2019. Prepared by the authors based on information from the European Union Representation website (2019).

2.1. The evolution of the summit meetings in the strategic partnership between Brazil and the European Union (2007-2017)

In 2007, at the first summit meeting, an agenda was formulated with the following objectives: to strengthen political dialog, mainly on sectoral policies; to work together to address the most pressing challenges of global peace and security; to expand and deepen commercial and economic relations; to encourage exchanges between its peoples with the aim of greater understanding between both regions; and to implement a Joint Action Plan, to be developed during the second Brazil-EU summit (Eubrasil, 2007) (Pereira & Prado, 2015).

At the second Brazil-European Union Summit, held in the city of Rio de Janeiro on December 22nd and 23rd, 2008, economic issues and financial regulation were the main priorities on the agenda (EU Delegation, 2016). The topics covered were the following: the implementation of the I Brazil-European Union Joint Action Plan 2009-2011, in which both agreed to build a comprehensive strategic partnership by promoting peace and security through an effective multilateral system; strengthening the economic, social and environmental partnership to promote sustainable development; promoting regional cooperation; promoting science, technology and innovation; promoting exchange between peoples (EU Council, 2008).

On October 6th, 2009, the third summit, held in Stockholm, discussed issues such as the implementation of the Joint Action Plan and global, regional and international issues, such as technological development, the environment and trade (EU Council, 2009).

As of December 1st, 2009, the Brazil-European Union relations were governed by the Lisbon Treaty. As a result, the other regular meetings started to be organized by the Presidents of Brazil and the European Council, and the subsequent summits, held in the cities of Brussels and Brasília, followed the same model.

On July 14th, 2010, in Brasilia, the fourth Brazil-European Union Summit was held. Once again the importance of building the 2008 Joint Action Plan was discussed. Issues such as the commitment to the fight against arms and drug trafficking and sustainable development were addressed, among other topics (EU Council, 2010). There was also the creation of sector dialogs, to strengthen cooperation, and bilateral conversations between various sectors, in addition to the provision of a budget of up to 30 million Euros to finance projects of common interest (Sector Dialogs, 2020).

The fifth meeting of this partnership took place on October 4th, 2011 in the city of Brussels. On that occasion, the authorities stressed the importance of the summits for deepening political dialog in the face of global challenges, and, among other topics, addressed issues related to higher education, technological development and innovation, academic mobility and sustainable development (EU Council, 2011).

> They emphasized their shared view on the crucial role of higher education, academic cooperation and mobility, as well as scientific research, technology and innovation, to promote rapid and sustainable growth and increase productivity and employability. They decided to strengthen EU-Brazil dialog and cooperation in these fields, based on existing policy instruments and programs, such as Erasmus Mundus and Marie Curie and the "Science without Borders" mobility scheme in Brazil. They also decided to launch a platform for dialog and exchange to promote academic mobility and cooperation between Brazil and the EU (Council EU, 2011, p. 2).

On January 24th, 2013, the sixth Brazil-European Union summit took place in Brasília. At that meeting, the 2012-2014 Joint Action Plan was implemented. Those present expressed their satisfaction with the partnership and with the progress in more than 30 areas of different sector dialogs and also showed enthusiasm for the growing bilateral relationship and the consequent increase in trade and investment flows between both parties (MRE, 2013).

In bilateral cooperation, the European Union invested 61 million Euros, distributed as follows: support for sector dialogs (9.15 million Euros); academic cooperation (30.5 million Euros); Center for European Studies (3.05 million Euros); and promotion of the environmental dimension of Sustainable Development (18.3 million Euros) (Tomanzini, 2018). The largest amount of investment in academic cooperation occurred through the granting of scholarships from the Erasmus Mundus program, in operation in that same period (Tomanzini, 2018).

On February 24th, 2014, at the last summit of this partnership, three topics dominated political dialog: the first was economic and job growth, mainly due to the agreements aimed at bilateral-regional negotiations between Mercosur and the European Union; the second was the building a common agenda for global challenges (climate change, energy, human rights, among others); and the third was the proposal to build more solid cooperation on foreign policy and security (Brussels News, 2014).

During this period, Brazil started to be considered a middle-income country for the EU, which meant that the financing of the bilateral relationship would no longer be through development cooperation, but through the Partnership Instrument (PI). Cooperation is based on joint public policies in the multilateral and bilateral environment of sectors of common interest. To this end, the following projects considered relevant for the continuity of the relationship were immediately analyzed: bilateral cooperation of the sector dialogs, the Jean Monnet Program and the actions of public diplomacy (Tomanzini, 2018).

Thereafter, European financing started to be developed through a specific regional fund. Between 2014 and 2020, nearly 805 million Euros were allocated to Latin America, with Brazil being the preferred partner. The resources were distributed in the following manner:

> *163 million Euros were allocated to higher education under Erasmus+* [emphasis by the authors]; 300 million Euros are earmarked for environmental sustainability and climate change; 215 million Euros will be allocated to projects related to sustainability and inclusive growth for human development; 42 million Euros are intended to support good governance, accountability and social equality initiatives; 70 million Euros will be allocated to security and development projects; 15 million Euros will be allocated to support measures (Delegation Brazil, 2016).

