

# Public Policy Based on What? An Analysis of the Restrictions on Economic and Social Activities in The Fight Against COVID-19 in the Brazilian Federal District

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By 2020, the world was affected by the COVID-19 pandemic that caused hundreds of deaths, in almost all countries. In times of a global health crisis, it is urgent to study, in the field of political science, the policies for coping with the pandemic formulated and implemented by national and subnational governments. This research aims to analyze and stimulate the debate on the measures to restrict economic and social activities triggered by the Government of the Brazilian Federal District in the fight against COVID-19 between February 28<sup>th</sup> and August 5<sup>th</sup>, 2020. The evaluation is that there was a misalignment between the evolution of the indicators of cases and deaths in the Brazilian capital and the dynamics of imposing and easing restriction measures over time. This dissociation is analyzed in the light of literature on policy diffusion. Thus, the first measures to restrict activities in the Brazilian Federal District were premature due to emulation of policies that were already adopted around the world at the time.

**Keywords:** pandemic; Brazilian Federal District; policy diffusion

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DOI: <https://doi.org/10.21874/rsp.v72.i1.4988> | E- ISSN: 2357-8017

[Submitted: August 18, 2020. Approved: November 9, 2020. ]



## **Política pública baseada em quê? Uma análise das restrições à atividade econômica e social no combate à covid-19 no Distrito Federal**

Em 2020, o mundo foi afetado pela pandemia de COVID-19 que causou centenas de milhares de óbitos em quase todos os países. Em tempos de crise sanitária mundial, urge estudar, no campo da ciência política, as políticas de enfrentamento da pandemia, formuladas e executadas por governos nacionais e subnacionais. Esta pesquisa visa a analisar e fomentar o debate sobre as medidas de restrição às atividades econômicas e sociais acionadas pelo Governo do Distrito Federal no combate à COVID-19 entre 28 de fevereiro e 5 de agosto de 2020. A avaliação é que houve um desalinhamento entre a progressão dos indicadores de casos confirmados e óbitos na capital federal e a dinâmica de imposição e flexibilização das medidas de restrição ao longo do tempo. Esse desacoplamento é analisado à luz das literaturas sobre difusão de políticas públicas. Nesse sentido, a adoção das primeiras medidas de restrição às atividades no Distrito Federal teria sido precoce e decorrente de um processo de difusão via mecanismo de emulação das políticas já adotadas no mundo à época, sob contextos diferentes.

**Palavras-chave:** pandemia, Distrito Federal, difusão

## **¿Política pública basada en qué? Un análisis de las restricciones a las actividades económicas y sociales en la lucha contra el covid-19 en el Distrito Federal de Brasil**

En 2020, el mundo se vio afectado por la pandemia COVID-19 que ha provocado, cientos de miles de muertes en casi todos los países. En tiempos de crisis de salud global, es urgente estudiar, en el campo de las ciencias políticas, las políticas para enfrentar la pandemia formuladas e implementadas por los gobiernos nacionales y subnacionales. Esta investigación tiene como objetivo analizar y estimular el debate sobre las medidas para restringir las actividades económicas y sociales impulsadas por el Gobierno del Distrito Federal de Brasil en la lucha contra el COVID-19 entre el 28 de febrero y el 5 de agosto de 2020. La evaluación es que hubo una desalineación entre la evolución de los indicadores de casos y muertes en la capital brasileña y la dinámica de imposición y flexibilización en el tiempo. Esta disociación se analiza a la luz de la literatura sobre difusión de políticas. En este sentido, la adopción de las primeras medidas de restricción de actividades en el Distrito Federal brasileño habría sido prematura y debido a un proceso de difusión de políticas a través de la emulación de medidas ya adoptadas en el mundo en ese momento.

