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The pandemic and HEIC structural challenges: SUS funding, the federalized health services, and public-private relations

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Abstract

This article aims to demonstrate how structural fragilities of the Economic and Industrial Complex of Health (HEIC) associated with Brazilian public finances have manifested during the novel coronavirus pandemic, requiring emergency responses. The paper discusses in particular: a) the fiscal rules' impacts on the Unified Health System (SUS) funding; b) the asymmetrical design of the Brazilian fiscal federalism between services delivered by subnational entities and their dependence on the federal government; c) public-private partnerships and their effects on HEIC, especially those involving the inequity on the access to hospital beds, the regulation of health insurances regarding the pandemic, and the norms for the purchase of strategic products given Brazil's external dependence. To conclude, an agenda must be set to respond to the structural challenges of SUS and the vulnerabilities of HEIC in a context of increasing demand for health services and technological changes.

Keywords: Covid-19. Health Economic-Industrial Complex (HEIC). Unified Health System (SUS). Health Funding. Fiscal Norm.

1. Introduction

In an interview to *Estado de São Paulo* on May 7th, 2020, President of Oswaldo Cruz Foundation Nísia Trindade stated that the Covid-19 pandemic is the great landmark that inaugurates the 21st century, as proposed by Eric Hobsbawn. He stated that a century does not start by its calendar date, but by a phenomenon that brings a profound change in relation to the previous historic period. The "brief 20th century" would have ended in the period between the late 1980s and early 1990s, with the consolidation of a development model replete with risks to society. The pandemic exposed the fragilities of this eastern world social contract, especially in Brazil, as highlighted in an editorial by the *Financial Times*.[1] As a result, the Covid-19 pandemic revealed more issues about the role of the State and the available instruments it can work with, questioning widely diffused dogmas since the 1990s. We can ask whether the last three or four decades were a brief interregnum, or, despite the pandemic, the bases upon the recent development model was molded will be maintained or even strengthened.

The model prior to the pandemic gives an extremely limited role to public finance. Especially, the fiscal policy should be executed exclusively to guarantee sustainable public debt trajectories. This led to changes in the institutional framework of several countries in the 1980s and 1990s, such as adopting strict fiscal rules with no space for discretion. In Brazil, this view was consolidated in the mid-1980s, within a non-linear process. For this reason, we currently have an incongruent fiscal framework full of overlaps, artificially limiting the State actions, as it became evident during the pandemic.

The State command and actions are key to devising a nation-wide plan to manage the pandemic and minimize economic, political, and social impacts that come from it and make structural problems graver. However, the many obstacles in the Brazilian State actions hindered the federal government

1 "Virus lays bare the frailty of the social contract". *Financial Times*, Apr. 3rd, 2020. Available: https://www.ft.com/content/7eff769a-74dd-11ea-95fe-fcd274e920ca. Access: Aug. 8th, 2020.

while it activated mechanisms and instruments that could minimize the pandemic profound consequences in a country characterized by a profound and multifaceted inequality. Because the non-essential activities were interrupted, the adequate social isolation was a privilege of those who could maintain their economic activities remotely and had adequate housing for extended confinement. The only way of extending the entire population to the "right to isolate" was through a voluminous increase in public spending to that this could grant emergency aid, which conflicted with the existing fiscal regulations.

Meanwhile, funds were needed in order to expand health services and meet a demand for health care too concentrated temporally. Having a Unified Health System (SUS) with an already established and vast network enabled access to services and information to the population across the country. Nonetheless, the pandemic exposed fragile points in SUS that had already been investigated by specialists since the beginning of what can arguably be viewed as one of the greatest achievements of the Brazilian citizenship.

In a certain way, this comes from a Brazilian institutional overlap in which the idea of creating a Welfare State, proposed by the Federal Constitution to correct the pattern of income and wealth concentration of the development model of the period 1930s-1980s, was in part interrupted by a typically neoliberal institutional architecture of public finance that was put into practice as of the 1990s. As we aim to discuss in this article, the pandemic exposed the structural fragilities of SUS associated to the absence of a fiscal institutional architecture compatible with a Unified Health System. This is undeniable in at least three aspects: public health funding, the federative issues regarding health services, and the public-private relations in both goods and services acquisition and the relation between the public system and the supplementary health system.

Firstly, we are going to investigate the impacts on "SUS funding" by highlighting the consequences of fiscal regulations and analyzing how they affected the expansion capacity during and after the pandemic. Secondly, we are going to discuss how the "federalized health service" limitations became a hindrance during the pandemic due to the restricted capacity of action of the subnational entities and the historical regional inequalities, such as the

lack of equipment and hospital beds, which are concentrated in the large urban centers. Finally, we are going to highlight the issues resulting from the "public-private relations" within the Brazilian health system that emerge on various levels, such as the acquisition of equipment and medical inputs and diagnostic devices; the unequal distribution of private and public hospital beds; the access to medication and treatment and health care plan regulation. Throughout the article, we will seek to highlight how the pandemic has reinforced the need to overcome the historical vulnerabilities of the SUS in order to guarantee the constitutional principles.

2. Impacts on SUS funding

Funding is, undoubtedly, one of SUS biggest structural fragilities. In large part, this results from how artificial fiscal regulation taxes are. This became evident during the emergency situation caused by the pandemic. The crisis that followed strengthened aspects that had already been discussed before and even the economists who defend the current fiscal regulations started to demand a quick and strong response from the State.

In several countries, governments took necessary measures to guarantee the only precaution recommended by health authorities: social isolation. In Brazil there was "delay advantage," as defined by economic development. We could watch how the epidemic had affected other countries before uncontrolled contagion occurred here. However, taking necessary measures to manage the pandemic conflicted with the fiscal regulations in force, blocking stronger actions by the federal government.

