

# Production Development Partnership in Healthcare: Public procurement within the Brazilian development agenda

*As Parcerias para o Desenvolvimento Produtivo em saúde na nova agenda de desenvolvimento nacional*

Laís Silveira Costa<sup>1</sup>, Antoine Metten<sup>2</sup>, Ignácio José Godinho Delgado<sup>3</sup>

**ABSTRACT** By reflecting their systemic nature, the Production Development Partnerships (PDP) in Healthcare represent a shift in healthcare policy and constitute the main instrument of public action on the part of the healthcare development policy community. Considering the importance of healthcare to a national development trajectory that combines economic competitiveness and social inclusion, this article aims to analyze the political and institutional factors that affect national development in healthcare policy, by highlighting the PDP. In order to do so, it uses the theoretical framework of cognitive analysis of public policies to identify how institutions manage their strategies and the preferences of the actors involved, and how they influence the results of public action.

**KEYWORDS** Health policy. Health sciences, technology and innovation management. Public policy.

**RESUMO** Ao refletir seu caráter sistêmico, as Parcerias para o Desenvolvimento Produtivo (PDP) representam uma inflexão na política de saúde e constituem o principal instrumento de ação pública da comunidade de política desenvolvimentista de saúde. Considerando a relevância da saúde para uma trajetória de desenvolvimento nacional que alia competitividade econômica e inclusão social, este artigo visa analisar os elementos político-institucionais que condicionam o desenvolvimento nacional na política de saúde, com destaque para as PDP. Para tanto, utiliza o arcabouço teórico da análise cognitiva das políticas públicas visando identificar como as instituições orientam suas estratégias e as preferências dos atores, e como influenciam os resultados da ação pública.

**PALAVRAS-CHAVE** Política de saúde. Gestão de ciência, Tecnologia e inovação em saúde. Política social.

<sup>1</sup>Fundação Oswaldo Cruz (Fiocruz), Grupo de Pesquisa de Inovação em Saúde (GIS) - Rio de Janeiro (RJ), Brasil.  
lais.costa@fiocruz.br

<sup>2</sup>Fundação Oswaldo Cruz (Fiocruz), Grupo de Pesquisa de Inovação em Saúde (GIS) - Rio de Janeiro (RJ), Brasil.  
antoine.metten@gmail.com

<sup>3</sup>Universidade Federal de Juiz de Fora (UFJF) - Juiz de Fora (MG), Brasil.  
ignaciodelgado.uffj@gmail.com

## Introduction

Over the last decade, a set of public policies has been put in place in Brazil with the objective of overcoming the vulnerability of the healthcare productive base and mitigating its consequences on the sustainability of the healthcare system. The inclusion of this issue in the political agenda suggests a renewed perception of healthcare, which is now being considered both as a structuring element of the social welfare system and a strategic sector for the accumulation of capital, evidencing the multiplicity of relations that exist between healthcare and development. In addition to its recognized role within the welfare structure, healthcare also incorporates industrial activities – chemicals, biotechnology and medical/hospital equipment manufacturing – and services, which are jointly referred to as the Healthcare Economic-Industrial Complex (HEIC) (GADELHA *ET AL.*, 2012), currently accounting for about 9% of the country's Gross Domestic Product (GDP), 10% of skilled jobs and more than 25% of the investment in research and development in the country. This complex incorporates advanced technologies such as biotechnology, nanotechnology, information technology and communication, among others of major importance to the technological consolidation of the national productive base. However, in Brazil, the growing deficit in the HEIC trade balance shows the dependence of the country's healthcare system on having access to these markets, which are characterized by their oligopolistic and asymmetric structures (LOYOLA, 2008; GADELHA *ET AL.*, 2012).

The identification of the healthcare productive base's potential to leverage the country's economic and technological development and its insertion into the political agenda dates back to the 1970s. However, it was only from the beginning of this century that a new generation of public policies to support the consolidation of the HEIC

began to emerge. These took into account its systemic nature and its structural elements, such as the evolution of the international markets for healthcare inputs, demographic changes and the Unified Health System's (SUS) needs. This set of policies has been based on the articulation of an inter-sectoral institutional network that involves participants from public healthcare, science and technology, foreign trade and other sectors.

As a result, a series of strategies to strengthen the productive base of the healthcare system have been observed, with emphasis on the intensification of the State's purchasing power and on the transfer of technology to national laboratories. These strategies are mainly represented by the Productive Development Partnerships (PDP), launched in May of 2008 as part of the government's Productive Development Policy and incorporated into the priorities of the Major Brazil Plan in 2011 and the National Healthcare Plan of 2012–2015. PDP are defined as a series of partnerships between public and private institutions aimed at reducing the vulnerability of the SUS and the cost of strategic healthcare products by developing producing high value-added strategic technologies (GM / MS N°. 2,531 / 2014) (BRASIL, 2014B).