In the bilateral relations between Brazil and the European Union, the area of education played an important role, as both opt for a strategy aimed at strengthening soft power (Pinheiro & Candeas, 2012; Geraldi, 2006) and multilateralism to the detriment of hard power. Thus, the theme of education, especially the internationalization of higher education, was important in the bilateral agenda between 2011 and 2016.

> The topics related to international cooperation in higher education, research and innovation were always present in the different joint statements issued after each summit; however, the relevance given to these topics increased since 2011. An example is the Joint Declaration of the 5th EU-Brazil Summit of October 4th, 2011. In this statement, the Brazilian Government's Science without Borders (SwB) program, the Erasmus Mundus program, the 7th Framework Program for Technological Research and Development (7FP) and the EU's Marie Curie Actions are seen as instruments of political action to boost and implement cooperation between the two regions. The active involvement of higher education institutions and the teaching staff in the implementation of the High Level Political Dialog is another aspect highlighted in this document (Maia & Carvalho, 2014, p. 19-20).

However, what were the reasons that led the internationalization of higher education to gain a very important role in Brazilian-European relations?

3. The internationalization of higher education in the relations between Brazil and the European Union

On the one hand, in Brazil, President Dilma targeted as one of the thirteen main guidelines of her government the expansion of investment in research and development and in scholarships in strategic sectors – such as biofuels and nanotechnology – in order to transform the country into a “technological and scientific economy” (Brazil, 2011). This was also expected to reduce the scientific and technological gap that still segregates

Brazil from more developed nations, in addition to improving the training of human resources in the country (Manços & Coelho, 2017, p. 56). During an official visit to the United States, President Dilma Rousseff was very impressed by the breadth of initiatives, such as the "100 k Strong in the Americas", created to strengthen academic mobility flows. She also saw the potential of joint initiatives for educational exchanges in science as a tool of the Brazilian foreign policy and soft power (Manços & Coelho, 2017, p. 56; Menezes & Paiva, 2019). This is clear in the presidential speech:

> We are sure that, after the first hundred thousand, another hundred thousand will follow, and *we want to open the scientific and technological training and the environment necessary for innovation to many Brazilians, because we depend on this massive training to create this kind of critical mass environment, which is essential for inventions, for discoveries and for this immense adventure of the human being that is to overcome oneself systematically*.
> I know our challenges are great, and Brazil is a complex country. *I know we need, simultaneously, to face our historic debts, such as extreme poverty and the guarantee of raising the competitiveness of our society, our economy, through science, technology and innovation* (Brazil, 2011b, n.p., emphasis by the authors).

According to Saraiva (2018, p. 279), Brazilian policy makers identified the partnership with the EU as an instrument to strengthen the country's prestige and international recognition on the international stage. One of the vectors of this relationship is the engagement in science and technology. Since 2004, there has been a Scientific and Technological Cooperation Agreement, whose objective is to increase investments and transfer of technology and innovation. In fact, during the V Brazil-European Union Summit in October 2011, one of the most emphasized themes was the strategic importance of increasing educational cooperation in higher education to promote flows of academic modalities and the construction of scientific, technological, and joint innovation research studies between Brazilians and Europeans. To achieve this goal, the parties decided to deepen their relations based on existing programs, such as Erasmus Mundus and Erasmus+, developed by the European Union, and the Science without Borders project created by Brazil (EU Council, 2011).

One of the goals of the European Union is to be a "civil power", that is, an effective actor in the multilateral arena, with an emphasis on the area of soft power to defend its values and interests. Therefore, it is observed that higher education is seen as an important instrument of power projection for the Europeans (Costa, 2017). Thus, the European engagement in the internationalization of higher education, both inside and outside the European bloc, is vital for this international insertion strategy. By the way, the Strategy Europe 2020 document places the internationalization of higher education as one of the main goals.

> *The aim is to enhance the performance and international attractiveness of Europe's higher education institutions* and raise the overall quality of all levels of education and training in the EU, combining both excellence and equity, by promoting student mobility and trainees' mobility, and improve the employment situation of young people.
> At EU level, the Commission will work:
> – *To integrate and enhance the EU's mobility, university and researchers' programmes (such as Erasmus, Erasmus Mundus, Tempus and Marie Curie) and link them up with national programmes and resources.*
> – To step up the modernisation agenda of higher education (curricula, governance and financing) including by benchmarking university performance and educational outcomes in a global context (European Comission, 2010, p. 11, emphasis by the authors).

In 1999, the European bloc launched the Bologna Process, an intergovernmental and supranational program whose scope is the elevation and harmonization of European higher education within all its affiliated countries (European Commission, 2018). To achieve this, the program encouraged national education reforms and the creation of a single common framework that promotes academic mobility and common teaching, research and extension programs. The aim was to make European educational institutions more attractive, competitive and accessible to researchers from around the globe. Furthermore, the European Higher Education Area (EHEA) was established, through which 48 European countries are committed to:

> ... introducing a three-cycle higher education system, consisting of undergraduate, master's and doctoral degrees; ensuring the mutual recognition of qualifications and periods of learning abroad completed at other universities; applying a quality assurance system in order to reinforce the quality and relevance of learning and teaching (European Commission, 2018).