Since the Constitution was enacted, implementing social rights has dealt with a fiscal framework that was defined from theoretical determinations based on rigid fiscal regulations of low discretion. Two regulations in force to this day had been approved in the original constitutional text: the so called "Golden Rule," which says that the State can only incur debt to pay capital expenditure. This stops a great part of health expenditure, current expenditure, from being directly enforced by public indebtedness; and forbidding direct acquisition of National Treasury titles by the Central Bank.

In 2000 the Fiscal Responsibility Law (FRL or LCP 101/2000) was enacted. It marks a change in the Brazilian Federative Pact as it reduces the capacity of action of the State, especially on the subnational entities. It imposes redesign of the "fiscal balance" based on legal instruments, such as strict regulations on personnel expenditure, indebtedness limit, and fiscal result targets, especially the primary surplus. Finally, going against the increase in fiscal regulation flexibility that had been happening in the world, a new fiscal regulation was enacted in 2016, and now it was even more strict than the previous ones. The expenditure cap constitutional amendment (CA), CA 95/2016, imposes a gradual limitation of the State actions (Rossi; Dweck, 2016), as it restricts the correction of federal primary expenditure in relation to the past year's inflation.

2.1 Temporary interruption of regulations during the state of calamity

By mid-March, when subnational managers, in a decentralized way, had taken measures on the circulation of people and economic activities, the federal government was still beyond a possible contingency of federal expenditure. At that time, estimates indicated the need for a R$ 40 billion-cut[2] in discretion expense. This is a typical example of the pro-cyclic character of the FRL primary surplus rule. Because of the decrease in collection due to economic deceleration, the government "must" cut down on spending, heightening economic deceleration. The solution found by the government was to utilize one of the escape clauses previewed in Article 65 of the FRL and request the Congress that it acknowledge the state of public calamity.

Despite the suspension of the need to achieve the primary results, the possibility of expansion of expenditure still conflicted with two fiscal regulations. The 2020 budget had already been approved within the limit of the "expenditure cap", with no margin for expansion of primary expenses and the need for a flexibilization of the "Golden Rule" via approval by the Congress

2 "Guedes: Contingenciamento seria de R$ 40 bi sem declarar estado de calamidade". *Valor Investe*, March 18th, 2020. Available: https://valorinveste.globo.com/mercados/brasil-e-politica/noticia/2020/03/18/guedes-contingenciamento-seria-de-r-40-bi-sem-declarar-estado-de-calamidade.ghtml. Access: Aug. 8th, 2020.

of a budgetary authorization to use R$ 350 billion in debt in order to cover current expenditure. It was no surprise that the first measures announced by the federal government, still in March, did not foresee any expansion of the federal budget, but just anticipation or relocation of the approved budget.

It was becoming increasingly clear that a large part of the population would not have the "right to isolate," as they would completely lose their income and would not be able to provide for their families. Companies and subnational entities also saw themselves before a drastic decrease in cash flow and collection. This hindered their capacity of paying their employees and providing public services to the population.

Because of such a situation, only was the federal government able to expand income to manage the pandemic and minimize its consequences by use of compensatory measures, e. g., transference of income to the population (emergency aid and unemployment insurance), expansion of subsidized credit to companies, allocating larger funds to subnational entities, and maintaining formal employees' salary pay. To respond to this challenge, one of the only escape clauses of CA 95/2016, which removes the extraordinary credit from the basis of calculation of the cap, and the whole pandemic-related budget started to be enforced directly from these credits. Still, the necessary measures to manage the pandemic were taken too slowly, as presented below. Only on May 7th was CA 106/2020 enacted. It suspended the Golden Rule and other FRL constraints for all federation entities while the calamity situation lasted.

Regarding the expenditure cap case, unlike the other two regulations, there was no suspension of its validity. Only the expenses related to the pandemic were being enforced by extraordinary credits, while the other expenses remained subject to the cap.

Due to the Covid-19 pandemic, there was a consensus as to temporarily relaxing the Brazilian fiscal regulations. This goes to show that the State was always able to act. As discussed by Bastos, Martins & Dweck (2020, p. 10), it is not difficult for the federal government to fund itself at this point despite the forecasts of increased state indebtedness on the federal sphere.

2.2 The defunding of SUS in the period 2018-2020

There is extensive literature on the historical underfunding of SUS ever since its implementation (DAin, 2001, 2007; Dain; Castro, 2016; Mendes; Marques, 2009; Piola *et al*., 2013). However, such trajectory was aggravated because of the approval of CA 95/2016, which froze the constitutional minimal expenditure on actions and public health services (Asps) during the 20 years of the expenditure cap. Since 2018 the federal government has been obliged to allocate the 2017 minimum in Asps as corrected by the previous inflation only. Table 1 shows the estimated value of losses[3] for Asps between 2018 and 2020. Its full sum, according to the parameters considered for this calculation,[4] is R$ 22.5 billion, as mentioned by Moretti et al. (2020).

CA 95 froze the minimum invested at 15% of the 2017 CNI, updating values according to the Brazil Consumer Price Index (CPI) of 12 months, which were accumulated up to June before the fiscal year at hand. In 2017, health expenses amounted to 15.8% of the CNI, which was over the minimum, but dropped to 13.5% of CNI in 2019. This indicates a short-term effect of the expenditure regulations on health services. From a structural perspective, defunding implies of commitment of actions and even constitutional pillars of SUS. Until 2036, it is estimated that the minimum investment freeze due to CA 95 might lead expenditure in the health sector to less than 10% of CNI (Rossi; Dweck, 2016, p. 2). Moreover, by the end of the New Fiscal Regime, the federal expenditure in health might amount to 30% of the total expenditure of the sector. In 2000, it amounted to almost

3 It is known that a way of measuring the impact of CA 95/2016 on SUS federal funding is to compare the minimum investment frozen as per 2017 values (15% of the current net income - CNI) with the values invested in actions and public health services. The logic is to demonstrate that, in case the constitutional minimum prior to the freeze by CA 95 (under CA 86/2015 terms) had been enforced between 2018 and 2020, SUS should have been allocated an amount larger than what was effectively verified. To do so, the Integrated Budgeting and Planning System – Siop is employed (for use of the budget funds) and the National Treasury of Brazil (for CNI).