**Palabras clave:** pandemia, Distrito Federal de Brasil, difusión de políticas

## 1. Introduction

By 2020, the world was affected by the COVID-19 pandemic that caused hundreds of thousands of deaths in almost all countries. In times of a global health crisis, it is urgent to study, in the field of political science, the policies for coping with the pandemic formulated and implemented by national and subnational governments. This research aims to analyze and stimulate the debate on measures that restricted economic and social activities triggered by the Government of the Brazilian Federal District in the fight against COVID-19 between February 28<sup>th</sup> and August 5<sup>th</sup>, 2020.

Due to the geographical breadth of Brazil, differences in socioeconomics and the varying sanitary infrastructure conditions throughout Brazilian states and municipalities, policies to combat the pandemic need to be adjusted according to the conditions of each locality. Each state or municipality must face the pandemic at different moments and conditions. Hence the necessary role of governors and mayors in the fight against the pandemic, duly recognized by the Brazilian Supreme Court (STF) (BRASIL, 2020a).

On March 11<sup>th</sup>, 2020, the World Health Organization (WHO) declared COVID-19 a pandemic disease, given the high number of confirmed cases and deaths in more than a hundred countries (WORLD HEALTH ORGANIZATION, 2020).

On the same day, the Brazilian Federal District was the first Brazilian state to adopt measures to restrict economic and social activities due to the pandemic. At the time, the Brazilian capital had only two confirmed cases, both imported, and no deaths<sup>1</sup>. (DISTRITO FEDERAL, 2020b).

Another scenario, quite different, was presented on August 5<sup>th</sup>. On this date, the Brazilian Federal District recorded 115,966 cumulative cases. It was higher than the State of São Paulo, and Brazil, itself, as well as Spain, Italy and the United Kingdom at that time, when divided by the respective population (BRASIL.IO, 2020; DISTRITO FEDERAL, 2020i; ROSER *et al.*, 2020). In relation to deaths, comparatively, the scenario was not so bad. The

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<sup>1</sup> The imported cases are those in which it is possible to trace that the contamination of the individual occurred in another territorial context (municipality, state or country).

difference between the relative position of cases and deaths was possibly due to the fact that Brasília had the largest number of physicians, intensive care beds and mechanical respirators *per capita* in Brazil (BRASIL.IO, 2020; BRASIL, 2020c; DISTRITO FEDERAL, 2020I; ROSER *et al.* , 2020).

Analyzing the data from a longitudinal point of view, when comparing confirmed cases from May 16<sup>th</sup> and death rates since July 3<sup>rd</sup>, the number of new cases and new deaths<sup>2</sup> in the Brazilian Federal District increased faster than Spain, Italy, and the United Kingdom (BRASIL.IO, 2020; ROSER *et al.* , 2020).

Therefore, this article shows a misalignment between the progression of cases and deaths in the Brazilian capital and the dynamics of imposition and flexibilization of measures to restrict economic and social activities. This decoupling is analyzed in the light of the literature on the policy diffusion. Thus, the adoption of the first measures to restrict activities in the Federal District would have been premature. This was a result from a diffusion process through emulation of already adopted policies in the world at the time, especially in Spain, Italy, and the United Kingdom.

## 2. Viruses and disease

Coronavirus is a family of viruses that cause respiratory infections. The first strains capable of infecting humans were isolated in 1937. The name coronavirus, which began to identify the family only in 1965, is due to its shape, like a crown. (LUDWIG & ZARBOCK, 2020; BRASIL, 2020d). The agent SARS-CoV-2, of the coronavirus family, is the cause of COVID-19 disease. It was isolated on December 31<sup>st</sup>, 2019, after the first case records in China (BRASIL, 2020d).

COVID-19 may establish a clinical picture ranging from asymptomatic infections to severe respiratory conditions. Approximately 80% of the infected individuals are asymptomatic or have mild symptoms, such as cough and fever, while the remaining 20% are affected with more severe breathing difficulties and may require hospital care. Around

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<sup>2</sup> The terms "new cases" and "new deaths" are used by the WHO to represent the number of cases and deaths, respectively, occurring on a given day or in the last 24 hours.

5% of hospitalized patients need intensive care support and equipment for the treatment of respiratory failure, so-called mechanical ventilators (BRASIL, 2020d).

