

Development, Innovation and Health: the theoretical and political perspective of the Health Economic-Industrial Complex

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Abstract *The concept and approach of the Health Economic-Industrial Complex (HEIC) were present in the advancement of the Unified Health System (SUS) in the last decades, contributing to the incorporation of an agenda related to the national pattern of development. The paper reconstructs this approach to capture its dynamics and demarcate the vision developed in this paradigm. It reveals the thinking matrices of the field of political economy that provide the analytical substrate for its development, allowing us to confront the reductionist use of the concept. It highlights, therefore, the logical foundations that guided the public policies resulting from this approach, with emphasis on the systemic approach and the use of state purchasing power, through the Productive Development Partnerships (PDP), marking the effort to articulate the social and economic realms of development. At present, this analytical perspective is even more crucial, showing that well-being not only fits into GDP but can also be a lever for a pattern of development committed to the National Health Universal System (SUS), society and economic and technological sovereignty in health.*

Key words *Health economic-industrial complex (HEIC), Development, Innovation, Health political economy, National science, technology and innovation policy*

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Introduction

The concept of the Health Economic-Industrial Complex (HEIC) was developed in studies carried out in the early 2000s^{1,2}. Initially designated as “Health Complex”, it acquired different denominations according to the emphases sought in its theoretical and political application: Health Industrial Complex, Health Productive Complex and Health Industrial and Service Complex. In its conception, it is also worth noting the pioneering contribution to the analysis of vaccines – particularly the National Immunization Program (PNI) and the National Immunobiologicals Self-Sufficiency Program (PASNI) – as one of the productive segments of HEIC that best allowed to grasp the mutual social and economic determination of development^{3,4}.

This effort was favored by the meeting and academic and political interaction of the authors and combined the vision of collective health with the vision of political economy. Research was conducted and intervention proposals were made, which supported the strategic and prospective thinking in health in Fiocruz, with the creation of the Innovation Project in 2002 under the executive coordination of the authors. It also involved a health education front, with the organization, in the same year, of the discipline “Health Industrial Complex” in the ENSP/Fiocruz postgraduate course.

As has occurred in several fields of collective health, there has been a productive interaction between the world of ideas and public policies, characterizing a *praxis* with a relevant impact on health and development policies. The theme gained political density starting in 2008, with the outset of a comprehensive policy action focused on the development of HEIC in the country, under the leadership of the Ministry of Health (MoH).

This paper resumes strength ideas from the perspective of the HEIC to demarcate the vision incorporated into this paradigm, facilitating confrontation of the reductionist and non-dialectical use of the concept. It is understood that this effort is decisive for the consolidation of the SUS and a national development project simultaneously based on the establishment of universal systems and strong, sovereign and socially-oriented production and innovation bases.

Thus, more than retelling the story of an innovative policy - already discussed in other works^{5,9} - the work carries out a conceptual reconstruction, explaining the central analytical

foundations of the HEIC and the main lines of public policies.

HEIC’s methodological approach

HEIC’s conception outlined a research program in the epistemological sense of the term¹⁰, inserting a systemic and structurally hierarchical logic for the treatment of the productive system and health innovation in its relationship with the SUS. In this regard, an effort was made to reconstitute an object and a research program that sought to advance the perspective of investigating the relationship between health and society and health in the capitalist context, which were already present in the country at various moments of the last century (works by public health researchers and policy makers such as Mário Magalhaes da Silveira, Sérgio Arouca, Hésio Cordeiro, Cecília Donnangelo, Carlos Gentile de Mello, among others, who were the field of collective health and social medicine in our country¹¹).

An attempt was made to incorporate analytical and methodological advances of these conceptions into a specific program to associate the economic and social aspects of development in an endogenous way and not as two analytically separated dimensions. The methodological incorporation of the conceptual basis of political economy and structuralist contour in the social field was the significant challenge of this research program. What was considered as an expenditure comes to be understood as an investment; emphasis was placed on dynamics and innovation instead of allocative static; instead of the sector, the systemic realm prevailed; the economic and social structure were interconnected; and the world of knowledge and technology was faced with social and human needs.

