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Innovation policy instruments for health: an Exploratory Analysis of the Grant-in-Aid Program to FINEP Innovation

Fabio Batista Mota
UFRJ.
motafb@hotmail.com

Carlos Bianchi
UFRJ.
carlosbianchi@ie.ufrj.br

Flávio Peixoto
UFRJ.
flaviojmpeixoto@yahoo.com.br

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Abstract
The aim of this article is to present the results of public calls of the Economic Subvention Program to Innovation of FINEP to the health area. We performed a descriptive statistical analysis based on the results of public calls for the period 2006-2009. Among the results, it is worth mentioning the high concentration of values approved: (a) in the southeast region, mainly due to the State of São Paulo, with more than 50% of the total amount approved for health; (b) in micro and small firms, with about 70% of the total value. Additionally, the article presents an exploratory discussion which aims to place relevant aspects to the debate on innovation policy instruments.

Keywords: Innovation policy; Economic Subvention; Innovation; Health

Introduction

Generally speaking, the specifications of a Grant-in-Aid Program to Innovation launched by the Ministry of Science and Technology (MCT as in Portuguese), through the FINEP (a public institution for studies and projects financing), aimed to support the development of innovating products, services and processes in Brazilian companies of any size. The legal basis that enables such a policy is the Law No. 10.973/2004 (Innovation Law), regulated by the Decree No. 5.563/2005. The financial resources to companies, provided in the form of financial support (non-refundable), are originated from the National Scientific and Technological Development Fund (FNDCT, as in Portuguese).

The aim of this paper is to present to the health field, the results of the Grant-in-Aid Program to FINEP Innovation public calls, over the 2006-2009 period. Additionally, the article presents an exploratory discussion which aims to put relevant issues for the debate on innovation policy instruments - but without attempting grants or its results evaluation. First, it looks at the

results of health in relation to the public calls' objectives for projects on smaller firms (micro and small companies), as well as for those based in the North, Northeast and Midwest regions. Then, grants are located in the Production Development Policy (PDP, as in Portuguese), and as instruments of such policy, relating these to the objectives for the Industrial Health Complex (CIS, as in Portuguese) development. It also discusses the financial aid as to its ultimate goal, the promotion of Brazilian companies' innovation. Finally, it comments on the influence of the Brazilian Innovation Law and the FINEP Grant-in-Aid Program, as well.

Method

It was performed a descriptive statistic analysis from the results of the Grant-in-Aid Program to FINEP Innovation public calls over the period 2006-2009. The software used was the SPSS 17.0. Data over the period 2006-2008 were provided by the MCT. In the original sheet were added the results of the public call for 2009 (available at: http://www.finep.gov.br) and other information relating to companies with approved projects. Thus, the final data sheet compiled data related to: (i) the results of public calls (grants year, public notice area, project reference, project title, applicant, company size, region and federal unit in which the company is incorporated; and maximum value approved per project); (ii) and on the activities of companies with approved projects (National Classification of Economic Activities (CNAE 2.0, as in Portuguese), export and patent registration in the country).

Companies classification as to CNAE was based on the 'Registration and Registration Status Evidence', of the Internal Revenue Service (http://www.receita.fazenda.gov.br). The CNAE division description was obtained at the Brazilian Institute of Geography and Statistics (www.cnae.ibge.gov.br) CNAEweb. Export data collection was performed at the site of the Ministry of Development, Industry and Foreign Trade (MDIC, as in Portuguese) (http://www.desenvolvimento.gov.br), in consultation with the Trade Balance by each State. The data on patenting in the country were consulted on the National Institute of Industrial Property (INPI, as in Portuguese) (http://www.inpi.gov.br) patents basis.

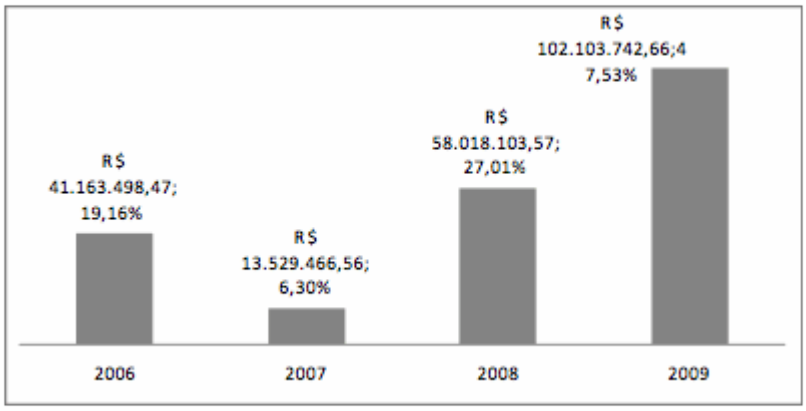
Whereas, in the same year, a company can have more than one project included, the results refer to the number of projects approved and not the number of companies; except where noted. For the first two years, which here is indicated by the health area it does not directly correspond to what is provided in the notices. This is because only after 2008 such area was specified. The projects classification over the period 2006-2007 on health was conducted by the MCT. In 2006, were included in the health area 17 projects in Public Notice's four areas: Drugs and medication (3), Mobilizing Strategic Applications (2), Nanotechnology (1) and "General" (11). In 2007, 12 projects in two areas: Biotechnology and Health (10), and ICT and Nanotechnology (2).