In considering this context, which highlights the relevance of healthcare to the promotion of a national development strategy that combines economic competitiveness and social inclusion, the first objective of this article is to analyze the political-institutional elements that influence national development in healthcare policy, with an emphasis on PDP. Its secondary objective is to identify how the institutions involved in this process have guided the participants' strategies and preferences and how they have influenced the outcome of public healthcare initiatives since the beginning of this century.

This study is based on the theoretical framework of the cognitive analysis of public policies (JOBERT; MULLER, 1987; FAURE; POLLET; WARIN,

1995, LASCOUMES; LE GALÈS, 2004, 2012), which emphasizes not only the practices of the public policy participants and their interactions, but also the institutions, norms, collective representations and procedures that govern the set of such interactions. In this sense, public sector initiatives are analyzed on the basis of a configuration of the participants, their practices, the specific context, representations and coded knowledge. The existence of a public policy framework shared by the participants involved (FAURE; POLLET; WARIN, 1995) is scrutinized using the cognitive analysis of public policies elaborated by Pierre Muller in 1987 ('The State in Action'). This framework is based on the real representation and cognitive image of the participants' perception of a given issue and coexists with a global framework as well as a sectorial framework (relating to the sector, academic area or the profession).

The global framework includes concepts such as the need for economic growth, technological dynamism, insertion into asymmetric international markets and the maintenance or reduction of public spending, among others (LASCOUMES; LE GALÈS, 2012). In the cognitive perspective of public policy analysis, the interaction between the sectorial and global frameworks produces a certain perception of the issue to be addressed – in this case, the vulnerability of the healthcare productive base – thereby conditioning, in a reflexive way the participants' positioning and their decision-making processes. The PDP are, therefore, understood as 'public action instruments', with rules and values that are representative of this sectorial framework of public policy (LASCOUMES; LE GALÈS, 2004).

In addition to its Introduction, this article is further divided up into three sections. In the first section, PDPs are contextualized within the core of the relationship between healthcare, technology and development. Following the identification of these structuring elements, the design and implementation of the PDPs are analyzed from the

public policy participants' point of view. The third section seeks to identify the potential of the PDPs as a policy that promotes economic and technological development on the one hand, and on the other acts as a determinant of the sustainability of the healthcare system; this section also seeks to outline the challenges that PDPs must face in order to reach their objectives. We conclude the article with some final considerations on the subject.

## Healthcare, strategic technology and development

The expansion of access to healthcare has led to a significant increase in the HEIC trade deficit during the last decade, increasing from US \$ 3 billion in 2003 to US \$ 11.5 billion in 2014 (GADELHA; COSTA; BAHIA, 2015). This situation reveals the weakness of the national productive base of healthcare services and its dependence on international markets, and reveals the need for the elaboration of public policies aimed at supporting national production of the strategic supplies necessary for the functioning of the healthcare system.

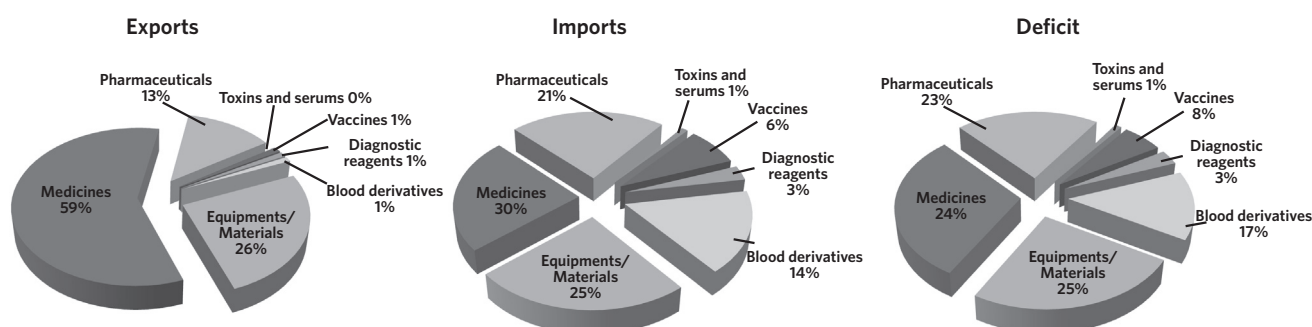
The strengthening of the national productive base is particularly relevant in healthcare services, given the asymmetrical and oligopolistic nature of the international healthcare industry markets: the ten largest pharmaceutical companies in the world are either from the United States or the European Union and accounted for about 45% of total world sales in 2010. In turn, the United States and Western Europe accounted for more than 70% of the world market for medical/hospital and dental equipment and supplies (THE WORLD MEDICAL MARKETS FACT BOOK, 2013).