4 The values between 2018 and 2019 are implemented and compared to the minimum in force before the freeze by CA 95. For 2020, the ABL values were used as approved by the National Congress and were compared to the CNI foreseen in the ABL. The year 2020, due to the sanitary and economic crisis, was characterized by great uncertainty from the economic and fiscal perspectives. Regarding expenditure, the budget was expanded via extraordinary credit. Regarding revenue, a decrease in collection is expected. In relation to 2020, it is important to register, in the pre-pandemic scenario (when the ABL was approved by the National Congress), the expected effects on the SUS expenditure according to the minimum investment freeze. The extraordinary expenses in the face of the pandemic will be investigated in future topics.

60% of it, though (Soter; Moretti, 2016).

Table 1 - Expenses on public health actions and services (ASPS) – R$ billion

Year	Expenses ASPS A*	RCL B**	EC 86 (15% of RCL) C	Losses (C - A)
2018	116.82	805.35	120.80	3.98
2019	122.27	905.66	135.85	13.58
2020	125.23	868.00	130.20	4.97
TOTAL	364.33	2,579.01	386.85	22.53

Sources: * Siop, for 2018 and 2019, commitment; for 2020, LOA. Does not consider resources from pre-salt royalties and replacement of remaining payables. Considers values subject to the golden rule. ** STN (2018; 2019); Final LOA Report (2020).

Along with the decrease in invested values as a proportion of CNI,[5] there has been a growing commitment of the health budget with expenses allocated by the Parliament. This goes in accordance with a logic more leaning towards the relation between the congresspeople and their electoral base than the funds distribution criteria of SUS. Among these funds, the mandatory amendments (individual and bigwig ones), the non-mandatory amendments (especially rapporteur ones), and discretion funds. They do not appear as amendments, but are allocated according to parliamentary definitions, especially funds for paying for basic care, medium and high complexity care costs. In 2019 the mandatory amendments and funds for paying for health costs amounted to R$ 12.3 billion, or 10% of the Asps implemented budget. Thus, the mandatory amendments were enforced amounting to R$ 6.7 billion, a nominal 130%-increase in relation to 2014 (R$ 2.9 billion).

5 It is impossible to discuss this article theme in detail, but there was also a decrease in the federal health funds in real per capita terms between 2017 and 2019.

As far as the amendment values are classified as Actions and Public Health services as per the SL 141/2012 terms, they are counted for determination of the sector minimum mandatory values. Thus, the health funding situation has become aggravated in the past few years since a part of the budget has been invested via congresspeople's referrals, who tend not to cover for a number a regions and health sectors, like the Health Economic-Industrial Complex.

2.3 Effects on SUS funding for restarting fiscal regulations

As previously agreed, during the pandemic, the expenditure rules (primary surplus target, Golden Rule, and expenditure cap) are not restrictions to expanding primary expenditures due to the pandemic. Consequently, there was an expansion of public spending during the state of calamity. This showed that public spending restrictions do not always come from lack of funds. Impediments to public spending derive from restrictive fiscal regulations, whether they were suspended or not during the pandemic. On the other hand, according to CA 106/2020, partial suspension of fiscal regulations will be enforced only until December 2020. To make an estimate of how SUS was impacted after fiscal regulations were reactivated in 2021, the additional values authorized for spending on Asps due to the pandemic must be considered. ABL was approved with a forecast of R$ 125.2 billion for Asps. Because of the extraordinary credit established during the state of calamity, the Asps expenses reached R$ 161.2 billion. This was a R$ 36-billion increase in relation to the values approved in the ABL until August 8th, 2020. With the 2021 Asps budget project defined as per the CA 95/2016 minimum freeze, the federal expenditure estimated with SUS will be R$ 123.8 billion, resulting in a R$ 37.4-billion loss.[6]

It could be counterargued that in 2021 the need for pandemic-related expenses will be reduced. However, maintenance of the high numbers of

6 This calculation compares the values that had been authorized in 2020 until August 8th, with the CA 95 minimum for 2021 and considering the July 2019-July 2020 CPI, equal to 2.13%.

Covid-19 cases, the repressed demand for health services (such as the several procedures that could not happen during the pandemic) and the increase in unemployment, which will impact access to supplementary health services, will make high pressure on the public service network. Before the pandemic, nearly ¾ of the population depended exclusively on SUS to have access to health. This percentage tends to increase because of the ongoing economic crisis.

Furthermore, there is pressure on SUS coming from structural factors such as chronic underfunding, demographic, epidemiologic, and nutritional transition, technological incorporation, a health inflation higher than CPI, etc. Thus, a SUS minimum investment re-freeze will cause a negative impact on funding and the health services provision capacity.

The strong budgetary variance in the face of values approved in the 2020 Budgetary Law, pandemic budgetary credit, and the 2021 minimum freeze are signals of the structural effect of fiscal regulations, especially CA 95, on the health budget. Restrictions become more severe as they are applied in a chronically underfunded sector and cost structural pressures.

2.4 How rules and budgetary classifications affect SUS funding

The SUS minimum investment freeze done by CA 95 took R$ 22.5 billion from SUS between 2018 and 2020. In 2021, due to the restrictive CA 95, the health budget was presented by the Executive power as per the minimum defined in the amendment. The National Congress can expand the SUS expenditure, but there is a limitation for this expansion set by the cap. Even though collection has a better behavior than the forecast, there will be no increase in expenditure, as the cap imposes a limit to expenditure.