One of the initiatives was to reduce bureaucracy in the process of internationalization of higher education by reducing rules and restrictions on visas and the validation of student credits, as well as the development of government programs for student financing, such as full and partial scholarships, to facilitate mobility, among other actions. Among the various projects in the field, the most important are the Erasmus+, Erasmus Mundus and Horizon 2020 programs.

Erasmus+ is scheduled to run from 2014 to 2020. The program aims to support projects, partnerships, events and mobility in the areas of education, training, sports and internships, among others, both between institutions in European countries and in partner countries. The program was developed by the European Parliament of the EU and the European Commission. The execution is the responsibility of the Education, Audiovisual and Culture Executive Agency (EACEA) in Brussels and the National Agencies (NAs), located in each of the countries participating in the program (European Commission, 2017). The budget is approximately 16.5 billion Euros, distributed among higher education training projects, Erasmus Mundus Joint Master Degrees and Jean Monnet[5] Activities, among others (European Commission, 2017).

Erasmus Mundus aims to encourage European education through academic mobility, in addition to strengthening the bonds between other European countries and their partners. This program can be divided into two phases: the first, from 2004 to 2008, was more specific, so that non-European students could take a master's degree at European universities; the second started in 2009, and is in progress. The goals are as follows: to expand the program's actions, to enable high-level master's and doctoral scholarships at European institutions for citizens of partner countries, and to create an international institutional consortium for the promotion of European higher education (European Commission, 2017).

The Brazilian participation in the Erasmus+ Program, from 2015 to 2018, corresponds to 22% of the Latin American regional budget (European Commission, 2018). Table 2 shows the data of this participation, by category, in the Erasmus programs.

[5] Jean Monnet Actions aim to promote the excellence of higher studies on the European Union worldwide and are organized by higher education institutions (European Commission, 2018).

Table 2: *Brazilian participation in the Erasmus+ program*

Brazil in Erasmus+ Projects	2016	2015	2014
Total of Brazilian projects selected	64	57	60
Total of Brazilian EMJMDs[6]	10	11	5
EMJMD scholarships acquired by Brazilian citizens	77	85	40
Total of Brazilian CBHE[7] projects selected	6	7	8
Total of Jean Monnet Projects selected in Brazil	4	4	0

Source: European Commission, 2018.

Horizon 2020 is the EU largest research and innovation program. It aims to increase European excellence in scientific areas, industrial leadership and the search for solutions to European and global social challenges, and has the participation of EU member countries and their partners. The program budget is 80 billion Euros for the period between 2014 and 2020.

> EU funding covers 100% of the eligible costs for all research and innovation activities. For the innovation activities, funding generally covers 70% of the eligible costs, but can be up to 100% for non-profit organizations. The eligible indirect costs (for example, administration, communication and infrastructure costs, office supplies) are reimbursed by applying a flat rate of 25% of the eligible direct costs (those that are exclusively associated with the implementation of the activity) (European Union, 2014, p. 25).

Currently, 201 Brazilian projects participate in the program, with a European contribution of approximately 12 million Euros, which corresponds to 0.03% of the total budget (H2020 Projects, 2020). With the success of the program in Brazil, the Steering Committee of the "EU-Brazil Cooperation Agreement in Science and Technology" announced a new program in April 2019, Horizon Europe, scheduled to start in 2021 (European Commission, 2019).

Thus, the European Union, due to the strategic partnership with Brazil, opened great possibilities for Brazilian institutions in the areas of higher education, science and technology (Carvalho & Maia, 2015), providing an opportunity for development and reinforcement of cooperation with a view to expanding knowledge in the indicated fields. Increased competitiveness, innovation and economic growth were elements emphasized

[6] Erasmus Mundus Joint Master Degrees (EMJMDs).
[7] Training courses in higher education (CBHE).

and highlighted at the VI Brazil-European Union Summit (Colucci, Costa & Silva, 2015).

Brazilian higher education is the responsibility of the federal, state and local governments, both in federal and private institutions. The State, through the National Education Plan (*Plano Nacional da Educação*, PNE), pursuant to article 214 of the Constitution of the Federative Republic of Brazil, determines the national strategy for higher education (Brazil, 1988).

The Ministry of Education (MEC) is responsible for establishing the national education policies, as well as funding, guiding and supervising the entire network through several agents, such as: Office of Higher Education (*Secretaria de Educação Superior*, SESU), Office of Higher Education Regulation and Supervision (*Secretaria de Regulação e Supervisão da Educação Superior*, SERES), National Education Council (*Conselho Nacional de Educação*, CNE), National Commission for Higher Education Assessment (*Comissão Nacional de Avaliação do Ensino Superior*, CONAES), National Institute for Education Studies and Research (*Instituto Nacional de Estudos e Pesquisas Educacionais*, INEP) and the Foundation for the Coordination for Improvement of Higher Level Personnel (*Coordenação de Aperfeiçoamento de Pessoal de Nível Superior*, CAPES).

The Ministry of Science, Technology, Innovation and Communication (*Ministério da Ciência, Tecnologia, Inovação e Comunicação*, MCTIC) also plays an important role in higher education by funding research and innovation, mainly through its agency associated with the National Council for Scientific and Technological Research and Development (*Conselho Nacional de Pesquisa e Desenvolvimento Científico e Tecnológico*, CNPq) (OECD, 2018).