The transmission of the virus occurs from person to person, through droplets of saliva expelled by the infected individual when sneezing or coughing, or through contact with contaminated surfaces, such as the hands of other people and objects in general (BRASIL, 2020d). The virus can remain floating in the air between 40 minutes and 2 hours and 30 minutes. When deposited on a surface, the virus can remain active for a few hours or even days, depending on surface conditions (BRASIL, 2020b).

### **3. Measures to fight against the pandemic in the Brazilian Federal District**

On March 11<sup>th</sup>, WHO declared COVID-19 a pandemic situation. At the time, the world had counted more than 118,000 confirmed cases in 114 countries, with 4,291 deaths to date (WORLD HEALTH ORGANIZATION, 2020).

In Brazil, the Government of the Federal District (GDF) declared an emergency in the scope of public health, due to the risk of a new coronavirus pandemic, through Decree 40,475, of February 28<sup>th</sup>, 2020 (DISTRITO FEDERAL, 2020a). On March 11<sup>th</sup>, 2020, the same day, WHO declared a pandemic situation, the Brazilian capital was the first unit of the Brazilian federation to formally trigger measures to restrict economic and social activities, through Decree 40,509 (DISTRITO FEDERAL, 2020b). On this day, Brasília had only two confirmed cases, both imported, and no deaths (DISTRITO FEDERAL, 2020c). However, only 12 days after imposing the country's first restrictive measures, on March 23<sup>rd</sup>, the GDF began their flexibilization, through Decree 40,550 (DISTRITO FEDERAL, 2020f). On this occasion, the government allowed the operation of non-essential commercial activities, such as car dealerships and pet shops. Between March 23<sup>rd</sup> and July 2<sup>nd</sup>, the local government published several decrees that imposed or relaxed the restrictions on various activities. Nevertheless, Decree 40,939, of July 2<sup>nd</sup>, released all commercial and industrial activities in the Brazilian capital, while remaining suspended, on that date, social and sporting events, sports championships, cinemas, theaters, cultural activities, and nightclubs (DISTRITO FEDERAL, 2020h). At that time, the Brazilian Federal District had

52,281 confirmed cases, of which 1,605 were new cases, and 631 deaths, of which 11 were new deaths, and both rates were still rising (DISTRITO FEDERAL, 2020i, BRASIL.IO, 2020). On July 9<sup>th</sup>, in compliance with a judicial decision against Decree 40,939, the governor even suspended the return of activities (DISTRITO FEDERAL, 2020j; 2020k). However, on the night of the same day, another judicial decision changed the first decision, suspending its effects (DISTRITO FEDERAL, 2020l).

After July 9<sup>th</sup>, other decrees were issued by the governor of the Brazilian Federal District to continue the flexibilization of the few activities still restricted. On August 5<sup>th</sup>, the final milestone of this research, three of the 62 monitored activities were completely suspended (daycare centers,<sup>3</sup> social events and nightclubs) and eight activities operated under restrictions (DISTRITO FEDERAL, 2020m).

#### 4. Policy diffusion

The diffusion scientific literature defines the phenomenon as follows:

Diffusion is the process by which an **innovation** is communicated through certain **channels over time among the members of a social system**. Diffusion is a special type of communication concerned with the spread of messages that are perceived as new ideas. (ROGERS, 2003, p. 35, emphasized).

Diffusion is a bilateral communication process in which the message transmitted is an idea or knowledge, which does not necessarily need to be new in global terms, but a novelty for those who are receiving the message. It is a phenomenon related to the behavior of groups. These groups are divided into adopters and non-adopters of an idea that interrupts the process of incremental evolution (ROGERS, 2003).