The extreme concentration of these markets is further reinforced by the existence of barriers to technological entry, resulting,

on the one hand, from the considerable research and development investments required to launch new products, and, on the other hand, from the patent agreement established by the Trade-Related Intellectual Property Rights, signed in 1994 and defended by the World Trade Organization (WTO), which guarantees a 20-year monopoly on the production of patented inputs. These technological entry barriers create a situation in which national healthcare industries are relegated to the outer reaches of international markets, depending on the

importation of high technological value added inputs, and with a cost that is set by a cartel of international laboratories that dominates global production. This results in the technological dependency of healthcare systems in emerging and developing countries (GADELHA *ET AL.*, 2012). In Brazil, the lack of national healthcare policy sovereignty is evidenced by the obvious technological dependence on international markets in relation to essential inputs, which is illustrated in *graph 1* (GADELHA *ET AL.*, 2012, GADELHA; COSTA; BAHIA, 2015).

Graph 1. Participation of the different segments of the Healthcare Economic-Industrial Complex (HEIC) in Brazil's healthcare-specific trade balance – 2014



Source: Produced by GIS/Ensp/Fiocruz, using data provided by Rede Alice/MDIC.

Under these conditions, the need to design and implement public policies that help strengthen domestic HEIC industries, including the provision of incentives for innovation in healthcare, is abundantly clear. This should establish a regulatory framework that suits the needs of the national productive base and the use of the State's purchasing power. For Cimoli *et al.* (2007, p. 60),

[...] in all those countries with efficient and profit-making pharmaceutical industries there are government programs to support

biomedical research, usually in universities and public laboratories. At the same time, the personnel of such programs in universities have access to scientific training and, after completing their training, are immediately employed by the pharmaceutical companies. Furthermore, public funds and programs play an important role in governmental purchases of pharmaceuticals. And finally, in almost all these countries there are various forms of pharmaceutical market regulation that go well beyond property rights agreements and the honesty of transaction as set down in the manuals.

In order to resolve this technological dependence, the PDPs establish certain mechanisms from transferring technology from large private laboratories to public laboratories, aimed at conferring on the latter the capacity to competitively produce the necessary inputs for the proper functioning of the healthcare system as a whole, and of the SUS in particular. This is a tool of public policy based on a new perception of healthcare policy, which takes into account both the structural characteristics of the international markets of healthcare service supplies and the capacity of the national productive base to be included in these markets, thereby ensuring the sustainability of the healthcare system (GADELHA ET AL., 2012). It should be noted that this new vision of healthcare policy is the result of the construction of a public policy network that involves diverse participants who share practices, resources and world representation, allowing for the creation of a collection of different public policy tools.

## The creation of a healthcare productive development policy network

The PDPs are not in themselves a point of departure or of a break with public initiatives aimed at strengthening the productive base of healthcare services. On the contrary, they are part of a movement that recognizes the strategic importance of the productive base of healthcare services to national development that began in the 1970s. Although certain policies have been identified that encourage the national production of healthcare inputs, such as the creation of the Executive Group of the Pharmaceutical Industry (Geifar) in 1962, the Medicines Center (Ceme) in 1971 and the Medicines Master Plan of 1973 (LOYOLA, 2008), the scope of the present study is limited to the policies

that have been formulated since the beginning of this century. These have gained relevance in the organization of the national production of healthcare inputs and become an exemplary public policy instrument within the evolution of healthcare policy observed in recent years.

With regard to the institutionalization of the strategic nature of the HEIC, the importance of the First National Seminar on the Healthcare Economic-Industrial Complex, held at the National Bank for Economic and Social Development (BNDES) in May 2003 should be highlighted. During the event, the need to integrate the support of the innovative capacity of the HEIC industries into healthcare policies was determined. In the same year, the Office of Science, Technology and Strategic Inputs of the Ministry of Health was created and industrial policy initiatives aimed at the healthcare area were resumed when the Industrial, Technological and Foreign Trade Policy (PITCE) was launched, at the end of 2003. The PITCE has revived two issues that are central to the development agenda: the idea that we need to have a coherent industrial policy, and the importance of selecting certain strategic sectors to foster national development, such as the pharmaceutical production chain. In 2004, the BNDES Profarma program was created with the purpose of strengthening the nation's productive capacity and at renovating its pharmaceutical industrial park. In parallel, and in the same year, the National Policy on Science, Technology and Innovation in Healthcare was approved (PNCTIS), which defined the State's central role in the promotion and regulation of the HEIC.

In 2007, through the Mais Saúde Program, the need to strengthen the HEIC and reduce the country's dependence on external markets for medicines and hospital/medical materials, and therefore the vulnerability of Brazilian healthcare policy, was reinforced. In order to systemically monitor the initiatives implemented thus far, in May 2008 the

Executive Group of the Healthcare Industrial Complex (Gecis) was established, characterizing an important step in the strategy of the Ministry of Health to establish a link between the federal agencies that conduct the Science and Technology (S & T) policy of the Ministry of Development, Industry and Foreign Trade and the Ministry of Science and Technology, as well as other active institutions in the sector. These include, among others: the National Agency of Sanitary Surveillance (Anvisa); the Oswaldo Cruz Foundation (Fiocruz); BNDES; the National Institute of Industrial Property (INPI); the Brazilian Industrial Development Agency (ABDI); the National Institute of Metrology, Quality and Technology (Inmetro); and the Financier of Studies and Projects (Finep).