In 2021, given the primary surplus target, if there is failure in collection, the primary expense will be subject to contingency and below the cap. This means that the combination of fiscal regulations – expenditure cap and primary surplus target – has a strong impact on SUS, restricting is funding for beyond the minimum that had already been reduced by CA 95. In the past few years, the Executive power has been presenting the health budgetary proposal around the minimum. Besides, the Executive Power has been

presenting the Annual Budget Law Project (Ploa) to the Congress with expenses conditioned to approval of a Credit Bill by the Congress in order to enforce current expenditure over the limit set by the Golden Rule. In 2020, Ploa predicted more than SUS-conditioned R$ 30 billion, which was altered by the Congress when the budget was submitted.

The Brazilian fiscal regulations are founded on budgetary classifications that do not consider the impact of expenses on society regarding public goods provision, reduction of inequality, or even stimulus to economic activity and productivity and technology development. The primary surplus rules and the expenditure cap in particular favor financial expenses to the detriment of primary expenses since they impose restrictions to the latter only. The Golden Rule reinforces a false dichotomy between current expenses and capital expenditures. Thus, the budgetary classifications of public expenditures heighten the restrictions of fiscal regulations on health funding.

The Asps expenditures are mostly primary and current. According to the Integrated Budgeting and Planning System (Siop), in 2014 investments had already reached over 5% of the sector budget. However, in 2019, they amounted to 3% of the values invested in health. Meanwhile, from a structural perspective, health expenses are essential to the productivity and social development of an unequal country that must adapt to an accelerated demographic transition.

To sum up, the fiscal regulations in force have structural effects on the economy and society. They do not classify expenses according to their potential impacts, not only to guarantee social rights, but economic effects (balance of trade, induction of the Health Economic-Industrial Complex, job and income generation, technology incorporation etc.) They restrict expenses that may even have a positive impact on the economic dynamic, contributing to public accounts. A more elaborate expense classification should segregate expenses according to their potential economic, social, and environmental effects. In the fiscal regime, different rules must be established for real expansion of expenses as per such effects. Therefore, fiscal regulations could help devise State instruments that are more adequate to act on social inequality and the SUS structural productivity/technology base issues, not excluding fiscal sustainability.

2.5 Low budgetary and financial execution of the health budget to manage the pandemic

As mentioned above, there was an expansion of the 2020 SUS expenditure preview amounting to R$ 36 billion. The budget to manage the pandemic by the Ministry of Health (HM) amounts to R$ 41.2 billion. Over R$ 5 billion come from internal relocation to the Ministry of Health. Table 2 shows the availability of funds as per investment modality. It indicated that values were being invested slowly despite the fast increase in the number of case notifications and deaths due to Covid-19. The values paid up to August 10th, 2020 correspond to less than 50% of the authorized value. The transfers to the other entities amounted to 53% of the authorized values. Regarding the purchases made by the Ministry of Health (ventilators, tests, personal protective equipment etc.), the paid values correspond to 25% of the foreseen budget. Because of the slow granting of funds, on July 2nd, 2020, CNS recommended adopting urgent corrective measures to promote budget and financial execution of the Health Ministry as speedy as required by the sanitary emergency caused by Covid-19 in Brazil.[7] Until mid-July, execution of action was still at around 30% of the authorized values.

7 CNS. Recomendação n. 049, de 2 de julho de 2020. Available: https://conselho.saude.gov.br/recomendacoes-cns/1256-recomendacao-n-049-de-02-de-julho-de-2020. Access: Aug. 8th, 2020.

Table 2 - Coping with the public health emergency of international importance arising from the coronavirus (R$ billion) – Ministry of Health

Mode of application	LOA	Committed	Paid	Balance to be committed	Balance to be paid
Transfers to entities	31.68	21.21	16.80	10.47	14.89
Direct applications	9.00	4.25	2.22	4.76	6.78
Transfers abroad	0.43	0.43	0.43	-	-
Others*	0.11	0.11	0.03	0.00	0.08
TOTAL	41.23	26.00	19.48	15.23	21.75

Sources: Siop. Consultation on Aug. 10th, 2020.

***** Direct application resulting from operations between agencies, transfers to private non-profit institutions and to be defined.

The low execution of action to manage the pandemic shows the need to rethink the SUS federative balance. The subnational entities directly manage their health networks, but do not have fiscal instruments to expand funding of their actions, as presented below.

3. The federative issue – the issues of subnational action

The federative issue is a key dimension to rethink the role of the State specifically in their action as inductor of management guidelines and as a fund distributor for the SUS health services. After the 1988 Constitution fiscal decentralization and the expansion of federal entities' health service prerogatives, the limitation of the general state and municipality funding capacity caused constraints and federative imbalances. This hindered the reduction of inequalities in the state and municipality funding conditions (Lima, 2008).

In the federative context, a relevant structural issue is the dependence of

states and municipalities on federal remittances to health because of the constrained self-collection capacity. The pandemic was instrumental in illustrating this structural issue as it clearly exposed the existing fragilities. Among them, we highlight the remittance of extraordinary funds and the pandemic budget execution and its linkage to the notification of Covid-19 cases and deaths.

Given the importance of the states and municipalities in the direct provision of health services, the subnational entities took the lead to manage the pandemic. Because of the imminent risk of health systems collapse, the local authorities started to take social isolation measures to curb the contagion curve and enable some form of planning to expand services and avoid social chaos.

However, the subnational entities do not have the necessary means to finance the expansion of health service or maintain the sanitary measures to face the pandemic, such as guaranteeing income for the population affected by the decrease in economic activity.

As discussed above, during the pandemic, the federal government removed the artificial constraints that impeded its activity to minimize the economic crisis effects. Besides, the central government has important instruments that are typical of national States that issue sovereign debt. This enables them to expand their expenses regardless of their actual collection capacity. The federal government issues the national currency and widely accepted government debt securities. Nonetheless, this is not possible for subnational units.