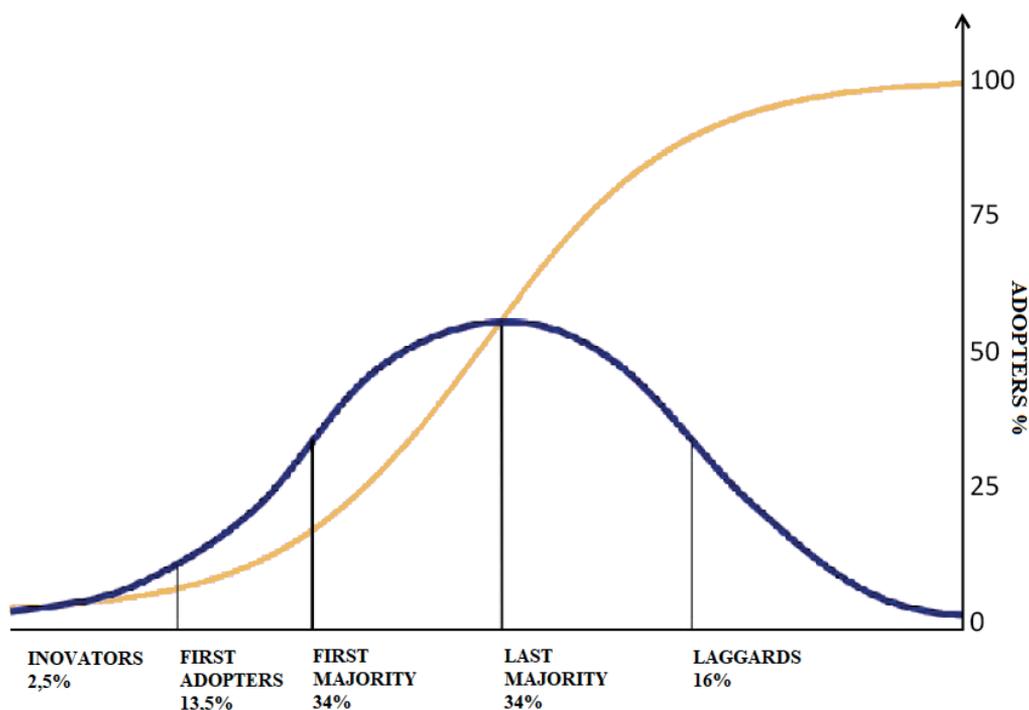
The diffusion process is usually characterized by a long maturation period. Typically, it has an accumulated adoption curve in the shape of an “S” (s-shaped curve) and a curve of new cases in the shape of a “bell” (bell-shaped curve). The latter tends to represent a

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<sup>3</sup> At the time of writing this article, the attendance in all day care centers of the Brazilian Federal District remained suspended in compliance with a judicial decision.

normal distribution. These curve formats result from differences between the first and last adopters. Figure 1 shows the typical adoption curve for innovations. The adoption rate and curve also differ from one idea to another. They are influenced by the following factors. First, the perception that individuals have of the relative advantages for the adoption of the new idea in each situation. Second, the compatibility of an innovation with the values, experience, and needs of the adopters. Third, the complexity of understanding and use of the innovation. Fourth, the possibility of experimentation (pilot). Finally, the ability to observe the results obtained (ROGERS, 2003).

**Figure 1 | Innovation Adoption Curves**



Source: adapted from <https://commons.wikimedia.org/wiki/File:Diffusionofideas.PNG>.

Members of a social system can be classified in terms of their innovative capacity in the following categories: innovators or pioneers, early adopters, first majority, last majority, and laggards. Innovators are the first to adopt an idea and do not depend on the subjective evaluation of other members of society (ROGERS, 2003).

Regarding the policy realm, policy diffusion is "the process by which a government's political choices alter the chances of choice by other governments." (COÊLHO, 2016, p. 37, free translation). Similarly, Simmons, Dobbin and Garrett (2006 apud GILARDI, 2012, p. 2) define that "international policy diffusion occurs when government policy decisions in a given country are systematically conditioned by prior policy choices made in other countries". In general, such definitions characterize diffusion as an interdependent process of spreading policy (GILARDI, 2012). In this sense, diffusion is not characterized as an outcome, but as a wide range of mechanisms and processes associated with a likely outcome, whose main actors are policymakers. (ELKINS & SIMMONS, 2005; GILARDI & WASSERFALLEN, 2019).