Results

From 2006 to 2007, the amount available for grants rose from R$300 million to R$450 million, representing an increment of 50%. The latter value was maintained in 2008 and 2009. In the sum of four years, there was R$1.65 billion available. In the same period, it was approved an amount of R$214,814,811.26 for health projects, equivalent to 13% of the amount available for all areas. For health, 17 proposals were approved in 2006, 12 in 2007, 39 in 2008 and 62 in 2009, a total of 130 projects divided among 99 companies. Although there has been a sharp

drop from 2006 to 2007, the approved amount for health increased significantly over the next two years. This particularly in 2009 when they were approved R$102,103,742.66, or 47.5% of the amount allocated to health in this period. The health area weight on the last Notice was also significant, comprising 22.7% of R$450 million available. In the public calls final result, the FINEP disclose the maximum values for each approved proposal. Thus, these values are not received by the companies; it is information prior to the projects hiring, which set the final amount. The contracted amounts and the released portions are not available at the FINEP web site.

Figure 1 - Total annual amount approved for grants in health area, in Reais (2006-2009)



SOURCE: Self-elaboration

Over the period 2006-2009, the projects selected, the most of them (105 proposals or 80.8%) contemplated companies that develop activities related to product manufacturing and/or equipment. Considering the 130 approved proposals (Missing = 6): 36 (27.7%) were to projects of 'Computer, Electronic and Optical Equipment' companies (CNAE: 26); 24 (18.5%) to 'Miscellaneous Products Manufacturing' (CNAE: 32); and 16 (12.3%) to 'Chemicals Pharmaceutical and Pharmaceutical products Manufacturing' (CNAE: 21). In turn, projects approved for companies with activities related to scientific research and development (CNAE: 72) also played an important role in the outcome (25 projects, or 19.2%). This is due, however, to the public call outcome for 2009, which concentrated 21 of 25 proposals selected for the whole period.

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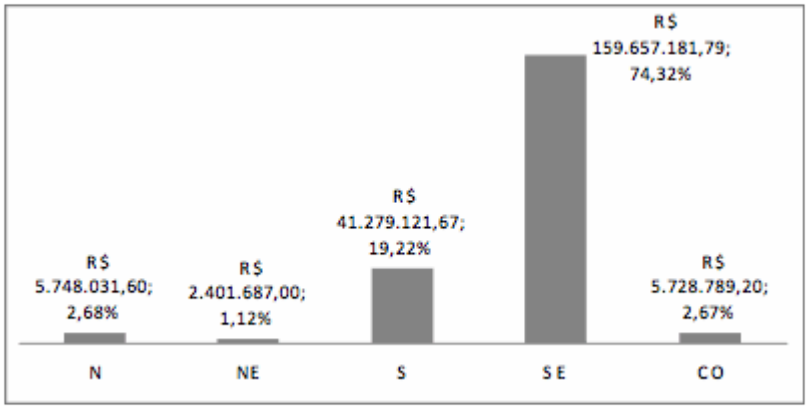
Figure 2 - Total of values by Region approved for grants in health, in Reais (2006-2009)



SOURCE: Self-elaboration.

Considering the distribution of resources based on the firms' size, the micro ones encompassed 50.72% of the total, an amount equivalent to R$ 108,960,387.10. The small businesses concentrated 18.72% of the funds; 11.37% for mid-sized firms, and 19.19% for large companies' projects. In turn, the number of approved projects for companies of smaller size is significant only in the Southeast and South regions. Together they concentrated 97 out of 130 proposals (all sizes), or 74.62% of the total. With regard specifically to microenterprises, the Southeast region is the highlight with 47 (61.04%) out of 77 proposals. São Paulo concentrated 32 projects, or 41.56% out of the total addressed to microenterprises. Among the 13 approved projects for large companies, 10 refer to businesses based in that State. The FINEP classifies the company's size according to its earnings (or economic group to which it belongs) in the year preceding the public notice: Micro / Small - up to R$2,400,000.00; Small – from R$2,400,000.01 to R$10,500,000.00; Medium – from R$10,500,000.01 to R$60,000,000.00; Large - from R$60,000,000.01.

Over this period, 47 (36.15%) out of the 130 approved projects contemplated companies which made exports in the public notice year. These companies concentrated R$90,909,964.06 (42.32%) of the resources for health. The vast majority of projects approved for micro-enterprises (71 out of 77) contemplated proposals from companies that did not export in the public notice year, equivalent to 54.62% of 130 projects. In turn, 12 out of 13 projects were approved for large companies where to proposals from companies that have exported.

Considering the 130 approved proposals, 59 (45.38%) refer to projects of companies that hold patent registration in the country. Of these 59, 22.03% (13) contemplated proposals for large companies and 32.20% (19) for micro-enterprises. Firms based in the Southeast accounted for 64.41% (38) of the total projects approved for companies with patents. Of the total approved funds for health during this period, R$ 117,202,056.24 (54.56%) went to projects of companies with patents in the country.