More specifically, the research program involved the systematic, primary and secondary, national and international, historical and prospective, survey of the social dimension (including demographic and territorial); the economic and industrial and services production base; the science, technology and innovation in health realm; and the role of the State and public policies.

Among the database and information used, in a national and international, historical and prospective scope, it is essential to highlight the following key thematic areas for the approach that guided data collection¹²: health conditions and trends; production base of the HEIC, incor-

porating industrial production and health services; science, technology and innovation (ST&I) in health activities; and public policies directly or indirectly related to the HEIC.

In addition to the systematic survey of the literature, official information – with emphasis on the Brazilian Institute of Geography and Statistics (IBGE) and SUS information systems – and the use of primary information, with data collection and interviews with key public and private stakeholders, information was produced and (re) analyzed, based on the differentiated approach adopted.

It is worth noting two sets of information search and systematization that supported and conferred academic and political legitimacy to this research program, considering the cognitive and political disarticulation between the areas of health and productive development and innovation. First, focus on the productive system of health, and not only in specific sectors, entailed the generation of evidence on the weight and its social and economic importance. Preliminary estimates were made based on the available information and validated in their essence in the surveys of health satellite accounts by the IBGE, which started as of 2009¹³, confirming HEIC's standing in the Brazilian economy.

Secondly, trade balance information was highlighted as an indicator of vulnerability and dependence, with a methodological treatment that reflected the theoretical basis of the HEIC, built on the database of the Ministry of Industry, Foreign Trade and Services (MDIC)¹⁴. The limitation of the familiar sectoral paradigms did not lead to an aggregate survey of strategic information of easy access and strong analytical and political content: the health trade balance.

Theoretical Matrices, Results and Discussion

As theoretical foundations in the HEIC concept, four matrices from thinkers and schools are essential to understanding the nature of development in capitalism: the Marxist^{15,16}, the Schumpeterian¹⁷, the Keynesian¹⁸, and the structuralist, the latter with an emphasis on Celso Furtado's lenses^{19,20}.

We can indicate the central theoretical and political aspects incorporated into the HEIC approach, which were based on mostly connecting and corresponding elements described below.

Innovation as a process of political, economic and social transformation

The accurate perception of the concept of innovation is adopted in the HEIC approach, incorporating the social, political, economic and institutional transformation associated with the change of the productive and technological base. The dynamics captured by Marx and Schumpeter to characterize capitalism as a system in permanent transformation is apprehended in the health sphere.

Development is thus characterized as a non-linear process that is associated with *structural changes* that do not stem from the expansion of the preexisting productive and social base. If, on the one hand, history plays a primary role, since there are no general models of organization of society and the market that lead to expansion and convergence; on the other hand, the intentionality of agents and the action of society and the state have a decisive weight in transforming prior conditions, without which the productive and social system can be locked in the past (*lock-in effect*).

Endogenous articulation between economic and social rationale

As consequence and logical development of the use of the Marxist vision, we tried to apprehend the *dialectic of development in health*. This incorporates both the sphere of the capital circulation, captured in depth in the classic book by Hésio Cordeiro²¹, which, in the words of the author, aimed to contribute to a *first approximation to the critique of current theoretical models on the consumption of health actions* (introduction, pg. XIII), indicating the influence of the “medical-industrial complex” on demand – as to the understanding of the health field as a strategic space for the development of productive forces, for the creation of value and generation of investment, income, employment, knowledge and innovation.

The significant challenge is to capture in health the dialectical relationship between the development of productive forces and their contradiction with the social relationships of production. There is a simultaneous process of expanding investment, income and employment and exclusion, inequality and instability. It is in the pursuit of this dialectical understanding that the HEIC emerges as a critical approach to political economy: it overcomes, on the one hand, the

reductionist, economicist and technical vision centered on productive chains and activity sectors and, on the other, an insulated view of the area of health and the field of social protection and well-being.