On its turn, the Ministry of Foreign Affairs (*Ministério das Relações Exteriores*, MRE), through the Division of Educational Themes (*Divisão de Temas Educacionais*, DCE), keeps a close relationship with higher education, as this division is responsible for matters within the scope of international educational cooperation. In addition, the DCE monitors the implementation of the programs offered by Brazil or other countries and is also responsible, together with the MEC and MCTIC, for maintaining the Exchange Program for Undergraduate Students (*Programa de Estudantes-Convênio de*

Graduação, PEC-G) and the Graduate Program (*Programa de Pós-Graduação*, PEC-PG) (MEC, 2018). Established in the 1960s, they aim to enable foreign students to carry out their studies in public and private Brazilian institutions. These are programs developed by the MRE and MEC together with public and private universities (MEC, 2018).

CAPES and CNPq are the main promoters of the internationalization of Brazilian higher education, through the funding of numerous transnational university partnerships, the offer of scholarships for researchers and the support of Brazilian research projects, among other investments in funding and capital.

CAPES is responsible for evaluating and promoting the expansion of *stricto sensu* graduation courses, expanding access and dissemination of scientific production, investing in the creation of high-level resources in the country and abroad and promoting international scientific cooperation, among other actions (CAPES, 2019). Currently, CAPES has 450 research projects only with international partners; its first partnership was signed 41 years ago with France; and today it has 77 partners abroad (InfoCAPES, 2019). For the execution of these cooperations, nearly 700 million Reais were invested in scholarships abroad between 2013 and 2017, in addition to a funding of more than 7.5 billion Reais in scholarships for SwB in the same period (CAPES, 2019). To this end, CAPES promoted new forms of internationalization: "CAPES develops projects for institutions to strategically plan internationalization, so that cooperation is not just mobility of students and teachers between countries" (InfoCAPES, 2019).

The CNPq, in its turn, encourages Brazilian scientific and technological production. The goal is to boost knowledge, innovation and sustainable development. This agency cooperates with numerous countries, especially in the formulation of joint projects and programs. According to data from 2018, the European countries with which the CNPq has a more intense partnership are the following: Germany, Belgium, Slovenia, Spain, Finland, France, Italy, Portugal and the United Kingdom. In 2017 alone, the CNPq made available nearly 80% of its budget for research and granting of scholarships for internationalization, which corresponded to approximately 1.11 billion Reais (CGU, 2017).

The process of cooperation in the internationalization of higher education between Brazil and the European Union was the work of a complex network created by several agents and institutions, with different funding sources, which fed back into bilateral ties and reinforced the strategic partnership between the two actors (Colucci, Costa & Silva, 2015). Carvalho and Maia (2014, p. 20) also point out the importance of the Strategic Forum for International Scientific and Technological Cooperation (SFIC) and the Brazil Initiative program in strengthening the strategic partnership.

The SFIC directly advises member countries and European Union institutions in the fields of science, technology and innovation through collection, analysis, planning and coordination of activities in ST&I. In 2012, with the help of diplomatic bodies and the representation of the European Union, the SFIC prepared the Brazil Initiative, whose objective was to take advantage of the synergies and possibilities opened up by the European Union and Brazil – in particular the Science Without Borders Program – and to strengthen the ties between authorities, (governmental and non-governmental) funding institutions, university networks, and teaching and research institutions, among others. To this end, the authorities carried out studies, supported capacity building projects, workshops, high-level meetings, participation in fairs, and preparation of material, among other initiatives (Maia & Carvalho, 2014, pp. 20-21).

4. The European Union's role in the Science without Borders (SwB) program (2011-2016)

The European Union's role in SwB must be understood within the political framework of the strategic partnership. On the one hand, the Brazilian political guideline of expanding outgoing mobility flows to create, through the training of human resources and participation in international research networks, the bases for technological advancement and promotion of national development; on the other hand, the European Union, with its experience in the internationalization process and with teaching and research institutions of recognized international excellence, had as one of its strategic goals the attraction of students and researchers of excellence in order to promote European institutions and values and boost the growth of the knowledge economy in the midst of the information society.