The PDPs were, in turn, established in May of 2008 as part of the government's Productive Development Policy, and they had four goals in mind: i) to increase the investment rate so as to eliminate and avoid supply bottlenecks; ii) to increase the innovation effort, especially in the private sector; iii) to preserve the robustness of external accounts; and iv), to support micro and small firms in the sector.

In 2011, after the expiration of this policy, the PDPs were integrated into the Brasil Maior Plan (PBM), defined in its constitutive document as the federal government's industrial, technological and foreign trade policy. The PBM identifies the HEIC as one of six strategic areas for the country's industrial and scientific development, recognizing its potential for the generation of income, jobs, and research and for development, as well as its traditional role in strengthening the welfare state.

With regard to the technology transfer mechanisms, the basic model used in PDPs involves the participation of three players: a public laboratory, a pharmaceutical laboratory (national or foreign, preferably located in Brazil), and a national laboratory that produces the active pharmaceutical input (AFI)

(REZENDE, 2013). Law N° 12.349/2010 (WHICH AMENDED LAW N° 8.666/1993 - BRASIL, 2010) states that technology transfers to public sector entities can only be done to productive institutions. Therefore, purchases made directly from private companies are not allowed, but only from a productive and technological unit with the capacity to absorb the transferred technology. The federal government's relationship is always facilitated by public sector producers, such as Fiocruz, Butantan, Hemobrás or by a producing public institution. In addition, when acquiring raw materials, official drug production laboratories must preferentially consider private entities that produce AFIs in the country.

Inter-ministerial Regulation N° 128/2008 (BRASIL, 2008B) established guidelines for the public acquisition of drugs and medications by the SUS through a network of public producers. In these guidelines, it is stipulated that the public acquisition of medicines and drugs by the SUS be done preferably from a Brazilian producer; It also requires that public laboratories give preference to local producers in their purchases of chemicals. In addition, Decree N° 7.731/2012 (BRASIL, 2012) establishes the granting of up to 25% preference margins for Brazilian products in public submissions to companies investing in technology research and development in the country.

The confirmation of the HEIC's importance within the National Health Plan 2012-2015, as well as the re-edition of the PDP in the PBM, reflects the institutionalization of a systemic vision of healthcare as a factor of economic and technological dynamism and as the producer of necessary supplies to ensure universal access to healthcare services. At the same time, this decision results from a process within those institutions involved that arises from different elements such as: the influence of organized groups, from within and from outside these institutions; the evaluation of previous public policies; the definition of the problem and

the formulation of solutions; as well as the macro-political context in which it is inserted (KINGDON, 2003). According to the multiple streams framework developed by Kingdon (2003), the combination of these elements provides an opportunity for political entrepreneurs to include a topic within the public policy agenda, giving a social issue the status of a political issue that implies a political response, i.e., the formulation and implementation of a public policy (CAPELLA, 2006, 2008, 2012, METTEN *ET AL.*, 2015).

In order to better understand this process involving PDPs, one should highlight the intersectoriality of the involved institutions' network, which can be considered to some extent a reflection of the systemic nature of the Healthcare Economic-Industrial Complex. Under the coordination of Gecis, the PDP's approval process involves a number of public institutions traditionally focused on economic and technological policies, such as the Ministry of Development, Industry and Foreign Trade (MDIC), the Ministry of Science, Technology and Innovation (MCTI), BNDES and Finep, among others, as well as representatives of the HEIC industries. The PDP's implementation monitoring involves the Regulatory Technical Committee (CTR), which consists of representatives from Anvisa, the Ministry of Health and from the public sector laboratories involved.

As such, the network of players involved in the formulation and implementation of PDPs constitutes a public policy community that could be referred to as the 'developmental healthcare policy community'. Here, we adopt the vision of developmentalism as offered by the Economic Commission for Latin America and the Caribbean (ECLAC), which involves a strategy of productive transformation aimed at reconciling economic growth with income distribution (CASSIOLATO; LASTRES, 2008). In turn, the concept of the public policy community was widely disseminated by the neo-institutionalist

school of the 1980s and can be defined according to March and Olsen (1989, p. 185) as a

network characterized by the stability of relations among its members, its selectivity, and the vertical interdependence regarding the division of responsibilities in the management of public services.