The endogenous articulation between the social and economic realms of development was emphasized. Economic and investment decisions embody a model of society while an inclusive and equitable model of society requires a certain productive structure and ST&I.

Asymmetry, national sovereignty and SUS sustainability

Inequality in national development patterns and the tendency towards polarization, an essential mark of the structuralist approach, have been incorporated into the context of global geopolitics. Power asymmetries that make up and reproduce a centre-periphery system build on the unequal direction and dissemination of technical progress. The dynamics of innovation are asymmetric and generate polarities between social classes, regions and countries, characterizing a process of modernization with marginalization, which also manifests itself strongly in its international realm^{19,22}.

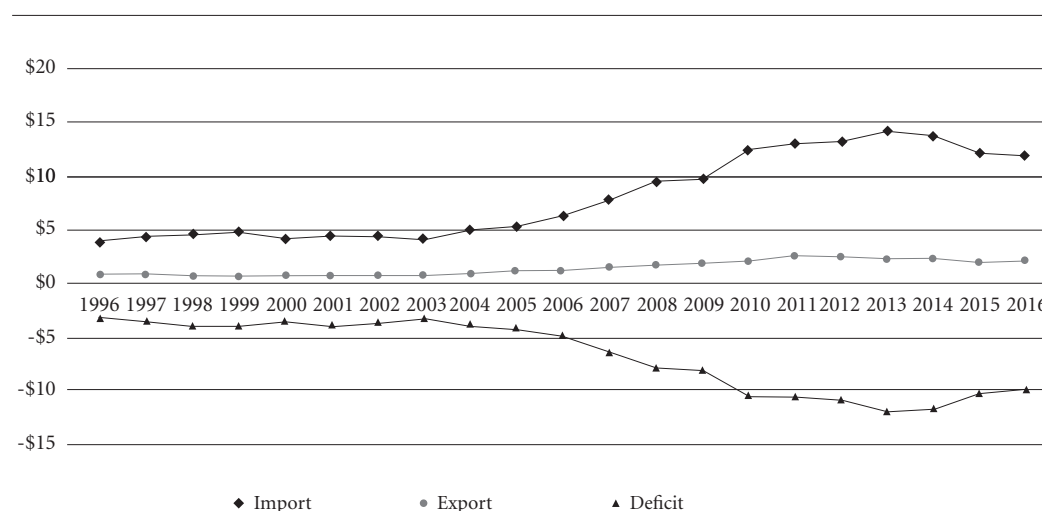
Health reproduces the centre-periphery system's rationale, as evidenced by the analysis of commercial relationships. Graphic 1 marks two

decades of systematization of the HEIC trade balance of health, showing the dependence on health in the context of global asymmetries. Over a 20-year period, in the midst of the construction of the SUS, the deficit has increased exponentially – evidencing the global technological weakness – from a level of US\$ 3.0 billion to US\$ 12 billion (cooling down slightly afterward influenced by the Brazilian economic depression).

From the analytical viewpoint, the deficit showed that, precisely in a period of SUS expansion The risk of economic reprimarization, dependence and loss of autonomy for the conception and implementation of universal policies showed its perverse trait.

Systemic view

Analytically, the HEIC is an institutional political, economic and social space, in which production and innovation in health are realized, capturing its interdependent dynamics. In addition to economic and technological interaction, there is also a common institutional framework (health regulation, technological incorporation, ethics in research, among others), involving several policies, programs and actions whose decisions implicitly or explicitly arbitrate practices, services and products that become dominant and others that reduce their relative importance or are even eliminated.



Graphic 1. Health Trade Balance Deficit Trend (Amounts in US\$ billion, updated by CPI/USA).

Source: Prepared by authors in cooperation with Cesário BB, from the information base of the Office for the Coordination of Prospecting Actions of the Presidency / Research Group on Development, Economic-Industrial Complex and Innovation in Health, FIOCRUZ, from BRASIL data. Alice Web [Internet]. [Access in January 2017]. Available at: <http://aliceweb.mdic.gov.br/>

On the one hand, the systemic perspective should be a natural consequence of the collective health vision. If SUS is thought of as a system, its productive, material and knowledge base would also have to be analyzed systematically to capture interdependencies and interaction with the health system. Restricting the theme of the productive base to “health inputs” means inadvertently assuming an unacceptable relationship that the “industrial good” is the “input” and health – or even services – its natural result (the “product”).