In short, diffusion is a process of communicating an idea among members of a given social system. In policy diffusion, this idea is the public policy itself, which, once adopted by a government, alters the probability of adoption by another government. It is a process of interdependence between political systems whose spread occurs in the medium and long term, obeying an adoption curve accumulated in the form of "S".

The way public policies spread is called a mechanism. One mechanism is nothing more than "a systematic set of statements that provide a plausible account of how [two variables] are linked." (HEDSTRÖM; SWEDBERG, 1998 apud GILARDI, 2012, p. 13). In general, the literature on policy diffusion characterizes four different political and institutional mechanisms that trigger the diffusion process. The mechanisms enshrined by the mainstream are learning, competition, coercion, and emulation (COÊLHO, 2016).

In the context of this article, the mechanism of interest is emulation. Emulation occurs when there is a non-rational process of imitation that does not consider the local specificities for the implementation of a given idea or policy. From this mechanism, the adoption of a policy occurs precisely because a certain government or political actor has previously adopted it. Thus, there is no critical analysis of the merits or the suitability for the context in which the policy will be adopted. In general, the mechanism is triggered by symbolic or normative reasons. It occurs, for example, when a political actor wants to turbo charge its administration by associating it with a wave of innovations or the notion of appropriate behavior (COÊLHO, 2016; COUTO & ABSHER-BELLON, 2018).

## 5. Methods

### 5.1. Case selection

In Brazil, the decisions about the fight against pandemic were not centralized or even coordinated by the federal administration. In fact, they were assumed by the state and local governments. It happened due to three reasons. First, Brazil is a federal state, so governors and mayors have a high level of political autonomy. Second, there were differing views amongst the president and most governors about the disease and the measures needed to fight against it. Finally, the decision of the Brazilian Supreme Court recognizing the roles of governors and mayors in the pandemic scenario (BRASIL, 2020a). In fact, the actions taken to combat the pandemic in Brazil had quite different characteristics amongst different Brazilian states and reflected the vision of local governors and the local pandemic status. In summary, in Brazil, the *loci* of decision on strategies to deal with the pandemic were the local states.

Unlike the Brazilian case, in Italy, Spain, and the United Kingdom the fight against the pandemic took place in a centralized way. In these countries, the effects of the pandemic arrived earlier than in Brazil. In fact, the epidemiological status and the strategies to fight the pandemic adopted in these countries were widely reported in Brazil, at a time when cases in the Brazilian territory were still incipient.

The main purpose of this article is to verify the following assumptions:

1. There is a decoupling between the evolution of the pandemic in the Brazilian Federal District and the dynamics of measures to restrict economic and social activities.
2. There is a policy diffusion phenomenon by emulation of the restriction measures adopted in Italy, Spain, and the United Kingdom into the Brazilian Federal District.

In this sense, Table 1 summarizes the selected cases and their justification.

**Table 1 | Selected Cases and Justification**

Case	Pop.	Case 1	Case 500	Justification
Brazilian Federal District	3.015.268	07/03/2020	07/04/2020	Target case
State of São Paulo	45.919.049	25/02/2020	22/03/2020	Unit of the Brazilian Federation First case in Brazil Epicenter of the pandemic in Brazil in the first months
Brazil	212. 559. 409	25/02/2020	20/03/2020	Country in which the Federal District is inserted Decisions about the fight against pandemic were not centralized or even coordinated by country government
Italy	60. 461. 828	31/01/2020	28/02/2020	Democratic countries in Europe Decisions about the fight against pandemic were centralized in the country-level Administration International news framed these countries in a bad situation in the fight against the pandemic, specially between March and May, 2020
Spain	46. 754. 783	01/02/2020	06/03/2020	
United Kingdom	67. 886. 004	01/02/2020	11/03/2020	

Source: Elaborated by the authors based on data from the Brasil.io (BRASIL. IO, 2020) and OurWorldinData (ROSER *et al.*, 2020).