Table 1 –Approved projects by company size vs. export, import and patents registration (2006-2009)

Company Size	Exports		Patents		Total
	Yes	No	Yes	No	
Micro	6	71	19	58	77
Small	14	10	13	11	24
Medium	15	1	14	2	16
Large	12	1	13	0	13
Total	47	83	59	71	130

SOURCE: Self-elaboration.

Discussion

During the period considered for the analysis of the Grant-in-Aid Program, all public notices directed part of the resources allocation to facilitate both smaller-sized and based in the North, Northeast and Midwest regions companies:

- 2006: at least R$60 million in micro and small enterprises; and application of at least 30% of the total amount available (R$300 million) in projects for companies located in geographic operational areas of both the Amazonia Development Agency (ADA, as in Portuguese) and the Northeast Development Agency (ADENE, as in Portuguese) (FINEP, 2006);
- 2007: at least 40% of the available resources (R$ 450 million) to small businesses; and, at least 30% oriented to companies located in the North, Northeast and Midwest regions (FINEP, 2007);
- • 2008 - 2009: at least 40% out of the available resources (R$450 million) for small businesses and micro enterprises; and at least 30% to companies located in the North, Northeast and Midwest regions (FINEP, 2008, 2009).

As seen, the approved funds allocation for smaller businesses exceeded that provided in the public notices documentation, covering 69.44% of the values. On the other hand, the concentration of the amounts approved in the South and especially in the Southeast region indicates that, at least in the case of health, the allocation guidance given in the notices was not successful. Further analysis is not, however, likely to be held, as part of the necessary information is not available. It is true that the Southeast region has the main productive and innovative capacity in the country, including the health area, so that either it does not surprise - or it is more than expected - the values concentration approval in this region, above all in São Paulo . However, this does not explain the minimum percentage funds allocation for projects of companies located in the N, NE and MW regions.

It is known that for public notices with no classified proposals in sufficient numbers to achieve the minimum percentage, resources are allocated for other approved projects. But what were the factors that implicate such an allocation? Were there enough projects bid from this firms directed to FINEP calls, or not? If so, would be part of the problem lied in the quality of bids

submitted, towards meeting the requirements for approval? If not, would be the problem lied in the companies training, especially the smaller ones, to meet the requirements of the notices? Or otherwise, the subjects involved by grants would be distant from the production and innovation efforts - or the production and technological capabilities – for the firms in these regions, so do not generate the same interest for the financial support? There are, therefore, questions that a priori cannot be answered.

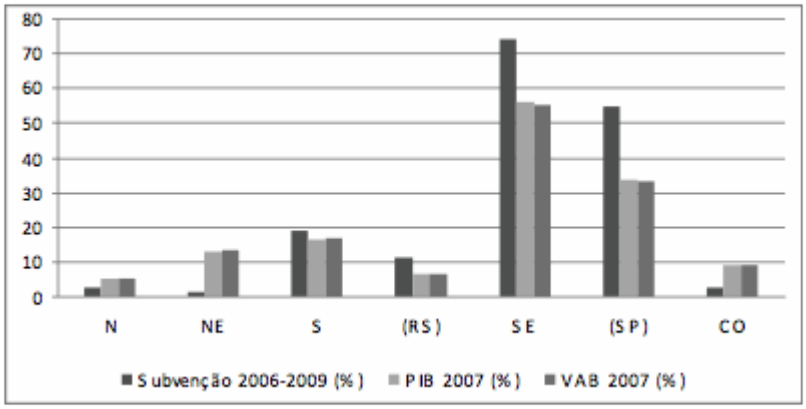
However, the information presented allows different interpretations on the policy effects. On the one hand, it is reasonable for a program aimed at promoting companies innovation to be more availed in regions with more productive development. On the other hand, this result, although expected, may be undesirable if it contributes to the deepening of regional differences. It is clear that a policy instrument must have an integrative function in the context of a highly unequal country, but it is not clear that all innovation activities in all areas should be spread throughout the country. There are clustering advantages that can be exploited. If the less developed regions productive capacity diversity needs are accepted, it is also needed that the support instruments can count on a selection and prioritization mechanism regarding the areas that will be supported for each region.

In general, the resources distribution from the Grant-in-Aid Program corresponds to the distribution of wealth and production in Brazil. However, as shown in the Figure below, the percentage of the Grants' amount approved for the Southeast region is proportionately larger than its share in GDP and in the gross added value in the year of 2007 (IBGE Regional Accounts of Brazil 2003-2007). The same can be said for the states of São Paulo and Rio Grande do Sul. These results seem reasonable. Given the regional differences, the gap between different regions is accentuated when it comes to activities related to innovation, even more concentrated than the production capacity and the value addition. This simple indicators comparison raises, however, a relevant question: Would be the financial aid contributing to the increase in the innovative gap among regions of Brazil? Would that be a problem? The fact that innovation activities are concentrated in the most dynamic regions of the country goes beyond the possibilities of the Program. This happens especially when the innovation support is offered to businesses through public calls. In this sense, it seems reasonable to charge Grants for guidance in reducing innovation activities concentration in more developed regions.