On the other hand, the management of innovation also requires a systemic approach, as the Neo-Schumpeterian school began to emphasize in the concept of “National Innovation Systems”, incorporating politics, society, institutions, the role of the National States and their organizational ways, involving a *praxis* between thinking, knowing and doing²³⁻²⁵.

The HEIC logic fits into these traditions, capturing the interface between national health systems and national innovation systems. It constitutes the central arena in which the tension between the interests of capital and social interests is realized in health and where knowledge becomes wealth while generating social, regional and territorial inequality. It contributes, therefore, to the understanding of the dynamics

of capital reproduction and its interaction with society, contributing to a political perspective of de commodification of access to health²⁶ with the structuring of more autonomous and sovereign national systems.

Figure 1 shows a detailed and simplified morphology of the HEIC, allowing to present the frame of the productive and innovative system and the productive subsystems and segments of this economic, social and institutional space.

Role of the State

The HEIC approach is based on the perspective that the market does not have the natural attribute of generating efficiency and well-being. The theme of the Keynesian matrix, which provided essential theoretical elements for the conceptions that allowed both investment sustainability and the setting of Welfare States in post-war Europe stands out in this theme. Keynes’ paradigm, when countering the liberal and neoclassical school, clearly assumed the non-identity between individual and collective interest, the basis of his defense of the State, including the orientation of investments. The following passage from his 1926 article (before the 1929 crisis) stresses the tension between individ-

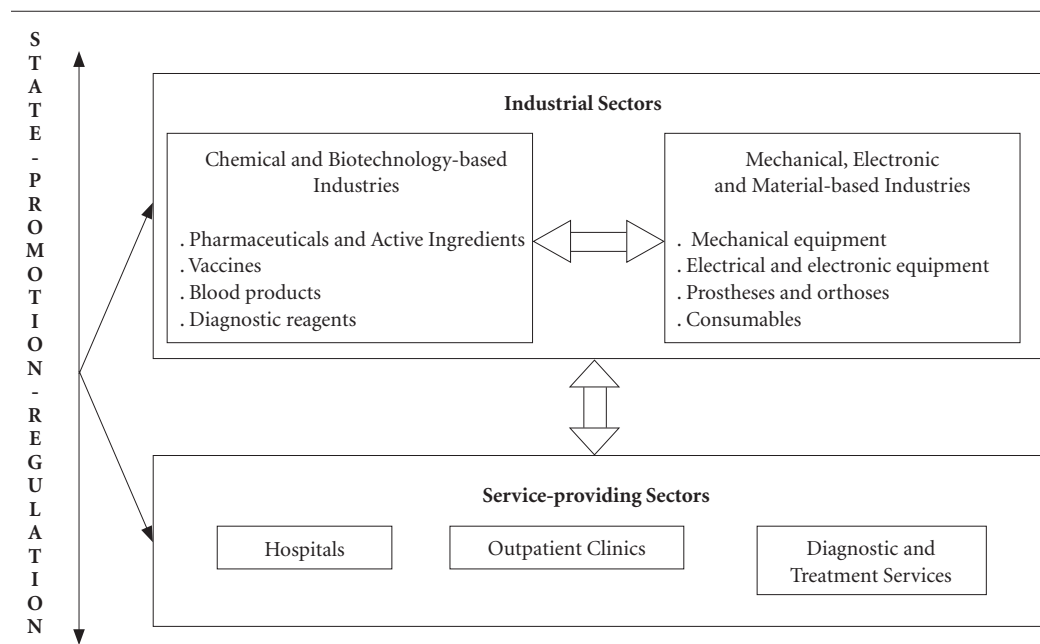


Figure 1. Health Economic-Industrial Complex Morphology.