## 5.2. Limitations

It is relevant to list some caveats and limitations of this research. First, the policy analyzed aims to address a global health crisis that is solely responsible for hundreds of thousands of lives lost. In this context, it is natural to adopt the precautionary principle. Second, this research analyzes an ongoing policy, because at the time this article was written, the pandemic was still ravaging the world. Third, it is natural that there is some inconsistency or unavailability of data that would better explain some phenomena. In this regard, it is important to mention the absence of data on the effective availability of doctors, intensive care beds and mechanical respirators in the Brazilian Federal District

throughout the research period. Finally, for some of the observed phenomena, the period of analysis was short, due to the dynamics of the pandemic. This is the case with the policy diffusion, where observation takes place over a period of years, not months. (BATISTA, 2017; COÊLHO, 2016; COUTO & ABSHER-BELLON, 2018; SUGIYAMA, 2008, 2011; WAMPLER, 2008). Thus, due to these caveats and limitations, the conclusions of this research are not definitive and, more than conveying certainties, intend to stimulate the debate.

### 5.3. Data gathering and processing

Data regarding the situation of the pandemic, in terms of cases and deaths, were obtained, in open format, on the Brasil.io's website (BRASIL.IO, 2020), and OurWorldInData website (ROSER *et al.* 2020). These electronic sites consolidate the information on cases and deaths provided by the state health departments, in the domestic scenario, and by the ministries of health or the like, in the international case. The raw data was treated to reduce the effects of seasonality, through the application of a seven-day moving average. In order to increase comparability, data on cases and deaths were divided by one million inhabitants. Information on the variation on cases and deaths in the Brazilian Federal District was obtained from comparing the moving averages of the plotted day and the fourteenth day before. It was considered that variations between -15% and + 15% reflected stability.

Data on the medical and hospital capacity of the Brazilian states were obtained on the website of the Brazilian Institute of Geography and Statistics (IBGE), specifically in the special section of the Brazilian Household Sample Survey (PNAD) with data related to covid-19<sup>4</sup> (BRASIL, 2020c). The data reflects the number of active intensive care beds, mechanical respirators, and physicians, in public and private hospitals, as available in December 2019. The data was simply plotted in a comparative graph amongst the Brazilian states. No reliable data was found regarding the evolution of the availability of beds, respirators, and physicians throughout the research period.

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<sup>4</sup> IBGE has provided a channel that brings together the initiatives undertaken and the actions under development in relation to its studies and research to support efforts to fight against COVID-19. This channel is available at <https://covid19.ibge.gov.br/>.

Information about measures to restrict the economic and social activities applied in the Brazilian Federal District were obtained from the reading of the decrees issued by the governor (DISTRITO FEDERAL, 2020m)<sup>5</sup>. The decrees were screened to filter only those that aimed to impose or relax measures to restrict activities, as well as those that declared emergency or calamity due to the pandemic (DISTRITO FEDERAL, 2020a, 2020g). In summary, 40 decrees, issued between February 28<sup>th</sup> and August 5<sup>th</sup>, were gathered and processed. The objective was to identify and plot the evolution of 62 social and economic activities. In this sense, the restriction levels were categorized into released (unrestricted), suspended (prohibited activity), and restricted (activity allowed under conditions).

To account the restrictions to the activities in time, the authors elaborated an Activity Index. This index is calculated by equation (1). The equation adds up all released activities, with weight 1, and all restricted activities, with weight 0.5, and divided by the total of activities. The weight for restricted activities was assumed to be 0.5, supposing that, on average, these activities were limited to half of their capacity. For example, assuming any activity X, which had an average daily movement of 100 people, the restrictions imposed on that activity reduced its average daily movement to 50 people.

$$\text{Activity Index} = \frac{\text{total of released activities} + 0,5 \times \text{total of restricted activities}}{\text{total of activities}} \quad (1)$$

The Activity Index can range from 0 (all activities suspended) to 100% (all activities released). The reference date is February 28<sup>th</sup>, the date of publication of Decree No. 40,475 (DISTRITO FEDERAL, 2020a), which declared an emergency situation within the Brazilian Federal District. On that date, all activities were released. The first restrictions took place from March 11<sup>th</sup>, through Decree No. 40,509 (DISTRITO FEDERAL, 2020b).