In recognizing the strategic importance of healthcare to the national development project, this public policy community assumes a certain perception of the problem to be faced – overcoming the vulnerability of the healthcare productive base – which is the central element of its 'public policy framework'. Conceptually, this framework can be defined as the "game of the social representations immediately associated with public policy negotiation" (JOBERT, 1995, p. 153), that is, "an image of the reality in which we want to intervene" (JOBERT, 1995, p. 164). According to a cognitive analysis of public policies, such a framework has a great influence on the performance of a given public policy community, since it guides the understanding of the constraints of the problem to be addressed, which in turn defines the range of adequate solutions.

Thus, PDPs constitute the main "tool of public action" of the developmental healthcare policy community. In the words of Lascoumes and Le Galès (2012, p. 201):

A 'tool of public action' constitutes a simultaneous technical and social device, which organizes specific social relations between the public power and its recipients for representations and meanings of which it bears [...]. [The] tools of action are bearers of values, feeding on an interpretation of the social and precise conceptions of the expected mode of regulation. The tool is also a producer of a specific representation of the challenge it faces. Finally, the tool induces a particular problematization of the objects of application as it hierarchizes the variables and can proceed

until inducing an explanatory system. (LASCOURMES; LE GALÈS, 2012, P. 201).

Thus, the design and implementation of PDPs in healthcare is representative of a perception that simultaneously considers the role of healthcare in structuring the welfare state, its potential as an economic and technological development inducer and its relevance to the international projection of the country. More specifically, the PDPs ensure that the core of advanced technologies is transferred to the country. Therefore, the domestic development of research and medicines and the national control over patents and knowledge is guaranteed, ensuring, in the medium and long terms, the national productive capacity and autonomy of the Brazilian healthcare system.

Based on these considerations, it is worth analyzing the PDPs' potential both as an inducing instrument for economic and technological development and as a mitigating element of the SUS' vulnerability with regard to access to essential inputs and products.

## **PDP in healthcare: potential and challenges**

PDPs are one of the pillars of developmental healthcare policy as they establish mechanisms to strengthen the HEIC with the dual purpose of ensuring the medium and long term sustainability of the Brazilian health system, and of fostering the transfer of advanced technologies to national laboratories (REZENDE, 2013).

The design and implementation of the PDPs are part of a development policy that is consistent with the theory of the Big Push model established in the seminal contribution of Rosenstein-Rodan (1943). This perspective recommends that developing countries invest heavily in industries with a strong productive and

technological potential, inducing the dynamism of related sectors of the economy (spillover effect). Therefore, it is important to highlight the need to identify and foster those driving industries (GOULART, 2006) that have considerable productivity and financial resources, the capacity to generate technological innovations, a dominant position within their fields of expertise and that operate in a dynamic business segment with high rates of expansion. The effect of the growth in the driving industry on the industries being driven is an increase in income generation and investment. Perroux (1967), meanwhile, identified the potential of leading companies to leverage economic development by establishing growth centers capable of generating a link and integrating with other economic sectors, thereby providing an innovative milieu that could take different formats, from business incubators to technological parks or cities. Silicon Valley, in California, and the 'Third Italy' are successful examples of regional centers widely studied in industrial economics. Thus, such policies that encourage the technological consolidation of the HEIC, and PDPs in particular, are fully aligned with this aspect of economic development.

Any feasibility analysis of such a development project should take into account the current stage of economic and social development of the country that intends to adopt such policies. Several historical experiences can be studied to better assess any possible potential and/or bottlenecks of such a strategy. On the one hand, the Asian experience of the 1980s and 1990s offers examples of countries that have succeeded in pursuing the 'catch-up' strategy, such as Japan, South Korea, Taiwan, among others, in which industrial development received active government support. On the other hand, Latin America's import substitution industrialization (ISI) was "a highly



ineffective development strategy” (CIMOLI ET AL., 2007, P. 77), confirmed by the accelerated de-industrialization process witnessed during the reopening of commercial markets in the region in the 1990s (BIELSCHOWSKY, 2000). The result was due to structural elements of the Latin American economies and to the implementation of such a strategy.

In more advanced economies, public institutions such as universities and regulatory agencies, as well as public policies for generation and establishment of new technological paradigms, have been prominent since the 19th Century. This kind of institutional network allows for the transmission of new knowledge, favoring economic learning based on the diffusion of tacit knowledge (LASTRES; CASSIOLATO, 2007).

A crucial role of such policies is to influence the players’ capacities, especially in new technological paradigms as described above, in which public incentives alone are not enough to motivate private companies to overcome large technological gaps.

Furthermore, technology ‘catch-up’ policies face the need to balance capacity-building measures – as well as the protection of ‘new knowledge’ – with mechanisms that limit stagnation and rentier behavior. During the ISI experience, several protected industries were manufacturing products with negative added value, thereby restricting innovation. Governments should have generated competition between local firms, which would have encouraged the importation of new technologies. The failure to create internal competition, rather than protectionism against external industries, was the prime reason for the economic stagnation in the region during the 1990s (CIMOLI; CORREA, 2002). In contrast, the stimulation of internal competition in a strategic economic sector protected from importation and the promotion of competitive exportation were central elements in the success of the technological catch-up of

the Eastern Asian economies.