However, the maxim that homogeneous political to heterogeneous realities reproduce the heterogeneity must be highlighted. It should therefore be asked whether such a Program could be better directed to supporting innovation in less developed regions. More than just a state in the notices some protection for companies based in the North, Northeast or Midwest regions, it would be also necessary an adequacy effort for some of the issues covered by this financial aid to these regions firms production and innovation details or interests. This is partly due to the existence in Brazil of a territorial labor division in certain areas served by technological and productive capabilities and others devoid of them. Within these areas, companies tend to be distinguished by their greater or lesser ability to use such capabilities and location advantages. According to Santos (2004), such spatial and socioeconomic selectivity leads to rapid changes in the territorial labor division, where firms with the most gifted in terms of technical and financial aspects tending to seek a location where the potential profit will be stronger, leaving

to the rest of the territory, albeit with similar capabilities, firms less capable of such development.

Figure 3 - % Grants values distribution (Health 2006-2009), GDP 2007 (%) and GVA in 2007 (%) in Millions of Reais



SOURCE: Self-elaboration based on: FINEP. Grant-in-Aid Program 2006-2009; IBGE. Regional Accounts of Brazil 2003-2007. Gross Domestic Product at market prices; IBGE. Regional Accounts of Brazil 2003-2007. Gross value added at basic prices.

The FINEP Grant-in-Aid Program is a tool for supporting strategic areas development taken by federal policies. Among those, the Productive Development Policy (PDP, as in Portuguese), which opened in 2008, seeks to continue the resumption movement taken by the Federal Government, seeking the planning and implementation of industrial and technological explicit nature policies - started in 2004 with the Industrial, Technology and Foreign Commerce Policy (PITCE, as in Portuguese) release. A preliminary evaluation of the PDP can be obtained from CNI (2009) and FIESP (2008). At the structural level, focused on production systems, the PDP is divided into three categories of programs, which cover various industry segments: (i) programs in strategic areas, (ii) Programs to Strengthen Competitiveness, (iii) Programs to Consolidate and Expand Leadership. A PDP preliminary evaluation can be obtained from CNI (2009) and FIESP (2008). At the structural level, focused on production systems, the PDP is divided into three categories of programs, which cover various industry segments: (i) Mobilizing Programs in Strategic Areas, (ii) Programs to Strengthen Competitiveness, (iii) Programs to Consolidate and Expand Leadership.

In the first of these programs, which are facing scientific, technology and innovation nature challenges, is the Industrial Health Complex (CIS, as in Portuguese) area, taken by strategic in the PDP and managed by the Ministry of Health (MOH). Roughly speaking, the CIS involves a number of industries (chemicals and biotechnology base; and mechanics, electronics and materials base) and services (hospitals, first aid post and diagnostic and treatment services) that keep a strongly inter-sector relation of buying and selling goods and services, included in a political-institutional environment determined by the health specifics (GADELHA, 2003, 2006; GADELHA et al., 2003).

More than one strategic PDP area, the CIS is rather a political economy approach - enjoying in part on the approach of the Innovation National Systems - which seeks to provide a politic analytical frame to guide the health and the economic capitalism logic joints. It is, therefore, an approach heavily oriented towards the health policies articulation, with industrial and

technological development policies, taking the health area as a fundamental innovation locus and economic development. There are, in the scientific literature, several studies that go toward to similar direction, relating innovation, health and development (e.g., WHO, 2001, 2005; ALBUQUERQUE; CASSIOLATO, 2002; VIANA; ELIAS, 2007; ALBUQUERQUE, 2009). The table below presents the PDP objectives, goals and challenges to the CIS area.

Table 2 – PDO objectives, goals and challenge to the CIS area

Objectives	(i) Consolidate in Brazil a competitive industry in the production of medical equipment, materials, reagents and diagnostic devices, blood products, immunobiological, chemical intermediates and plant extracts for therapeutic purposes, the active ingredients and medicines for human use; (ii) Dominate the scientific and technological knowledge in strategic areas aimed at reducing the National Health System vulnerability.
Goals	- Reduce the CIS trade deficit to US$4.4 billion by 2013; - Develop technology for 20 strategic products local production to SUS (Unified Health System) up to 2013
Challenges	- Reduce the National Health System vulnerability; - Raising innovation investments; - Increase exports; - Attract foreign companies production and R&D centers; - Deepen the supply chain and also strengthen the national companies; - Strengthen the public laboratories network

SOURCE: Self-elaboration, based on: .

In the PDP, the Grant-in-Aid to FINEP figures as one of the CIS area several instruments to support two of the six challenges: (i) to reduce the national health system (SNS, as in Portuguese) vulnerability and (ii) to raise innovation investments. The first refers both to the CIS strong dependence of more intensive knowledge and technology products imports (GADELHA, 2006) and the trade balance high deficit - US$5.5 billion in 2007 (MDIC). According to Gadelha (2006), based on the CIS trade balance for goods and economic blocs, year 2004, the import dependence of the complex takes place, mostly in products with higher technological content (including drugs and medicines) coming from developed countries blocks (NAFTA and EU). In turn, the Brazilian exports, with lower technological content, are intended largely for economic developing countries blocks (Mercosur and the "rest of the world"). This scenario shows an international labor division configuration, in which Brazil plays a position of greater dependence on foreign technology related to the developed countries (SANTOS, 2004; PEIXOTO, 2005). This process involves a different labor territorial division sphere (among countries), which suggests a technological hierarchy among countries. The second challenge refers to the low innovative capacity of the sectors that make up the CIS - as illustrated by the case of the Brazilian pharmaceutical (GADELHA, 2003, 2006; GADELHA et al, 2003). This CIS reduced innovation capacity can be considered in a broader perspective, a reflection of the immaturity of the Brazilian national innovation system, discussed in a study by Albuquerque and (2000).