As discussed by Dweck et al. (2020), in the face of the significant drop in revenues, the Brazilian fiscal federal system forces the subnational entities to reduce expenses. Consequently, along with the reduction in provision of public services to the population at a critical time, there was an even larger retraction in aggregate demand, with local and regional impacts that were particularly dramatic.

3.1 Extraordinary funds remittance

As discussed by Dweck et al. (2020), because of pressure from the subnational entities, which clung to the Supreme Court to get some financial alleviation, the federal government decided to announce a state support program to respond to the coronavirus crisis. Initially, the government tried to resume the "Mansueto Plan," but with several demands for compensation that would only aggravate the subnational entities' economic situation.

After a heated discussion at the Parliament, the Coronavirus Sars-COV-2 Federal Management Program was enacted on May 27th, 2020, over 60 days from the beginning of the social isolation measures. In general terms, the project proposals are as follows: a) suspending debt payments that the states, the FD, and the municipalities have with the Union; b) restructuring credit operations that the state, the FD, and municipalities have done with the financial system and multilateral credit institutions; and c) remit Union funds as emergency aid for the states, the Federal District, and the municipalities in the 2020 fiscal year, as well as for actions to manage the coronavirus Sars-COV-2.

Besides, the project also foresees the suspension of execution of guarantees by the Union in case of non-execution by the entities. It dismisses the states, FD, and municipalities from fulfilling some FRL regulations, as well as other laws such as achievement of fiscal results and limitation of implementation as per article 9 of the FRL. It forbids any limitations, legal or regulatory conditions to make or receive voluntary remittances. As compensation, the project imposed various prohibitions to the entities until late 2021. Some of them are raising civil servants' salaries, allowing job post progressions; conducting public tenders; creating continuous mandatory expenses; taking any measures that imply rises in mandatory expenses over the inflation variation. Besides, this Supplementary Law demands states and municipalities give up any judicial actions against the Union due to the pandemic.

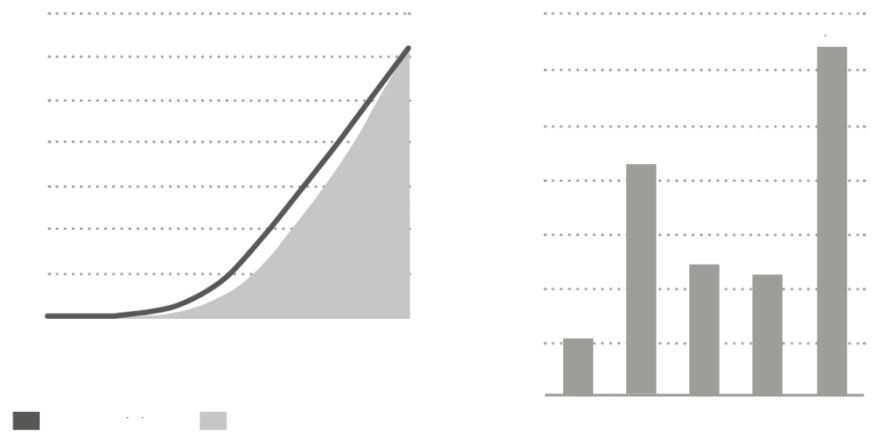
The program granted funds totaling R$ 120.2 billion to the federated entities via direct remittances (R$ 60.15 in four installments) and renegotiation of debts with the Union, public banks, and international bodies

(R$ 60.05 billion).[8] The first federal aid installment to states and municipalities was remitted on June 9th and amounted to R$ 15 billion. Of these, R$ 9.25 billion were remitted to the states, R$ 5.7 billion were remitted to the municipalities, and R$ 38.6 were remitted to the Federal District. The emergency aid works as compensation for losses in collection and a way to guarantee health care and social welfare.

3.2 The pandemic budget execution and notifications

The slow response to the subnational entities and taking the needed measures for the right to isolate affected the capacity of maintaining higher levels of social isolation. The highest level was reached in the second week of March, when the measures started to take effect. Since then, despite local differences, the average level of social isolation in Brazil only declined.

Graph 1 - Accumulated cases and deaths, Covid 19 and health transfers to loved ones, Covid 19 (R$ billion)



Source: Ministério da Saúde (left projection) and SigaBrasil (right projection). Consultation: Aug. 11th, 2020.

8 "Estados, municípios e DF recebem 1ª parcela de auxílio do Governo Federal". *Gov.br*, June 9th, 2020. Available: https://www.gov.br/pt-br/noticias/financas-impostos-e-gestao-publica/2020/06/estados-municipios-e-df-recebem-1a-parcela-de-auxilio-do-governo-federal. Access: Aug. 8th, 2020.

Graph 1 shows that while the emergency aid program was being discussed, there was a decrease in remittances of Ministry of Health funds to entities to manage the pandemic between April and May despite the fast-growing number of Covid-19 cases and deaths in that same period.

4. Public-private relations in health services

The public-private relations in health services are another important dimension of the structural SUS issues. The regulatory role of the State is key to overcome these obstacles.