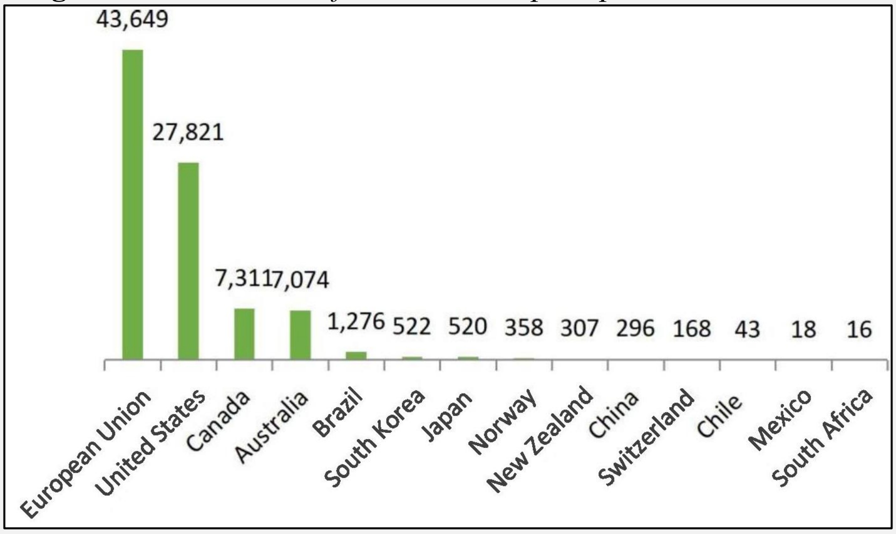
The Science Without Borders (SwB) Program was developed by the Brazilian government between 2011 to 2016. The initiative was jointly supported by the Ministry of Science, Technology and Innovation (MCTI) and the Ministry of Education (MEC), assisted by organizations such as CNPq, CAPES and departments of higher education and technological education. The program was shut down in 2016, having officially ended its actions in 2017, amid heated political discussions.

According to Decree No. 7,624 of the Presidency of the Republic, the main objectives of SwB were the following: to encourage the expansion and consolidation of the internationalization of science and technology; to promote innovation and Brazilian competitiveness; to contribute to the process of internationalization of Brazilian higher education institutions and research centers; to encourage and improve applied research in the country, aiming at scientific and technological development and innovation; and to provide greater international visibility to academic and scientific research conducted in Brazil (Brazil, 2011).

To achieve these goals, the Science Without Borders program included specific teaching areas, such as: Engineering and other technological areas; Exact and Earth Sciences; Biology, Biomedical and Health Sciences; Computer Science and Information Technologies; Aerospace Technology; Drugs; Sustainable Agricultural Production; Oil, Gas and Mineral Coal; Renewable Energies; Mineral Technology; Biotechnology; Nanotechnology and New Materials; Technologies for the Prevention and Mitigation of Natural Disasters; Biodiversity and Bioprospecting; Marine Sciences; Creative Industry (focused on products and processes for technological development and innovation); New Technologies of Constructive Engineering; Training of Technologists (Brazil, 2011). The human sciences were placed in the background.

The focus of SwB was on the academic mobilities for undergraduate and graduate students, competitive educational systems and dynamic sectors of science and innovation; on the other hand, the program sought to spark the interest of foreign researchers so that they could move to Brazil or work together with Brazilian researchers. The initial goal was to fill up 101,000 scholarships in the four-year period and, according to its control panel, by January 2016, nearly 92,880 students had benefited from the program (SWB, 2016).

Figure 3: *Distribution of the scholarships implemented until 2016*



Source: Control Panel of the Science Without Borders Program, 2016.

Figure 3 shows the important role of the institutions in welcoming Brazilian students. Among the 28 Member States of the European Union, 17 were associated with the SwB program, with great positive effects on the bilateral relations, as this required an active engagement by State agencies (Colucci, Costa & Silva, 2015, p. 19-20). In fact, SwB mobility flows were negotiated directly between State representatives, in the top-down model; thus, the strategic partnership and the sector dialogs were essential for building trust among stakeholders and for dynamizing actions (Espósito & Espindola, 2019; Cravinho, 2019).

> SwB was designed to offer opportunities directly to talented students in a fast and massive way. The mobility flows were centrally negotiated by the Brazilian government with representatives of the host countries, using a top-to-bottom approach, with very little participation from the Brazilian HEIs. Mobility ended up taking place without the involvement of the HEIs in the selection of students and identification of countries and institutions hosting fellows. In this sense, SwB is often considered a free-move program, in which the scholarship holder moves on an individual initiative without an institutional framework (Salvaterra, Filipini, Spadaro & Zicman, 2015, p. 13).

According to CNPq (2011), the European institutions were chosen according to the following criteria: (a) quality in teaching, according to the international rankings; (b) more affordable prices for academic tuition fees; (c) experience in the internationalization process and academic culture close to that of Brazil; (d) finally, the representation of the European Union and the embassies of European countries did a good job of promoting their institutions and convincing the Brazilian authorities. In fact, several countries in the European bloc, such as Spain and Germany, have educational offices that are very active in Brazil in promoting European soft power (Miranda & Bischoff, 2018, p. 903).

University networks, both Brazilian – such as the Coimbra Group of Universities (*Grupo Coimbra de Universidades*, GCUB) and the Brazilian Association of International Education (*Associação Brasileira de Educação Internacional*, FAUBAI) – and European – such as the Coimbra Group (CG) and the Network of Universities from the Capitals of Europe (UNICA) – played an important role in advocacy, in the definition of priority partners and in international educational cooperation (Colucci, Costa & Silva, 2015, p. 20). In addition, the EU-Brazil Cooperation Group was created, with the purpose of sharing and acquiring experience and disclosing cooperation opportunities (Maia & Carvalho, 2015).