In the Grant-in-Aid Program's notices (2008 and 2009), health issues include a wide range of sub-themes - involving, e.g., new chemical or biotechnological basic solutions (molecules) development, drug and medicines development, medical devices projects and reagents supplies development. The ways the areas or sub-themes are presented not allow us to differentiate between truly innovative activities and modernization activities. This type of areas presentation gives rise to varying levels of technological complexity projects. The analysis of this aspect is not feasible, however, without information detailing and technical knowledge specific to each project.

However, it can be observed that the public notices include activities which, while innovative, are, in fact, aimed at rehabilitation or reconstruction of the old capacity present in the health-industrial complex in Brazil. A good example is the funding for projects geared to the development of hemodialysis equipment. As illustrated by Melo et al (2000), from a tragic episode in the Caruaru city in 1996 it was generated a review and control process over the hemodialysis care quality. This represented a major shift in regulation, including the hemodialysis equipment characteristics that could be used, even though the episode was a result of the water type and not the type of device. While appropriate from the public health care point of view it has generated a strong negative impact on the hemodialysis equipment domestic industry which did not have time to adapt itself to those new requirements. This regulation change favored foreign firms and as a result, the national dialysis providers - which once dominated the market - have become imported equipment and materials representatives, technical assistance service providers, or exited the market.

According to Arocena and Sutz (2002), this type of event is known as an "unlearning" process. These authors point out that policies defined without a systemic conception may have a positive result for a given aspect - such as public health, in the case described above - but a destruction effect of in the learning years to another aspect - as for the hemodialysis equipment national industry. This kind of experience may explain why, in the Grants Program, support to totally new things development for the country and at the same time, themes that are focused on a reconstruction effort of productive activities that have been discontinued are included - many times by not taking a systemic perspective in policymaking.

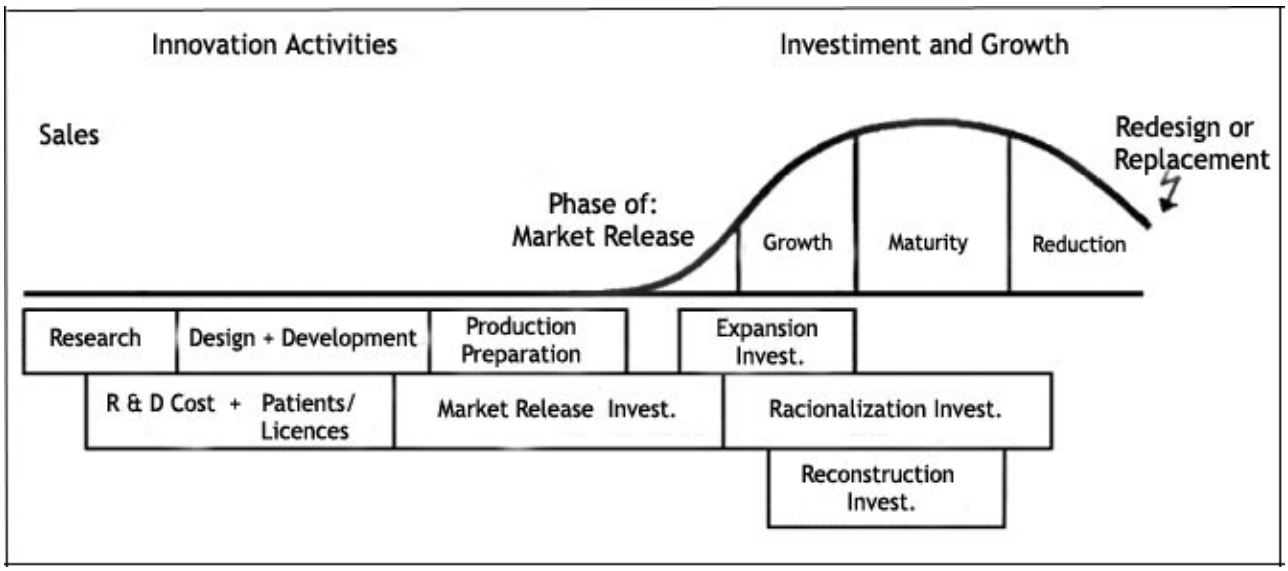
As part of the PDP macro goals (or country-goals) are the magnification of (i) Brazilian exports participation in world trade and (ii) the number of micro and small exporters' companies (MPEs, as in Portuguese) (by 10% up to 2010). The participation of MSEs in Brazilian exports in the PDP is seen as an indicator that summarizes the competitiveness, survivability and growth potential of the same. The MPEs participation in Brazilian exports is seen in the PDP as an indicator that summarizes the competitiveness, survivability and the growth potential of such companies. Although it is not an instrument aimed at promoting exports, the economic grants are also part of some federal policies set of actions aimed at promoting the competitiveness of domestic companies (FINEP, 2006). Considering grants approved amounts, 42.32% of the companies that had projects contemplated conducted export.