Despite the underfunding and decentralization of services, as mentioned above, a significant part of the SUS procedures, especially of medium and high complexity, are managed by the private sector. This is a dual-system feature of the Brazilian system, in which there is a public/private mix of health services and equipment that are financed by public funds (Bahia, 1999; 2018; Noronha; Santos; Pereira, 2011). Moreover, there has been a private health subsystem within the Brazilian health system ever since it was created. It is formed by the private health care plans, the so called supplementary health services, and the classic private offer of health services directly to families. Unlike SUS, access to this market is restricted to those who pay for services using their own money (out-of-pocket costs) or via private insurance and health care plans. Despite such a restrictive character, this system is partially funded by substantial public funds either directly or indirectly. This occurs via tax exemptions for both individual persons and legal entities (Dain *et al*., 2015; Ocké-Reis; Gama, 2016; Melo, 2017). The expansion of private health services is part of a hard and complex interplay between the international competition for market expansion and capital (Gadelha; Temporão, 2020; Hiratuka; Da Rocha; Sarti, 2016). This is a promising area for expansion, especially with the pandemic. Thus, the State must make sure that such expansion is made towards making SUS universal, guaranteeing the right to health, and fighting inequalities, that is, towards public interest, not just profits (Viana; Elias, 2007, p. 1775-1776; Melo, 2017, p. 179-183).

A relevant structural question within the public-private context is the SUS

dependency on the private sector regarding the provision of goods and services and the external sector due to the internal production issues.

The pandemic exposed this structural issue by showing the existing fragilities, such as the difficulty in expanding the public service, as well as three aspects in particular: the difficulty found for public purchases of health inputs, the imbalance in the availability of hospital beds, and the health care plan actions.

4.1 Public purchasing

As discussed in Section 2.5, only 14% of the funds for direct investment by the Ministry of Health to manage the pandemic had been paid until August 10th, 2020. Some health service managers mentioned obstacles to health input purchasing.

Firstly, due to the low execution of direct acquisition by the Ministry of Health (ventilators, tests, personal protective equipment - PPEs, etc.), the entities tried to make purchases on a lower scale and disadvantageous conditions due to the world-scale increase in demand, the high dollar exchange rate, and the low internal supply.

Because there is no sufficient production of several health inputs in Brazil, they try to purchase them abroad. The emergency situation enables flexing purchasing conditions (increased costs and advanced funds), which was actually authorized by Provisional Decree 961/2020. However, there is no legal certainty in procurement in health emergency conditions. This made local SUS managers become conflicted between the risk of shortages and questioning the control bodies.

Finally, the inputs for intensive care units (ICUs) are scarce in most states, as stated in an official letter by The National Council of State Health Secretaries.[9] Information on 17 medications was surveyed. Of these, 11 are

9 "Tabelamento de preços e requisição de estoques de medicamentos sedativos e outros". *Escriba Câmara*, June 3rd, 2020. Available: https://escriba.camara.leg.br/escriba-servicosweb/html/59656. Access: Aug. 8th, 2020.

in shortage in more than half of the state departments that answered the survey. The increase in demand is linked to the high number of patients who need intubation and the prolonged period of hospitalization. There are restrictions for the national industry to reply to the increase in demand, especially because of the difficulty in importing raw materials and the high dollar exchange rate. There are no rules to define the Union role in a health emergency situation regarding centralized purchases to meet a higher demand for inputs in specific situations. Because of the Union's higher capacity, centralized procurement or registering prices for entities to buy would be adequate solutions to solve the supply issue. However, the SUS enactments state that it is not normally responsible for buying inputs.

Thus, the pandemic exposed how inappropriate procurement regulations are in Brazil, especially concerning health inputs. The following aspects deserve highlight: a) the lack of legal certainty of emergency purchases; b) the absence of policies and norms to stimulate internal input production, reducing foreign dependency; c) lack of stimuli to new partnership formats to transfer technology to public laboratories; d) structural difficulties for entities to purchase health inputs, such as deserted tenders; unfulfillment of bid rule requirements, such as presenting certificates required by the Brazilian Health Regulatory Agency (Anvisa); prices above the maximum government sale price (MGSP).

4.2 The imbalance in the availability of hospital beds

Inasmuch as there was a concentrated, growing, and quick increase in the demand for hospital beds to treat Covid-19 both in SUS and the private health system, it was necessary to expand offer. Once again, the structural issue of SUS dependency on private hospital beds was exposed, showing the imbalance in availability and access to hospital beds. According to a May 2020 report by the National Health Establishment Register (CNES), there were 446,503 hospital beds in Brazil. Of these, 69.4% (314,725 hospital beds) were available for universal service, and 30.6% (132,508 hospital beds) were exclusive for private health care plan clients. A technical statement was made by the Health Care Plan Study Group (Geps/Preventive Medicine) of the

Medical School of the University of São Paulo (FMUSP) and the Research and Documentation Group on Health Entrepreneurship (GPDES) of the Institute of Collective Health Studies of the Federal University of Rio de Janeiro (Iesc/UFRJ). It explained that even in the SUS network, 21.5% of the hospital beds are private, and 64% of them are philanthropic. This means that there is a segmentation in hospital bed offer, and most of them are private.

According to recommendation no. 26/2020 of the National Health Council,[10] based on data from the National Health Establishment Register (CNES) in February 2020, SUS had 14,876 adult hospital beds for intensive therapy, while 15,898 intensive therapy hospital beds were destined exclusively for private-sector patients and insurance and health care plan beneficiaries. Even though ¾ of the population depend exclusively on SUS the public network has less than half the ICU beds. Meanwhile, the private health care plans have at about 47 million beneficiaries and still receive various fiscal incentives.

Costa & Lago (2020, p. 4) show that raw availability average of ICU beds in the SUS public segment was 13.6 ICU beds per 100,000 inhabitants, while in the health care plan, it was 62.6 ICU beds per 100,000 insured people. The average of ICU beds found in the supplementary health services sector was 3.8 times greater than that of SUS.