Overall, historically, a successful technological catch-up has always been accompanied by improvements in per capita income and wages, regardless of the initial comparative advantage of the economies in question. According to Hoff and Stiglitz (2001), a crucial feature on which the relevance of Big Push models is based, is the existence of widespread externalities whose interaction effects occur through the system’s global variables, such as aggregate demand, demand for industrial inputs and the costs of demand.

Therefore, the success of PDPs as inducers of economic and technological growth is related to the diffusion of positive intra- and inter-sectoral externalities, which depend, in turn, on the mobilization of an institutional network as a vehicle for progress in technological knowledge. It should also be noted that the strengthening of this institutional network in Brazil has to take into account macroeconomic structural elements. These include: the high interest rates and foreign exchange policy employed to maintain the country’s credibility in the financial markets; the tax burden and its impact on research and development strategies of national firms; and, the stronger control mechanisms on intellectual property rights at the international level (bilateral agreements and TRIPS supported by the WTO) that limit the options of protection instruments of new industries, available to the countries in technological catch-up. The need, often neglected, of conditioning tax incentives to productive efficiency of industries should also be highlighted.

In addition, the PDP’s political action can only succeed as a tool of public action if it contributes to reducing national dependency on international markets for access to strategic healthcare inputs, thus ensuring the sustainability of the SUS in the medium and long terms.

In fact, the significant deficit increase in

the HEIC trade balance over the last decade shows the fragility of Brazil's healthcare production and innovation base, which is largely due to the importation of high-value-added inputs (GADELHA *ET AL.*, 2012) that are subjected to international monopolies and duopolies. The implementation of PDPs aims to break the current market advantage and make the supply of these inputs freely available in the domestic market.

The cost-effectiveness of purchases by the Ministry of Health is one of the requirements for the setting up of PDPs (REZENDE, 2013). As pointed out by the author, there is a marked influence of this cost-effectiveness on the access to drugs programs in certain government departments, such as in the Office of Science and Technology and Strategic Inputs (SCTIE), the Office of Health Surveillance (SVS) and the Office of Health Care (SAS). Thus, to encourage the internal production of pharmachemicals and medicines of major impact for public health a list of strategic products was created within SUS (Decree GM / MS N° 978/2008; Decree GM / MS N° 1.284 / 2014; Decree GM / MS N° 2.888 / 2014) (BRASIL, 2008a, 2104a, 2014c). This list also acts as a guide to the funding agencies such as BNDES, Finep and companies in the pharmaceutical sector.

Therefore, Brazilian public sector laboratories represent important institutions in terms of balancing drug (medicine) costs in the domestic market, in terms of the production of drugs for neglected diseases, which usually receive little research support from developed countries and are not profitable for the production laboratories, and in supporting the running of the SUS. These laboratories also play an important role in providing medicines for strategic programs run by the Ministry of Health, such as the STD/AIDS Program and the National Immunization Program (PNI) (LOYOLA, 2008).

Finally, there are numerous regulatory provisions that aim to ensure technology transfers to public sector laboratories and to

prioritize the production of the products essential to the SUS' operations in the medium and long terms.

## Final considerations

The Productive Development Partnerships therefore represent an inflection in Brazil's healthcare policy as it integrates the country's social, economic and technological dimensions, as well as the systemic nature of the HEICs within the same public policy. This renewed perception of healthcare constitutes the framework that is common to all the players involved in the design and implementation of PDPs, thus forming what can be called a developmental health policy community.

The PDPs, as the policy's main instrument, have a dual purpose. By enabling the transfer of technology from leading pharmaceutical companies to public sector laboratories, they induce the technological consolidation of the healthcare productive base, with positive effects on other sectors of the national economy (spillover effect). At the same time, the strengthening of the healthcare national productive base allows for an increase in the supply capacity of the inputs needed to ensure that the national healthcare system works properly, and has a positive effect on regulating the cost of international inputs.

Thus, the central objective of the PDPs is to consolidate the technological aspect of the healthcare productive base in the country, granting a greater autonomy to the SUS and stimulating economic growth by strengthening the productive capacity of Brazil's public and private laboratories associated with the technology transfer process. For it to succeed, one must avoid the drawbacks of the Latin American ISI experience of the 1980s and 1990s. In other words, it is up to the players involved in the implementation of the PDPs to maintain the technological dynamism within the protected sector,

in order to avoid a rentier-type behavior through the establishment of competitiveness assessment criteria. Likewise, in order to achieve the spillover effect, one must encourage the strengthening of the institutional network, enabling it to absorb and disseminate the transferred knowledge (universities, research centers, vocational training institutes, among others).