ual and community interest and the very lack of rational agents who are not even able to defend their interests, let alone the public interests resulting from the action of the “invisible hand” of the market. In the author’s words:

*The world is not ruled from above so that private and social interest always coincide. It is not administered down here so that in practice they coincide. It is not a correct assumption from the principles of Economics that enlightened self-interest always acts in favor of the public interest. Nor is it true that self-interest is usually enlightened; more often, individuals who act separately in the promotion of their own goals are too ignorant or weak even to attain them (Keynes, *The End of Laissez-Faire*¹⁸).*

It is by this matrix that the role of the State in the orientation of investments is central to the HEIC approach, as also indicated in Figure 1. At the same time, the need to think of intervening ways that associate the economic and innovation dynamics to social dynamics, as part of a research program committed to political action, is also introduced in the agenda.

HEIC approach in action

The political perspective of the HEIC is linked to the Keynesian matrix while incorporating the process of long-term and structural transformation of the productive, economic and social base that marks the Marxist, Schumpeterian and structuralist matrices. Two strategic perspectives for State action emerged from this paradigm, which, from 2008, started to guide HEIC policies.

First, the nature of the HEIC approach requires a *systemic pattern of state intervention*. Several public policy interfaces are critical for an intervention mode that focuses on investment, productive transformation and innovation, and that is geared to SUS needs. Particularly noteworthy is the articulation of health policy with industrial and ST&I policy.

In this regard, the Brazilian experience was the launch of the Productive Development Policy on May 12, 2008, which placed HEIC on the priorities of the new Brazilian industrial policy. The insertion of the Complex as a strategic axis of the MoH Plan for the period 2008/2011 under the *Mais Saúde* (“More Health”) Program²⁷ preceded and was decisive for this process. The incorporation of this vision into government policies turned the Complex perspective into concrete action, through which a series of public policy tools and efforts began to converge.

In the same act of launching the Productive Development Policy, the Executive Group of the Health Industrial Complex (GECIS)²⁸ was established as a political coordination body, constituting a historical framework of systemic intervention. Coordinated by the MoH, the GECIS gathered the formal representation of fourteen bodies or entities of the Public Administration, involving the decision-making core of the national development policy (Presidency, Ministry of Finance, Planning, Foreign Affairs, Development, Industry and Commerce and Science, Technology and Innovation), national financing and regulatory agencies, and ST&I institutions. SUS national management was unconditionally coordinating a priority policy of industrial, technological and innovation development, placing itself as the body of articulation of the economic, industrial and technological area to meet SUS requirements.

Secondly, the theoretical framework of the HEIC highlights, among all tools of induction and regulation, *the use of state purchasing power* as a structuring factor to overcome the conditions of dependence and delay in production and innovation in health. On the one hand, purchasing power and mission-oriented state policies are the main force behind more substantive and risky processes of productive transformation²⁹. On the other hand, the strategic role of this tool of public intervention is related to the very link between the economic and social realms of development. The critical link of this relationship, which subordinates industrial and innovation policy to the needs of the health system, is precisely in meeting SUS demands that involve the productive transformation towards its technological capacitation.

The tool designed in 2008, whose operation began in the period 2009/2010, was that of the Productive Development Partnerships (PDP) as a specific action coordinated by the MoH (not to be confused with the productive development policy mentioned above). Without intending to enter here in all the stages of its implementation and greater detail, carried out in recent works⁵⁻⁹, we wish to most importantly emphasize that this was the concrete and innovative way of effecting the use of purchasing power for transformation in the health productive system. It also allowed to increase autonomy in areas of greater technological dependency and to guide investment projects according to health demands, as defined by the MoH in the successive publications of strategic product lists for PDP projects.

The basic PDP model involves the use of MoH central procurement of products (usually

of high cost and greater technological complexity) that were purchased in the market (with a significant share of imports), to stimulate local production, involving technology transfer. Local production occurs through the establishment of a partnership between the company that owns the technology and a public institution qualified to attend the SUS during the period of technological absorption (where Fiocruz and Butantan are the most important). This process takes the shape of a technological order, considering that public producers can offer directly to the SUS without conventional bidding processes, but having to obey the principles of economicity and public benefit.