Costa & Lago (2020, p. 4 e 8) show that there is a wide discrepancy among the states, especially the state of Maranhão, where there are 14 ICU beds per 100,000 inhabitants dependent on SUS against 109 ICU beds per 100,000 inhabitants with health care plans; the state of Mato Grosso (9 x 78), Pará (10 x 70), Piauí (9 x 56), Rio de Janeiro (16 x 82), Rondônia (13 x 82), Tocantins (10 x 104), and the FD (15 x 112). For example, in São Paulo, the most populated city in Brazil, the density for SUS-dependents and people with private health care plans is 21 x 43, respectively. The authors add that 68% of the Brazilian population lived in a state that was already in a critical ICU bed availability condition in December 2019, and "benevolent" parameters

10 CNS. Recomendação n. 26, de 22 de abril de 2020. Available: https://conselho.saude.gov.br/recomendacoes-cns/1131-recomendacao-n-026-de-22-de-abril-de-2020. Access: July. 5th, 2020.

were considered for the occupation rate. Another problem mentioned by the authors is the unequal distribution, which is concentrated in large capitals, hindering access to ICUs for small and medium-size city populations, as well as the periphery of metropolitan areas.

Law 13979, of February 6th, 2020,[11] already foresaw the requirement of goods and services during the public health emergency caused by the coronavirus on the condition of a fair compensation. This measure had already been authorized in the Organic Health Law (Law 8080/1990). However, the health requirement, used by a few entities, turned the public sector into the manager of these units and beds. To solve this issue, some states and municipalities hired social organizations to manage them, which had implications in management and inspection. Others have opted for emergency hiring and compulsory bed enablement, which are subject to the SUS management central, but under private management.

In March 2020, the Ministry of Health, via Ordinance no. 568,[12] altered the daily cost of the adults' and children's ICU beds to R$ 1,600.00 in exceptional circumstances to provide care for Covid-19 patients. This was valid during the pandemic. Before that, the paid value was R$ 800.00. There are entities that supplement these values and include remittances for the private sector. Despite the increase in the paid value, an incentive to the private network, a part of the supplementary health sectors questioned it. If they are exclusively destined to supplementary health, these beds could reach a higher price.

Until July 2020, according to the National Council of State Health Secretaries,[13] the Ministry of Health had already enabled over 11,000 ICU beds exclusively for Covid-19 and Severe Acute Respiratory Syndrome (SARS). This generated an estimated expenditure of R$ 1.6 billion based on the unit cost of R$ 1,600.00/bed and a 90-day length of stay.

11 BRASIL. Congresso Nacional. Lei n. 13.979, de 6 de fevereiro de 2020. Available: https://www.in.gov.br/en/web/dou/-/lei-n-13.979-de-6-de-fevereiro-de-2020-242078735. Access: July 5th, 2020.

12 BRASIL. Ministério da Saúde. Portaria n. 568, de 26 de março de 2020. Available: https://www.in.gov.br/en/web/dou/-/portaria-n-568-de-26-de-marco-de-2020-*-251705696. Access: July 5th, 2020.

13 CONASS/CIEGES. Centro de Informações Estratégicas para a Gestão o SUS. (Digital platform). Available: https://cieges.conass.org.br/paineis/listagem/situacao-de-saude-da-populacao/monitoramento-de-autorizacoes-de-leitos-uti-srag-covid-19. Access: July 5th, 2020.

More than enabling Covid-19-related beds, the pandemic reinforced a structural inequality in the public and private offer, as well as access to health services.[14] Resuming discussions on the public-private relations in health services is a key element within a structural agenda to reduce inequalities and build a productivity/technology foundation to guarantee the universal access to health.

4.3 How health care plans acted

Despite the inequalities in offer and access to hospital beds, the pandemic showed there was a need for questioning the role of health care plan companies, for instance, in the discussion caused by the proposal of creating a line or a unique line for service in public and private hospitals.

This proposal was divulged in the Technical Statement of April 1st, 2020. It was prepared by the Geds/Preventive Medicine of FMUSP and GPDES/Iesc/UFRJ, as well as the Beds for All + Equal Lives Manifesto,[15] there should be a single line for access to public and private beds for hospitalization and ICUs with central regulation made by the public sector. This line would consider the right to access as per need of use, not payment capacity. Despite legislative proposals on the issue, until the beginning of August no project in this area was approved by the Congress. Because of the line segmentation, the lethality rate in public beds was almost twice as much as private beds. This was not due to service quality, but the longer wait for available SUS beds.[16]

Still, with no action plan by the Supplementary Health National Agency (ANS) to manage Covid-19, some measures were taken regarding the supplementary health service sector. They include financial aid for the sector

14 On the relation between pandemic and social inequalities in Brazil, see Silva *et al.* (2020).

15 *Manifesto Leitos para Todos + Vidas Iguais*. Publication: May 13th, 2020. Available: https://docs.google.com/forms/d/e/1FAIpQLSe_JGVuXVU75Tt3A9gxDEhYp66ajvxWnwthPyB33V7QNhdqdA/viewform. Access: July 5th, 2020.

16 "Mortalidade em UTI's públicas para covid-19 é o dobro de hospitais privados". *UOL Notícias,* May 5th, 2020. Available: https://noticias.uol.com.br/saude/ultimas-noticias/redacao/2020/06/21/mortalidade-em-utis-publicas-para-covid-19-e-o-dobro-de-hospitais-privados.htm. Access: July 5th, 2020.

via withdrawals from the Deposit Insurance Fund, as well as credit concession, loans, remittances, and government subsidies. Four kinds of measures were taken until March 31st, 2020 (GEPS; GPDES, 2020, p. 3-4): 1) relaxing authorized withdrawals from the Deposit Insurance Fund of health care plans; 2) the lines of credit, remittances, and government subsidies for the private health care sector; 3) rationalization of the health care plan assistance flow, focusing on economizing funds; 4) notes on possible repercussions of the epidemic regarding defaults, termination of contracts, and future rises in health care plan monthly payments.