One of the most questionable grant-in-aid program issues is precisely the one which leads to the ultimate goal, the innovation promotion in Brazilian companies - on, in PDP for the CIS, the increased innovation investment challenge. It says here that grants for economic development, as formulated by MCT/FINEP, does not works as an instrument for innovation financing but focused on research activities - mainly - and development in firms. It doesn't mean to say that

there are not projects supported by grants which have reached marketable innovations. The emphasis is on questioning how the program is formulated. Illustrating the argument, the financial aid can be located in the activities process initial phase that may or may not lead to innovation, corresponding in large part to the box 'search' in the Figure below, not traveling, however, to the path that leads from research to the invention released on the market. In the Indian case, for example, one of the instruments of innovation financing, called Technology Development Board (TDB) - 'research grants' - basically seeks the financial support to commercialization of autochthonous indigenous technology (indigenous technology) (MANI, 2010). A comparative analysis between the FINEP grants model and other correlates of developed countries can be found in Andrade (2009). It is also available an evaluation of the Grant-in-Aid Program program by FINEP itself, see FINEP (2010).

A Subvenção está voltada ao financiamento de projetos de pesquisa que podem ou não ser projetos de inovação. Isto, do ponto de vista econômico. Um aspecto chave do programa é que o risco financeiro é basicamente assumido pela FINEP – que pode financiar, inclusive, a contrapartida das empresas. Embora permitida, a associação entre empresas não é requisito necessário, de modo que o risco tecnológico e de inovação pode ficar em grande parte a cargo de empresas isoladas – aqui, o agravante é que, conforme visto, MPEs concentram a maioria dos projetos e recursos aprovados pela FINEP.

Figure 4 - Temporal dimension of innovation and investments related to innovation in the perspective of the product life cycle.



Source: OECD Adaptation, 1990.

Taking the innovation as a non-linear process (OECD, 1990), the R&D is part of this, or one of its phases, and not the result, the innovation itself. That is the invention that reaches the market and has commercial success, being the subject of incremental improvements over its life cycle (OECD, 1990). Or, in another sense, the innovation as "[...] a process by which organizations incorporate knowledge in the production of goods and services that are new to them, whether new or not, to their domestic or foreign competitor" (MYTELKA, 1993 apud CASSIOLATO; LASTRES, 2007). In this last approach, innovation is taken by the company in a broad sense, failing to consider just the radical type of innovation - particularly susceptible to the very large companies - and therefore being more favorable to the smaller firms universe:

The MPEs are the PDP and Grants instruments interest objects. For more details about the advantages of the latter notion to developing countries, see Cassiolato et al (2003).

Final considerations

It is implicit in the Grant-in-Aid Program to Innovation, as formulated, the encouragement of technological entrepreneurship (influence of the Innovation Law). This in the sense that seeks through financial support (via open competition – public call) promoting a set of innovative activities (supposedly) in a large number of companies (from micro to large ones). Apparently, some reading leaning excessively on a model of innovation known as the Schumpeter I (focus on the innovative businessman) (Schumpeter, 1997). The same author in a more mature phase (Schumpeter II or "old" Schumpeter), shifted his argument focus. Here, the "old" Schumpeter transfers from the adventurous businessman to the modern and large companies the main role as an agent responsible for the technical progress and innovation. Roughly speaking, the company size importance in Schumpeter (1961) refers to the explanation that makes the capitalist competition, embodied as it is, in processes of creative destruction. Moreover, it is known that Law No. 10.973/2004 - and derived from this, the FINEP economic support instrument - is partly a reading to Brazil of policy originally designed to promote innovation in developed countries (Koelle, 2009); and thus shifted from the context that gave meaning to it - whether historical, political, economic or institutional. A "timeline" can be traced to illustrate the policies influence to stimulate innovation from developed countries on the Brazilian Innovation Law and FINEP Grants Program – in a sequence that signals the influence of a policy on the other: Bayh-Dole Act (USA, 1980) => French Innovation Law (1999) => Brazilian Innovation Law (2004) => Grant-in-Aid Program to FINEP Innovation (2006). The French Innovation Law, however, was the main model for the Innovation Law in Brazil - see Koeller (2009) for more details on this discussion. It should be noted at this point that the French Innovation Law was prepared in parallel to the European Union discussion, which resulted in the "Lisbon Strategy", which places a strong emphasis on knowledge economic valuation as a strategy to reduce the innovative gap with the U.S. The mentioned laws, including the Brazilian Innovation Law, assumed a major step for intellectual property regulation. They are all based on the idea of strengthening the regulation of intellectual property in order to create a “marketplace of ideas”. This means that the Law provides legal support to anyone who manages a potentially economically exploitable idea. That is, aims to promote the economic use of knowledge. In a few sectors and countries, especially in the U.S., it can be observed a co-evolution of the intellectual property system in the capital market, which led to the creation of many innovative small and medium businesses that succeed. Although the existence of a legal regulation does not guarantee the existence of a intellectual property protection efficient system, on the other hand, this model requires some sort of association with a extremely dynamic capital system. The technical, financial and regulatory issues co-evolution is a key to consider when adopting laws and policy instruments originated in contexts that do not reflect Brazil. Moreover, this theoretical model - which underpins the Grant-in-Aid Program here, was considered too tied to the Schumpeter I model – it is related to the belief, somewhat naive, that the technological change under capitalism can be led by small businesses. The high participation of small businesses in the projects approved for the area of health in grants program allows us to put this question, albeit in a speculative way. This study presented the results of the Grant-in-Aid Program to FINEP Innovation calls (2006-