The program follows the constitutional provision that the domestic market integrates the national heritage, among others of the current legal and constitutional framework. Instead of a simple administrative process, public procurement becomes a tool of technological capacity building and development of the HEIC productive base, aiming to reduce the vulnerability of the SUS and the generation of investments, employment and income. The process changes the health market structurally, because it reduces the monopolistic practices, through a growing presence of public institutions (MoH and public producers) in its guidance. In this regard, despite confusion between acronyms, the process does not consist of a classical Public-Private Partnership (PPP), since it involves the participation of the State and the public producing institutions in markets that were previously only private.

Two precedents of the use of this tool should be highlighted. The first and oldest was observed in the case of vaccines with the creation of PASNI in 1985, in response to a supply crisis in the first half of 1980, to meet the needs of the PNI (established in 1973), involving technology transfer to local producers, associated with the use of state purchasing power^{3,4,30}.

The other precedent that represented the pioneering use of the PDP model was associated to the compulsory licensing of the Efavirenz patents, on May 4, 2007³¹, to ensure the sustainability of the National AIDS Program against high prices. In fact, this was unintentionally a pilot experience of the policy developed, headed by the establishment of coordination of Fiocruz with national drug producers in the country capable of reproducing and transferring the product's technology. It also provided a very concrete factual basis for SUS vulnerability and for the need to develop HEIC in Brazil through induction via

the use of state purchasing power and regulation (intellectual and health property) to articulate social logic with economic logic and innovation as interdependent realms.

The theoretical and policy bases of the HEIC design and their insertion in the national development policy and health policy, together with the precedents above, provided the basis for initiating the PDP implementation process from 2009/2010 onwards, with 19 approved projects and one effective acquisition. This policy gains scale and is institutionalized with the regulatory frameworks formalized in the period 2011/2014, totaling 106 projects approved until 2014, with 75 acquisitions. At present, this tool is maintained (Chart 1), despite facing new and complex challenges arising from the unstable new political and institutional context³².

The evaluation of the results of this innovative and systemic policy still requires more consolidation time, considering the challenge of transforming the national productive structure in health, but it is already possible to capture its movement.

As a more strategic starting point, there was a convergence between the different areas of government and intervention axes, rarely observed in a public development policy coordinated by a social ministry. It is important to point out that, for products approved in a collegial manner within institutions participating in GECIS, we observed the convergence of the tools of priority setting and use of purchasing power (MoH), financing (BNDES and FINEP), regulation (Intelectual Property/INPI, Metrology/INMETRO and Health Regulation/ANVISA), and of ST&I (ST&I Ministry and Fiocruz), as well as the link with more comprehensive national policies such as the industrial (MDIC), foreign affairs (MRE), economic policy and decisions that involved the coordination within the Presidency level. In this context, it is worth highlighting the change in the procurement legislation that occurred in 2012, strengthening the legal framework of the PDPs (amendment of Article 24 of Law 8.666, with inclusion of item XXXII and of paragraph 2, consolidating, respectively, the technology transfer mechanism and the participation of Public Institutions).

Chart 1 shows a picture of the current situation, evidencing the strength of the policy for the HEIC, fruit of this historical construction. Currently, 114 partnerships are approved and in force, of which 84 are being implemented, 25 are in the formalization stage of the terms of commitment and 5 of research and technological de-

Chart 1. Productive Development Partnerships*. Position at 31/12/2017.