In March 2020, the health care plans were authorized to use up to 20% of the Deposit Insurance Fund (a fund composed of health care plan assets to cover for insolvency cases). This is done in order to facilitate investments on more beds and outpatient units for coronavirus patients. Because of compensations, such as maintaining service to defaulters, several operators resisted signing a term of commitment to access funds. As stated in a technical note by Geps, who was not clear about the investments and approval rules of withdrawal from the fund on the mechanisms for prevention and likely punishment for inappropriate use due to the pandemic.

There is also a funding program offered by the Brazilian Development Bank (BNDES), whose budget reaches up to R$ 2 billion for immediate purchase of more emergency beds, and medical and hospital materials and equipment. The BNDES says that "companies of other sectors who seek to convert their production into health equipment and inputs will also receive grants".[17] The Caixa Econômica Federal (CEF) also released a credit line with additional resourced of nearly R$ 2 billion for charity hospitals.

Thus, there must be more transparency in the ANS regulations and legislative measures with regard to establishing how health care plans can contribute what their participation in the pandemic is like. Inasmuch as the sanitary crisis economic effects, the supplementary health services, who have relevant fiscal incentives, should have a more active role as to releasing

17 BNDES. Programa BNDES de Apoio Emergencial ao Combate da Pandemia do Coronavírus. *BNDES,* 2020. Available: https://www.bndes.gov.br/wps/portal/site/home/financiamento/produto/programa-apoio-emergencial-coronavirus. Access: July 5th, 2020.

pressures on the public network because of the loss of income, unemployment, and the greater demand for health. These aspects reveal a relevant structural question that needs to be discussed and should indicate a more cooperative, integrated participation of supplementary health services within SUS.

5. Final Remarks

In this article, we aimed to discuss how the circumstantial elements presented by the Covid-19 pandemic expose structural questions of the economic, productivity, and technology dynamics of HEIC that interfere in the SUS sustainability. We highlighted the following aspects: the artificial constraints to the State actions; the effect of fiscal regulations on SUS funding before, during, and after the pandemic; the historic underfunding and recent defunding of SUS; the difficulty in execution of extraordinary funds in the face of control regulations; the inadequate budgetary classifications to comprehend the importance of HEIC and guarantee its funding more steadily; the constraints in the subnational action in the context of federalized finance and health; the inappropriacy in the purchasing rules in Brazil, especially regarding health inputs, and the difficulty in productivity/technology induction; the imbalance in the provision of hospital beds in SUS compared to supplementary health services; the problems in regulating supplementary health services and the competition for inputs with SUS.

These aspects stress the need for a structural agenda of changes that include federative relations in SUS, and regulations on fiscal and budgetary levels, as well as acquisition of strategic health products. Such changes aim to strengthen SUS, reduce inequalities in access to health, and induce the organization of this sector economic and industrial complex. This should occur in tandem with the right to health and the ongoing technological changes.

With regard to public health funding, from a structural perspective, the Brazilian expenditure regulations deserve highlight. It was found that increasing expenses to manage the pandemic demanded that the fiscal regulations or the authorization of expenditures that were not counted in the

cap be suspended via extraordinary credits. The chronic underfunding of SUS (and its recent defunding by CA 95) is not explained by lack of funds, but expenditure rules that impose limits to the action of the State.

After the end of the state of calamity, reimposing such regulations will have circumstantial implications (given the increase in the demand for health and the role of the sector in the fresh start of the economy). There have been ongoing discussions on changes that enable expansion of primary expenditures. However, the expenditure regulations must be reviewed structurally. They are a hindrance to funding SUS and managing the vulnerabilities of the Health Economic-Industrial Complex. The adequate funding of SUS to induce the Health Economic-Industrial Complex requires a transition to a more relaxed model that will not impose a reduction in the provision of public services. In this model, the redistributive spending has a strong multiplying effect and is preserved in case of collection failure. The necessary changes must be extended to budgetary regulations as per new classifications that will especially induce spending that can alter the SUS productivity/technology base, generate income and employment, and guarantee internal availability of strategic health products.

In the federative dimension, a relevant structural question is the institutional fiscal architecture that delegates the offer of several public services, especially health ones, to the subnational entities. However, there is no guarantee of sufficient funds and instruments to tackle a dramatic decrease in collection. The states and municipalities are strongly dependent on the Brazilian federal administration remittances. This includes sharing revenues and funds focused on specific aims such as health and education. The constraint imposed by the fiscal regulations to the Union directly affects these remittances, increasing the dependency on self-collection capacity by federal entities. Nonetheless, they do not have any ways of tackling cyclical changes in collection, much less compensating the reduction in the Union participation in funding the Welfare State. The pandemic was instrumental in illustrating this structural issue as it clearly exposed the existing fragilities. Among them, we highlight the remittance of extraordinary funds and the pandemic budget execution and its linkage to the notification of Covid-19 cases and deaths.

The public-private relations in health services are another important dimension of the structural SUS issues. The regulatory role of the State is key to overcome these obstacles. There is the issue of chronic underfunding, as well as a public-private interplay in the health services and equipment. They are funded by public funds and a private health subsystem which has the classic private offer of selling health services directly to families who pay for the service, but also uses public funds.

Therefore, a relevant structural question within the public-private context is the SUS dependency on the private sector regarding the provision of goods and services and the external sector due to the internal production issues. The pandemic exposed this structural issue by showing the existing fragilities, such as the difficulty in expanding the public service, as well as three aspects in particular: the difficulty found for public purchases of health inputs, the imbalance in the availability of hospital beds in SUS and the supplementary health service network, and the health care plan actions.

Finally, managing the economic and social effects of the pandemic may not end by relaxing regulations in the short-term. An agenda that responds to the SUS challenges and the Health Economic-Industrial Complex vulnerabilities must be established considering a context of a growing demand for health services and technological changes. Thus, the public finance institutional architecture must be reconsidered in order to provide a framework for the 21st century Welfare State, in a scenario of ongoing social, economical and technological transformations.

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