CNPq and CAPES were the main sponsors of scholarships at institutions of excellence abroad and in Brazil. The scholarships were divided into the following modalities: sandwich undergraduate, professional and technological education, full doctorate, postdoctoral, sandwich doctorate, professional master's degree for foreign visitor researchers and young talents. According to the SwB control panel (2016), among the total of scholarships implemented, approximately 78% were sandwich degree scholarships. Table 3 below shows the distribution of the mean costs per scholarship mobility:

Table 3: *Mean cost of the SwB scholarships*

Mobility	Amount (UU$)
Sandwich undergraduate degree	33.752,43
Full master's degree	38.288,00
Sandwich doctoral degree	33.461,51
Full doctoral degree	39.946,65
Post-Doctorate	35.329,14

Source: CCT, 2015.

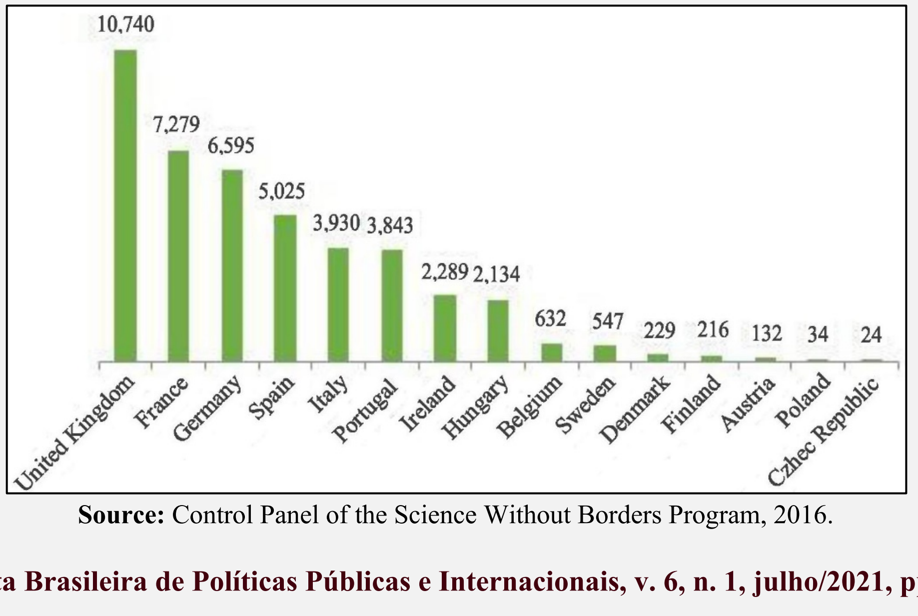
In addition to the CNPq and CAPES programs, some scholarships (approximately 20%) were funded by private institutions, such as:

Eletrobrás S.A, Vale S.S, Tim Celular, Shell, Petrobras S.S, Banco do Brasil, Caixa Econômica Federal, and Natura, among others. Until 2015, these institutions had cooperated with approximately 600 million Reais (net amount) and, during the period under analysis, there was an estimate of 1 billion Reais to be transferred in 2017 (Aziz & Martins, 2015).

Based on the difficulties of the SwB participants, in particular the lack of linguistic competence of many of them, in 2012 the Ministry of Education established the Language without Borders (LwB) program, developed together with the SESU and CAPES, with the aim of improving language skills and applying proficiency tests in other languages free of charge (Doringon, 2015).

As shown in Figure 4, approximately 50% of the scholarships implemented by the SwB program were mainly destined for institutions in the European Union countries. This success stems from the relationships already established in the field of internationalization of higher education, whether in previous cooperation in the Erasmus+ or Erasmus Mundus programs, or in other projects funded by CAPES and CNPq. In addition, during the V Summit of the Brazil-European Union strategic partnership, authorities on both sides agreed to stimulate the internationalization of higher education, science and technology through agents or programs in which these actors worked (such as SwB), with the final goal of stimulating academic mobility in their cooperation (EU Council, 2011).

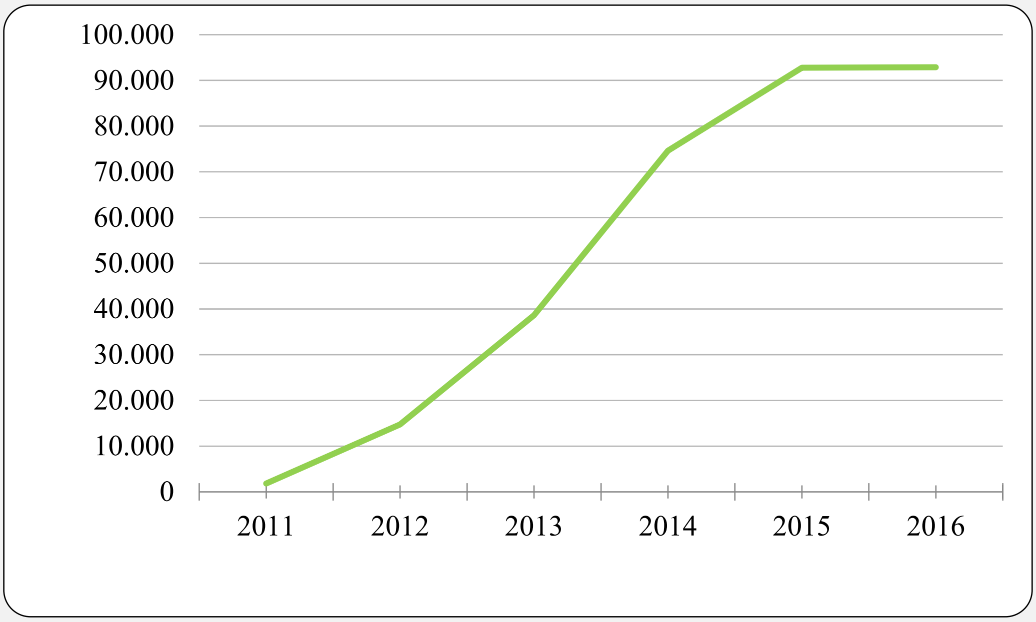
Figure 4:
Distribution of the scholarships implemented in the European Union countries