PDP under implementation	
Medicines	67
Equipment and diagnostic materials and products	12
Vaccines	5
Grand Total	84
Research and development PDP**	
Medicines	4
Equipment and diagnostic materials and products	1
Vaccines	0
Grand Total	5
New PDPs Approved (in the process of formalization)	
Medicines	25
Equipment and diagnostic materials and products	0
Vaccines	0
Grand Total	25
Consolidated list of PDPs Approved and under Implementation	
Medicines	96
Equipment and diagnostic materials and products	13
Vaccines	5
Grand Total	114
Products in Technology Transfer and Development in PDPs**	
Medicines	50
Equipment and materials objects of PDP	12
Vaccines	5
Grand Total	67
Producers with Technology Partnership Projects in the PDPs	
Public institutions	18
Private business	42
Grand Total	60

* Active partnerships at the moment of the survey and approved partnerships in the process of formalization. Extinct partnerships are not considered. ** The number of PDPs and products does not match, since the same product can be the object of more than one PDP. Products of the new approved PDPs that have not yet been started were not considered.

Source: Prepared by authors in cooperation with Nascimento MAC. Office for the Coordination of Prospecting Actions of the Presidency / Research Group on Development, Economic-Industrial Complex and Innovation in Health, FIOCRUZ, from the information of the Secretariat of Science, Technology and Strategic Products / Ministry of Health (SCTIE/MS), 2017. Productive Development Partnerships (PDP) – Ministry of Health – Health Portal [Internet]. Available at: <http://portalms.saude.gov.br/ciencia-e-tecnologia-e-complexo-industrial/complexo-industrial/parceria-para-o-desenvolvimento-produtivo-pdp>.

velopment. Among the partnerships implemented with ongoing processes of technology transfer, 67 products are being developed, of which 50 drugs with their respective active principles, 12 equipment and materials and 5 PNI vaccines. Finally, the Table shows that the partnerships mobilize a significant group of 60 producers (42 private and 18 public) who implement the partnerships for the MoH strategic products.

Chart 2 shows that there was an increased product delivery in the period 2011/2014, hiking 134% over a 4-year period, accounting for 35% of centralized procurement of MoH medicines. PDP projects, in turn, according to a field survey conducted in the 2012/2013 period, involved investment estimated at of R\$ 13 billion, summing up the budget resources with the credits provided by the public development agencies, with the generation of an immediate effect on the economic activity.

In addition to this economic impact, it is important to emphasize that the objective of obtaining more significant health and productive security for the SUS supply is intrinsic to the PDP tool since it reduces the structural situations of oligopoly through the entry of new producers with the participation of public institutions. In the long-term perspective, PDPs also generate greater purchasing price stability in the face of global market fluctuations. In all of the implicit or explicit normative frameworks of this tool, it is estimated that the price of PDP products, when delivered to the MoH, will be reduced against the purchase price of the preceding year. MoH estimates indicate that in the period from 2011 to May 2017, when the PDPs were scaled, the accumulated economy of the MoH stood at R\$ 4.68 billion, when comparing the prices of the previous year with the PDPs with the practiced after the onset of its implementation³³.

It should be noted that the prices of the PDP products, which initially are the minimum value of purchases, due to the described mechanism, immediately become the maximum reference value after completion. To access the public market, the companies whose market position was affected started a price attack to delegitimize and destroy the PDP. This complex mechanism means that static visions of price comparisons, which do not consider this long-term dynamic effect, become means, albeit unintentional, to legitimize and reinforce the previous situation of dominance of the oligopolies typical of health.

It should be noted that all PDP products are part of the SUS demand, whose purchases are

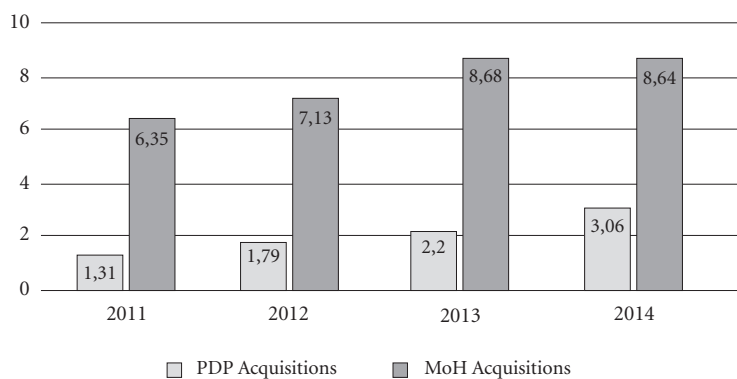


Chart 2. Effective Acquisition of PDP by Ministry of Health (R\$ Billions)