For the purpose of comparability between the Activity Index (percentage scale) and the values of new cases and new deaths (ordinal scale) and aiming to present such information in the same graph, it adopted the daily proportional values of new cases and new deaths in relation to the highest values in the historical series. These percentage values are trending, since they represent the daily percentage variation as a function of the peak value.

<sup>5</sup> A collection of the norms applicable to the pandemic within the Brazilian Federal District is available at the website <https://www.tjdft.jus.br/institucional/relacoes-institucionais/legislacao-covid-19-2013-coronavirus/legislacao-distrital-covid-19-coronavirus>.

Data on the diffusion of measures restricting economic and social activities in the world were compiled from the Coronavirus Government Response Tracker<sup>6</sup> (HALE *et al.*, 2020) website, coordinated by the Blavatnik School of Government at the University of Oxford.<sup>7</sup> The project consolidates data on 17 indicators related to the actions of national governments, and some subnational governments, in the fight against the pandemic. These indicators are grouped into activity restriction policies, economic policies, health policies, and other policies. In addition, the project calculates, based on different subgroups of indicators, five indexes: government response, containment and health, restrictive measures (rigor), economic support, and restrictive measures (legacy). In the scope of this research, only data from the index restrictive measures (rigor) were used. For accounting the effective adoption of restrictive measures to economic and social activities, it only considered countries with an index value higher than 30 ( $i > 30$ ).

## 6. Results and discussion

There was something wrong about the strategy to fight against COVID-19 adopted by the Brazilian Federal District between February and August 2020. Figure 2 shows the comparison of confirmed cases per million inhabitants among the Brazilian Federal District, São Paulo, Brazil, Spain, Italy, and the United Kingdom. In this figure, it is possible to notice that, on August 5<sup>th</sup>, the number of confirmed cases per million inhabitants in the Brazilian capital was much higher than the other contexts comparatively.

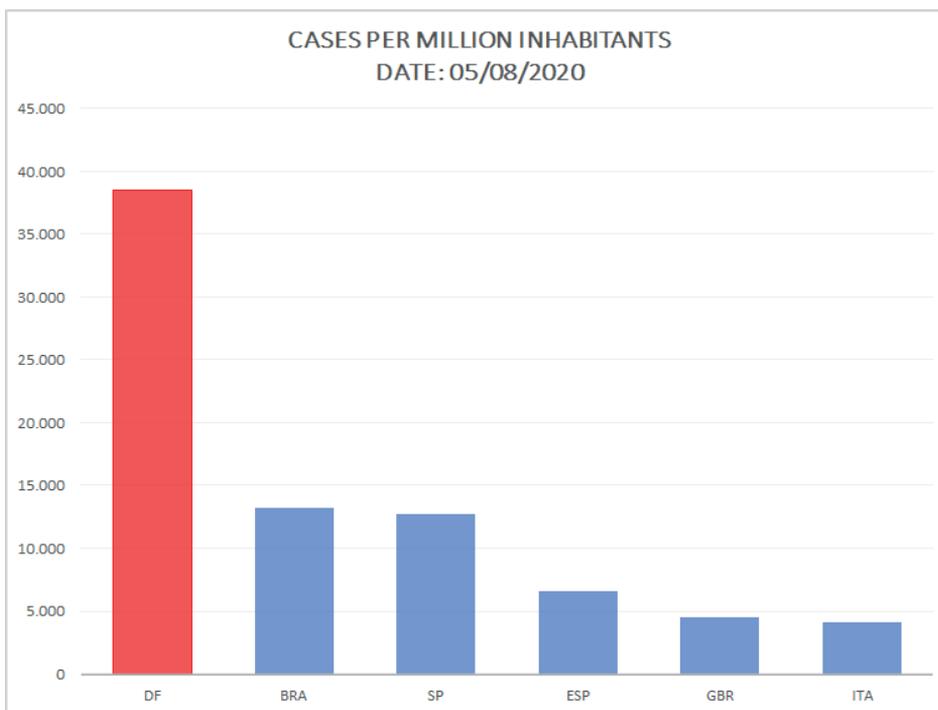
Figure 3 shows the comparison of deaths per million inhabitants amongst the same contexts. In this figure, it is possible to notice that, on August 5<sup>th</sup>, the number of deaths per million inhabitants in the capital exceeded the relative deaths of São Paulo and Brazil but was still lower than other contexts in comparison.