Source: Control Panel of the Science Without Borders Program, 2016.

The effectiveness of the Bilateral Agreement for Scientific and Technological (S&T) Cooperation of 2007 was another factor that increased and strengthened the flow of academic mobilities between Brazil and the European Union, and it is also necessary to consider the Erasmus+ and Horizon 2020 programs, which, having been implemented before SwB, ensured that the mobility networks were already established. Finally, the strategic partnership between Brazil and the European Union created an enabling environment for educational cooperation in higher education and, thanks to SwB, the number of Brazilian students in international mobility has grown exponentially, as shown in Figure 5.

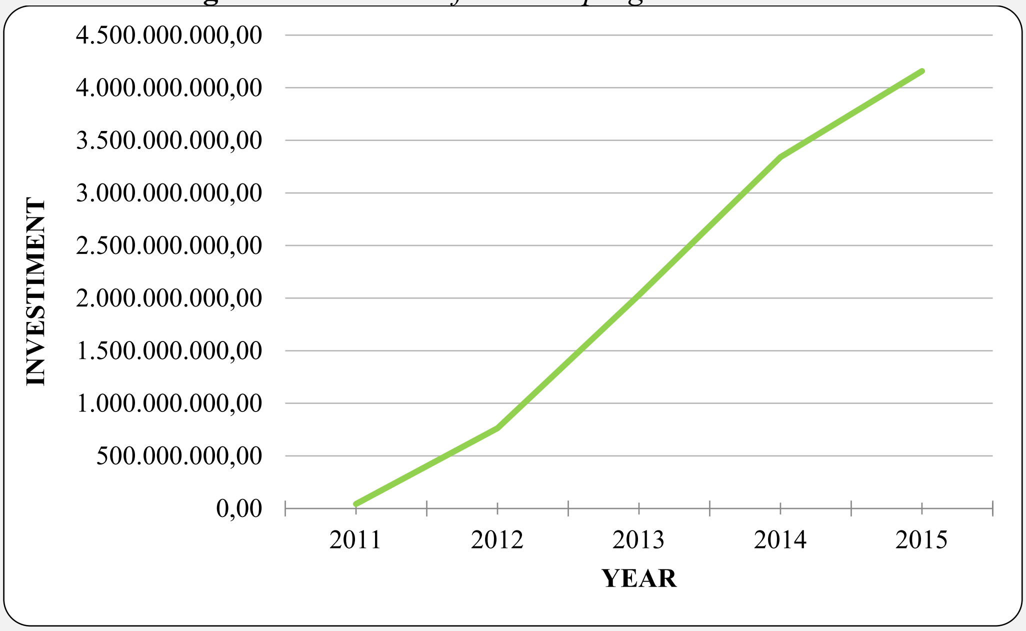
Figura 5: *Accumulated total of scholarships implemented per year of SWB*



Source: Control Panel of the Science Without Borders Program, 2016.

In line with this increase in mobility, in 2015 SwB ended up absorbing a large part of the federal budget applied to education, science, technology and innovation: 50% of the CAPES costing budget and 75% of the resources from the Post-Graduate Support Program (*Programa de Apoio à Pós-Graduação*, PROAP) and the Academic Excellence Program (*Programa de Excelência Acadêmica*, PROEX). In 2011, these costs were around 40 million Reais; in 2015, they reached more than 4 billion Reais (CCT, 2015). These numbers raised criticisms and questions about the quality of the expenditure, the return on investments and the lack of governance and control of contributions (CGU, 2016). For this reason, in July 2016, the federal government made a major cut in the program of nearly 3 billion Reais per year. In April 2017, after 13.2 billion Reais invested, the MEC announced the end of the Science Without Borders program (Marques, 2017).

Figure 6: *Evolution of the SwB program investments*



Source: CCT, 2015.

According to Manços and Coelho (2017), SwB has a positive balance, as it articulated the entire National System of Science, Technology and Innovation (*Sistema Nacional de Ciência Tecnologia e Inovação*, SNCTI) to achieve the proposed goals, with relevant impacts on international collaboration, knowledge production, education and university curricula, among other achievements.

> Regarding the panorama that preceded the creation of the Science without Borders program, the article sheds light on fundamental problems in the field of ST&I in the country, namely: (a) the deficit in the training of human resources in the field of basic sciences, engineering and other technological areas; and (b) Brazil's low scientific insertion on the international stage. Faced with these problems, SwB emerges as a – political – empowerment program implemented by President Dilma Rousseff and is inserted as one of the alternatives of public policy aligned with the strategy developed by the MCTI: the National Science, Technology and Innovation Strategy 2012-2015 (Manços & Coelho, 2017, pp. 76-77).