2009) for health. Among them, emphasis was given to the high concentration of values approved for the Southeast (especially São Paulo) and for smaller-sized firms. This brief results description was followed by a discussion related to R&D and Innovation in the FINEP Program, considering its role in the Productive Development Policy. Here, although exploratory, it was tried to indicate that the grants is more a support program for R&D in firms and less innovation oriented, which apparently reveals an ambiguity in the innovation understanding (R&D as innovation synonymous? A direct relationship between R&D and innovation?). It has to be said, however, that this apparent limitation in the program design has, in part, originated in the Innovation Law ("borrowed", as said, from the developed countries experience) and in the decree that regulates it. From the questioning of the program validity as to its ultimate goal, the support for innovation in business, it was sought here to contribute to the debate related to innovation policies in Brazil and its instruments.

References

ALBUQUERQUE, E. Catching up no século XXI: construção combinada de sistemas de inovação e de bem-estar social. 2009. Available at: <http://www.cedeplar.ufmg.br/economia/seminario/2009/Livro_Crescimento_Economico.pdf>

ALBUQUERQUE, E.; CASSIOLATO, J. As Especificidades do Sistema de Inovação do Setor Saúde. Revista de Economia Política, vol. 22, nº 4 (88), outubro-dezembro, 2002.

ALBUQUERQUE, E.; CASSIOLATO, J. As especificidades do sistema de inovação do setor saúde: uma resenha da literatura como introdução a uma discussão sobre o caso brasileiro. Belo Horizonte: FESBE, 2000. (Estudos FESBE, 1)

ANDRADE, A. Estudo comparativo entre a subvenção econômica à inovação operada pela FINEP e programas correlatos de subsídio em países desenvolvidos. Dissertação (Mestrado) – Escola Brasileira de Administração Pública e de Empresas da Fundação Getúlio Vargas. Rio de Janeiro, 2009.

AROCENA, R.; SUTZ, J. Subdesarrollo e innovación.Navegando contra el viento. Madrid, OEI, 2002.

BRASIL. Decreto nº 5.563, de 11 de outubro de 2005. Available at: <http://www.planalto.gov.br/ccivil_03/_ato2004-2006/2005/Decreto/D5563.htm>.

BRASIL. Lei nº 10.973, de 2 de dezembro de 2004. DOU de 3.12.2004. Available at: < http://www.receita.fazenda.gov.br/Legislacao/Leis/2004/lei10973.htm>.

CASSIOLATO, J.; LASTRES, H. Inovação e sistemas de inovação: relevância para a área de saúde. RECIIS – R. Eletr. de Com. Inf. Inov. Saúde. Rio de Janeiro, v.1, n.1, p.153-162, jan.-jun., 2007.

CASSIOLATO, J.; LASTRES, H.; MACIEL, M. (Eds.) Systems of innovation and development: evidence from Brazil. Cheltenham: Elgar, 2003.

CONFEDERAÇÃO NACIONAL DA INDÚSTRIA (CNI). A política de desenvolvimento produtivo: avaliação e perspectivas. Versão para discussão no Fórum Nacional da Indústria / Confederação Nacional da Indústria. Brasília, 2009.

FEDERAÇÃO DAS INDÚSTRIAS DO ESTADO DE SÃO PAULO (FIESP). Avaliação da Política de Desenvolvimento Produtivo. Cadernos Política Industrial n.1. Departamento de Competitividade e Tecnologia (DECOMTEC), 2008.

FINANCIADORA DE ESTUDOS E PROJETOS (FINEP). Relatório de avaliação do programa de subvenção econômica. Relatório de avaliação 2010. Disponível em: <http://www.finep.gov.br/DCOM/subvencao_avaliacao1.pdf >.

FINANCIADORA DE ESTUDOS E PROJETOS (FINEP). Chamada Pública MCT/FINEP/Subvenção Econômica à Inovação, 2009. Disponível em: <http://www.finep.gov.br//fundos_setoriais/subvencao_economica/editais/Subvencao_2009.pdf>.

FINANCIADORA DE ESTUDOS E PROJETOS (FINEP). Chamada Pública MCT/FINEP/Subvenção Econômica à Inovação, 2008. Disponível em: <http://www.finep.gov.br//fundos_setoriais/subvencao_economica/editais/EDITAL_Subvencao-2008.pdf>.