Finally, to meet the epidemiological needs

of the Brazilian population, one must first make an accurate assessment of the SUS' priorities concerning drugs and equipment access. Hence, it is worth emphasizing the need for future studies on the territorial dynamics of healthcare parameters, in order to identify the specific healthcare needs and potential of the different regions of Brazil, and to generate and disseminate healthcare innovation. ■

## References

BIELSCHOWSKY, R. *Cinquenta anos de pensamento na CEPAL: uma resenha*. Rio de Janeiro: CEPAL, 2000.

BRASIL. Ministério da Saúde. Portaria GM/MS no 978, de 16 de maio de 2008. Dispõe sobre a lista de produtos estratégicos, no âmbito do Sistema Único de Saúde, com a finalidade de colaborar com o desenvolvimento do Complexo Industrial da Saúde e institui a Comissão para Revisão e Atualização da referida lista. *Diário Oficial [da] União*, Brasília, DF, 2008a. Disponível em: <<http://pesquisa.in.gov.br/imprensa/jsp/visualiza/index.jsp?jornal=1&pagina=46&data=28/05/2008>>. Acesso em: 12 mar. 2016.

\_\_\_\_\_. Ministério da Saúde. Portaria GM/MS no 1.284, de 26 de maio de 2014. Altera o anexo a Portaria nº 978/GM/MS, de 16 de maio de 2008. *Diário Oficial [da] União*, Brasília, DF, 2014a. Disponível em: <<http://pesquisa.in.gov.br/imprensa/jsp/visualiza/index.jsp?jornal=1&pagina=36&data=27/05/2010>>. Acesso em: 12 mar. 2016.

\_\_\_\_\_. Ministério da Saúde. Portaria GM/MS no 2.531, de 12 de novembro de 2014. Redefine as diretrizes e os

critérios para a definição da lista de produtos estratégicos para o Sistema Único de Saúde (SUS) e o estabelecimento das Parcerias para o Desenvolvimento Produtivo (PDP) e disciplina os respectivos processos de submissão, instrução, decisão, transferência e absorção de tecnologia, aquisição de produtos estratégicos para o SUS no âmbito das PDP e o respectivo monitoramento e avaliação. *Diário Oficial [da] União*, Brasília, DF, 2014b. Disponível em: <<http://pesquisa.in.gov.br/imprensa/jsp/visualiza/index.jsp?jornal=1&pagina=102&data=13/11/2014>>. Acesso em: 12 mar. 2016.

\_\_\_\_\_. Ministério da Saúde. Portaria GM/MS no 2.888, de 30 de dezembro de 2014. Define a lista de produtos estratégicos para o Sistema Único de Saúde (SUS), nos termos do anexo a esta Portaria. *Diário Oficial [da] União*, Brasília, DF, 2014c. Disponível em: <<http://pesquisa.in.gov.br/imprensa/jsp/visualiza/index.jsp?jornal=1&pagina=120&data=31/12/2014>>. Acesso em: 12 fev. 2016.

\_\_\_\_\_. Portaria Interministerial no 128, de 29 de maio de 2008. Estabelece Diretrizes para a Contratação Pública de Medicamentos e Fármacos pelo Sistema

Único de Saúde. *Diário Oficial [da] União*, Brasília, DF, 2008b. Disponível em: <<http://pesquisa.in.gov.br/imprensa/jsp/visualiza/index.jsp?jornal=1&pagina=105&data=30/05/2008>>. Acesso em: 12 fev. 2016.

\_\_\_\_\_. Presidência da República. Decreto no 7.731, de 25 de maio de 2012. Autoriza a substituição de ativos do Fundo de Garantia à Exportação e a integralização de cotas do Fundo de Garantia da Construção Naval. *Diário Oficial [da] União*, Brasília, DF, 2012. Disponível em: <<http://pesquisa.in.gov.br/imprensa/jsp/visualiza/index.jsp?data=28/05/2012&jornal=1&pagina=13&totalArquivos=168>>. Acesso em: 12 mar. 2016.

\_\_\_\_\_. Presidência da República. Lei no 12.349, de 15 de dezembro de 2010. Altera as Leis nos 8.666, de 21 de junho de 1993, 8.958, de 20 de dezembro de 1994, e 10.973, de 2 de dezembro de 2004; e revoga o § 1o do art. 2o da Lei no 11.273, de 6 de fevereiro de 2006. *Diário Oficial [da] União*, Brasília, DF, 2010. Disponível em: <<http://pesquisa.in.gov.br/imprensa/jsp/visualiza/index.jsp?jornal=1&pagina=2&data=16/12/2010>>. Acesso em: 12 mar. 2016.

CAPELLA, A. C. N. Perspectivas teóricas sobre o processo de formulação de políticas públicas. *BIB*, São Paulo, n. 61, jan./jun. 2006.

\_\_\_\_\_. The trajectory of public management policy in the governmental agenda: Lula and FHC administrations. *Temas em Administração*, Araraquara, v. 2, n. 2, 2008.