Due to its magnitude, SwB had a significant impact on the lives of the Brazilian scholarship students. In Europe, institutions also had to adapt to the sudden increase in the number of Brazilian students, the style of internationalization and the flow of funds from the Brazilian National Treasury (Colucci, Costa & Silva, 2015, p. 22). The authors also point out the need to strengthen institutional partnerships, build capacities and open new opportunities for cooperation (ibidem, p. 23).

> *Internationalization is clearly a universal topic of strategic importance for Europe and for Brazil. In both regions* [emphasis by the authors], although with different levels of intensity, debates on internationalization have been triggered and fueled to a large extent by large-scale mobility programs, which work or have the potential to work as instruments to promote inter-institutional cooperation, recognition of studies, improvement of student support services and other aspects of the process of the internationalization of higher education institutions (Colucci, Costa, & Silva, 2015, p. 2).

In spite of these good results presented by the program, the criticisms centered on the lack of control over spending and the inconsistency of the returns, as a result of poor management and the lack of counterparts from the beneficiaries. According to Lingnau and Navarro (2018), the program had a much more discursive electoral strategy than a truly long-term educational proposal within a State and social project. According to Conceição and França (2015), the receiving institutions were much more favored than the beneficiaries of the program, and an example of this, according to these authors, is the full payment of high enrollment and tuition fees – nearly 50% of the expenses were used to pay charges at the receiving institutions – among other aspects.

Still with respect to the criticisms to SwB, Lignau and Navarro state: “We realize, the political/economic field, in the case of SwB, accentuates more evident power effects than the educational field” (2018, p.18). When observing the problems of Brazilian education, permeated by the most various issues (from lack of financial resources to barriers to the broad access of historically marginalized social groups and low educational quality of basic education), investing billions in outgoing internationalization without a deep, strategic, perennial and sustainable analysis becomes incoherent. Furthermore, at the apex of the program, the mean cost per scholarship student was five times higher than the per capita cost of the students from public universities in Brazil (Conceição & França, 2015). And, according to CGU (2018), the control and governance mechanisms were weak, which prevented the verification of the true impacts for its target audience, that is, it was not possible to prove its effectiveness for all students of the Brazilian higher education system. The evaluation of the program is still an open and very controversial topic.

5. Final considerations

In recent years, the internationalization of higher education has gained prominence in the political, national and international agenda of several countries around the world, either as a soft power factor (Pinheiro & Candeas, 2012), or in the construction of knowledge diplomacy (Knight & Wit, 2018), or as a vector of development in the information society (Castells, 1999).

Throughout the text, the authors presented the evolution of the internationalization of higher education between Brazil and the European Union. This approach should be seen within the strategic partnership, in which authorities created a favorable environment for building trust, in a positive win-win relationship, which expanded aspects of complex interdependence, with the effect of overflowing for other sectors, themes (human rights) and actors (university networks, companies, among others) and improvement in the international image of these actors, which is commonly called soft power. However, as it is a reciprocal gain, many authors believe that the most appropriate concept is knowledge diplomacy.

The history of Brazilian-European relations herein presented shows that the internationalization of higher education has always been present in the meetings and joint documents, and gradually gained relevance in the bilateral agenda until it became one of the central themes of the meetings since 2011, mostly due to the launch of the Science Without Borders Program in the same year (Maia & Carvalho, 2014, p. 20-21). At all times, the authorities of both parties had committed themselves to strengthening the partner's presence in their actions and policies for the internationalization of higher education. Educational cooperation was recognized as an important spill over element for other sectors in the bilateral relations, such as the digital economy, human rights and sustainable development (Cravinho, 2017; Tomanzini, 2019; Espósito & Espindola, 2019).

After the formalization of the strategic partnership, Brazil started to have a privileged place in the higher education policies of the European Union, especially in the Erasmus+ and Erasmus Mundus programs. The European countries also started to play a central role in the process of internationalization of Brazilian higher education, especially in the Science Without Borders (SwB) program. The bilateral strategic dialog influenced the internationalization strategy of funding bodies and other actors: funding agencies, State agencies, networks of universities, researchers and other entities of the organized civil society. The results of this cooperation were positive and have repercussions until the present day, with its overflow to other areas (Colucci, Costa & Silva, 2015).

Despite the criticisms pertaining to budgetary and organizational difficulties – due to its magnitude and complexity – it is concluded that the SwB program has achieved good results by placing Brazil at the center of discussions on the internationalization of higher education (Manços & Coelho, 2017). From the perspective of the Brazil-European Union strategic partnership, the experience was also successful, considering the following: number of scholarships, approximately 50% in European Union countries; creation of perennial networks of researchers; special treatment in the higher education internationalization programs proposed by the EU; the Erasmus+ and Horizon 2020 programs; and consolidation of channels for mature political dialog between the parties. Finally, the Science Without Borders project showed that, with possible adjustments and improvements, there are enormous possibilities for educational cooperation between Brazil and the European Union States.

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