FINANCIADORA DE ESTUDOS E PROJETOS (FINEP). Chamada Pública MCT/FINEP/Subvenção Econômica à Inovação, 2007. Disponível em: <http://www.finep.gov.br//fundos_setoriais/subvencao_economica/editais/Selecao_Publica_Subvencao_2007_versao_final.pdf>.

FINANCIADORA DE ESTUDOS E PROJETOS (FINEP). Chamada Pública MCT/FINEP/Subvenção Econômica à Inovação, 2006. Available at: <http://www.finep.gov.br//fundos_setoriais/subvencao_economica/editais/SUBVENÇÃO_INOVAÇÃO_final.pdf >.

GADELHA, C. Desenvolvimento, complexo industrial da saúde e política industrial. Revista de Saúde Pública, 40(N Esp):11-23, 2006.

GADELHA. C. O complexo industrial da saúde e a necessidade de um enfoque dinâmico na economia da saúde. Ciência & Saúde Coletiva. 8(2); 521-535, 2003.

GADELHA, C.; QUENTAL, C.; FIALHO, B. Saúde e inovação: uma abordagem sistêmica das indústrias da saúde. Cad. Saúde Pública. 19(1):47-59, 2003.

INSTITUTO BRASILEIRO DE GEOGRAFIA E ESTATÍSTICA (IBGE). Classificação Nacional de Atividades Econômicas. Available at: <http://www.cnae.ibge.gov.br>.

INSTITUTO BRASILEIRO DE GEOGRAFIA E ESTATÍSTICA (IBGE). Contas Regionais do Brasil 2003-2007. Available at: <http://www.ibge.gov.br>.

INSTITUTO NACIONAL DA PROPRIEDADE INDUSTRIAL (INPI). Consulta à Base de Patentes. Disponível em: <http://pesquisa.inpi.gov.br/MarcaPatente/jsp/servimg/servimg.jsp?BasePesquisa=Patentes>.

KOELLER, P. Política Nacional de Inovação no Brasil: releitura das estratégias do período 1995-2006. Tese (Doutorado). Instituto de Economia da Universidade Federal do Rio de Janeiro. Rio de Janeiro, 2009.

MANI, S. Financing of industrial innovations in India: how effective are tax incentives for R&D? International Journal of Technological Learning, Innovation and Development. vol. 3, n.2, pp. 109 – 131, 2010.

MELO, P.; RIOS, E.; GUTIERREZ, R. Equipamentos para hemodiálise. BNDES Setorial, Rio de Janeiro, n. 12, p. 105-134, set. 2000.

MINISTÉRIO DO DESENVOLVIMENTO INDÚSTRIA E COMÉRCIO (MDIC). Política de Desenvolvimento Produtivo. Íntegra da Apresentação da Política de Desenvolvimento Produtivo. Available at: <http://www.mdic.gov.br>.

MINISTÉRIO DO DESENVOLVIMENTO, INDÚSTRIA E COMÉRCIO EXTERIOR (MDIC). Balança Comercial por Unidade da Federação. Available at: <http://www.desenvolvimento.gov.br/sitio/interna/interna.php?area=5&menu=1078&refr=1076>

ORGANISATION FOR ECONOMIC CO-OPERATION AND DEVELOPMENT (OECD). Technological innovation: some definitions and building blocks. Draft Background Report, Chapter 2. Technology/Economy Programme (TEP), Paris, 1990.

PEIXOTO, F. O Local e os Sistemas de Inovações em Países Subdesenvolvidos: O caso do arranjo produtivo de moda praia de Cabo Frio/RJ. Dissertação (Mestrado). Instituto de Economia da Universidade Federal do Rio de Janeiro. Rio de Janeiro, 2005. RECEITA FEDERAL. Comprovante de Inscrição e de Situação Cadastral. Available at: <http://www.receita.fazenda.gov.br/PessoaJuridica/CNPJ/cnpjreva/Cnpjreva_Solicitacao.asp>

SANTOS, M. A natureza do espaço. Técnica e tempo. Razão e emoção. São Paulo: Editora da Universidade de São Paulo (Edusp), 4ª edição, 1ª reimpressão, 2004.

SCHUMPETER, J. Teoria do desenvolvimento econômico: uma investigação sobre lucros, capital, crédito, juro e o ciclo econômico. São Paulo: Nova Cultural, 1997. (Série "Os economistas").

SCHUMPETER, J. Capitalismo, socialismo e democracia. Rio de Janeiro: Fundo de Cultura, 1961.

VIANA, A.; ELIAS, P. Saúde e Desenvolvimento. Ciência & Saúde Coletiva, 12(Sup):1765-1777, 2007.

WORLD HEALTH ORGANIZATION (WHO). Innovation in developing countries to meet health needs experiences of China, Brazil, South Africa and India. Commission on Intellectual Property Rights, Innovation and Public Health (CIPIH). WHO Ref. CIPIH Study 10d (DGR). MIHR report to CIPIH, April 2005. Available at: <www.who.org>.

WORLD HEALTH ORGANIZATION (WHO). Macroeconomics and health: investing in health for economic development. Geneva, 2001. Available at: <www.who.org>.