Source: Prepared by authors in cooperation with Nascimento MAC. Office for the Coordination of Prospecting Actions of the Presidency / Research Group on Development, Economic-Industrial Complex and Innovation in Health, FIOCRUZ, from the information of the Secretariat of Science, Technology and Strategic Products/Ministry of Health (SCTIE / MS), 2017. Executive Group of the Health Industrial Complex (GECIS) – Ministry of Health – Health Portal [Internet]. Available at: <http://portalms.saude.gov.br/ciencia-e-tecnologia-e-complexo-industrial/complexo-industrial/grupo-executivo-do-complexo-industrial-da-saude-gecis>

made (or are likely to be made) by the MoH. They are predominantly high cost and greater technological complexity, or part of programs whose implementation occurs within the scope of the Federal Government. This fact places an objective restriction: products whose acquisition is decentralized or whose technological horizon is not considered by the capacities of public institutions cannot be the object of PDP. As a result, essential care products, many equipment and materials, among others with decentralized implementation, cannot be included in the PDP tool, lacking other initiatives, such as neglected drugs (the traditional and “new neglected ones”, such as those for childhood cancer treatment).

In summary, the State’s performance for the HEIC has characterized a significant institutional innovation of systemic intervention and articulation between economic and social policies, mainly involving industrial and innovation policy and health policy, under the latter’s command. This initiative occurred mostly through the establishment of PDP, which is a possible first pathway in the context of the institutionality of the Brazilian productive system. Data evidenced allow us to affirm that the evolution was expressive, but new structuring challenges are there, given the dimension of the task of changing and subor-

inating health’s productive system to the SUS requirements.

Final coments

This paper evidenced the long theoretical and political course that marked the HEIC approach, clearly configuring a *praxis*. Regarding its general conception, the agenda was strengthened around the interaction between development, health and innovation. There was also a series of academic initiatives that focused on the theme of HEIC and the relationship between development and health. A wide range of authors who have shared this theme or at least this analytical concern has been mobilized, although naturally preserving a great diversity of approaches and theoretical and political perspectives³⁴⁻³⁷.

Indeed, many other topics are crucial areas for the continuity of this research program committed to economic and social transformation, equity, inclusion and sustainability. We are particularly concerned with the global and local issue of sustainability, the predominance of the financial logic that limits, at the same time, production and productive development and well-being, and an update of the political econ-

omy that involves capitalism in its current phase and HEIC in particular.

Finally, it can be affirmed that the HEIC concept and approach were present in the SUS progress in the last decades, contributing to incorporate an agenda broadly related to the national development pattern, which involves the articulation of the economic, social and productive base and innovation realms. Currently, this perspective is perhaps even more crucial and generalizable, to show that well-being not only fits into GDP but can be a lever for a pattern of development committed to society and national challenges³⁸.

In spite of the continuity of the programs that have been created, there are considerable risks to the perspective that was built. This was based on the existence of three supporting structural pillars, which are currently under attack by the neoliberal paradigm: the consolidation of the SUS as a universal system with predominant

public financing, the centrality of the development of the national productive base and the social and economic value of the ST&I system. Without these pillars, the theoretical and political linkage of the HEIC with the building of a welfare system – that is autonomous, equitable, inclusive, economically dynamic and guided by environmental sustainability and the national development pattern – is lost.

Once again, the field of knowledge and politics must be articulated. The current situation imposes the need to emphasize that health (and well-being) is an opportunity to emerge from the crisis, and is a source of structural and social change, as the HEIC theoretical matrix shows, always looking at the fundamental and health lenses which marked the meeting of the authors of this paper. We sought to live up to the boldness and freedom of thought of the collective health founders that led to the creation of the SUS as a great project of a new pattern of development in our country.

Collaborations

CAG Gadelha and JG Temporão worked in conception and elaboration.

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