\_\_\_\_\_. Perspectivas teóricas sobre o processo de formulação de políticas públicas. In: HOCHMAN, G.; ARRETCHE, M.; MARQUES, E. (Org.). *Políticas Públicas no Brasil*. Rio de Janeiro: Fiocruz, 2012.

CASSIOLATO, J. E.; LASTRES, H. M. M. *Discussing innovation and development: converging points between the Latin American school and the innovation Systems perspective?*, Globelics, 2008. (Working Paper, 2). Disponível em: <[http://www.redesist.ie.ufrj.br/ga2012/textos/Cassiolato/Lecture17\\_GA2008.pdf](http://www.redesist.ie.ufrj.br/ga2012/textos/Cassiolato/Lecture17_GA2008.pdf)>. Acesso em: 31 out. 2016.

CIMOLI, M.; CORREA, N. *Trade openness and*

*technological gaps in Latin America: a 'low growth trap*. LEM, 2002. (Working paper, 14).

CIMOLI, M. *et al.* Instituições e políticas moldando o desenvolvimento industrial: uma nota introdutória. *Revista Brasileira de Inovação*, Rio de Janeiro, v. 6, n. 1, p. 55-85, jan./jun. 2007.

FAURE, A.; POLLET, G.; WARIN, P. *La construction du sens dans les politiques publiques*. Paris: L'Harmattan, 1995.

GADELHA, C. A. G.; COSTA, L. S.; BAHIA, L. Reflexões sobre a saúde na agenda contemporânea do desenvolvimento: saúde, desenvolvimento e inovação. Rio de Janeiro, *Cepesc*, v. 1, p. 43-69, 2015.

GADELHA, C. A. G. *et al.* *A Dinâmica do sistema produtivo da saúde: inovação e complexo econômico-industrial*. Rio de Janeiro: Fiocruz, 2012.

GOULART, S. Uma abordagem ao desenvolvimento local inspirada em Celso Furtado e Milton Santos. *Cadernos Ebape*, Rio de Janeiro, v. 4, n. 3, 2006.

HOFF, K.; STIGLITZ, J. *Modern economic theory and development*. New York: World Bank, 2001.

JOBERT, B.; MULLER, P. *L'Etat en action: politiques publiques et corporatismes*. Paris: Presses Universitaires de France, 1987.

JOBERT, M. Rhétorique politique, controversies scientifiques et construction de norms institutionnelles: esquisse d'un parcours de recherché. In: FAURE, A.; POLLET, G.; WARIN, P. *La construction du sens dans les politiques publiques*. Paris: L'Harmattan, 1995.

KINGDON, J. W. *Agendas, alternatives, and public policies*. 3. ed. Nova York: Harper Collins, 2003.

LASCOURMES, P.; LE GALÈS, P. *Gouverner par les instruments*. Paris: Presses de SciencePo, 2004.

\_\_\_\_\_. *Sociologia da ação pública*. Maceió: Edufal, 2012.

- LASTRES, H. M. M.; CASSIOLATO, J. E. 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.
- LOYOLA, M. A. Medicamentos e saúde pública em tempos de Aids: metamorfoses de uma política dependente *Ciênc. Saúde Coletiva*, Rio de Janeiro, v. 13, n. esp., p. 763-778, 2008.
- MARCH, J. G.; OLSEN, J. P. *Rediscovering institutions*. Nova York: Free Press, 1989.
- METTEN, A. *et al.* A introdução do complexo econômico industrial da saúde na agenda de desenvolvimento: uma análise a partir do modelo de fluxos múltiplos de Kingdon. *Revista de Administração Pública*, Rio de Janeiro, v. 49, p. 915-936, 2015.
- PERROUX, F. *A economia do século XX*. Porto: Herder, 1967.
- REZENDE, K. S. *As parcerias para o desenvolvimento produtivo e estímulo à inovação em instituições farmacêuticas públicas e privadas*. 2013. 176 f. Dissertação (Mestrado em Saúde Pública). Escola Nacional de Saúde Pública Sérgio Arouca, Fundação Oswaldo Cruz, Rio de Janeiro, 2013.
- ROSENSTEIN-RODAN, P. N. Problems of Industrialization of Eastern and South-Eastern Europe. *The Economic Journal*, Nova York, v. 53, n. 210-211, p. 202-211, jun./set., 1943.
- THE WORLD MEDICAL MARKETS FACT BOOK. *World Leaders in Health Industry Analysis*. Londres: Espicom Business Intelligence, 2013.
- 
- Received for publication: June, 2016  
Final version in: October, 2016  
Conflict of interests: non-existent  
Financial support: Conselho Nacional de Desenvolvimento Científico e Tecnológico, process: 405077/2013-0; Escola Nacional de Saúde Pública Sérgio Arouca (Ensp), Fiocruz, Project: Ensp-007-LIV-07-5