<sup>6</sup> Available at address <https://www.bsg.ox.ac.uk/research/research-projects/coronavirus-government-response-tracker>.

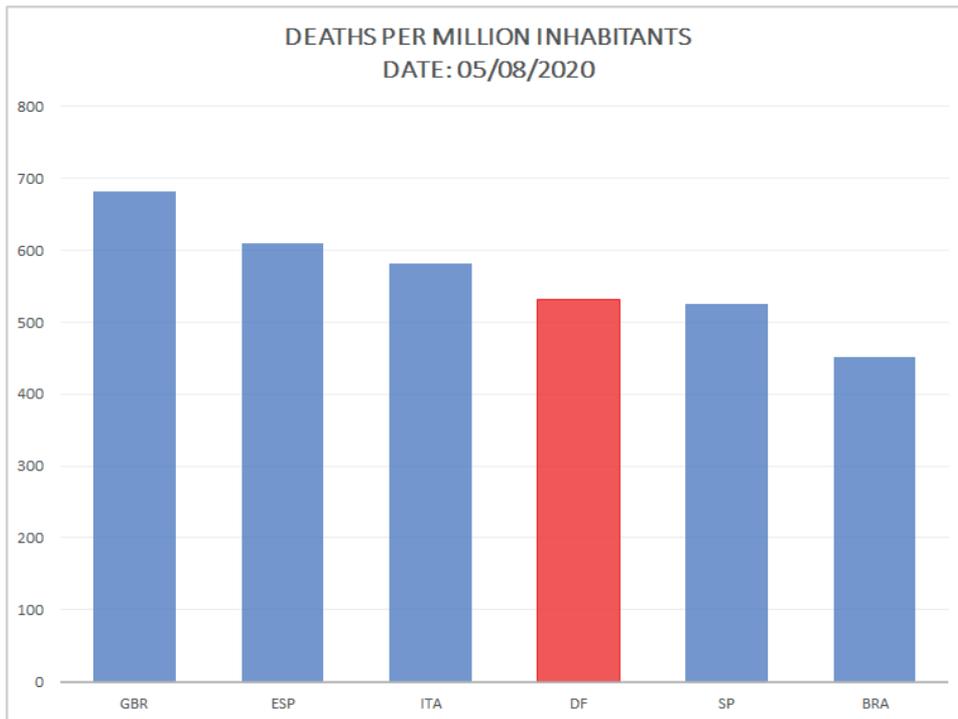
<sup>7</sup> According to those responsible for the project, data are collected from public sources, such as public government documents, news published in the press, among others. These sources and data are identified through Internet surveys by a team of more than 100 students and employees of the University of Oxford. The database records the data from the original source to allow verification of the coding performed.

Figures 4 and 5 show the comparisons of the progression of new cases and deaths, respectively. In these figures, it is possible to notice that the progression of cases and deaths in the Brazilian capital were more aggressive than other curves. The curve of cases has been more aggressive than all others since May 16<sup>th</sup>. In the same way, the curves of deaths have been more aggressive than all others since July 3<sup>rd</sup>. Regarding the curve of deaths, Spain, Italy, and the United Kingdom showed more aggressive trajectories during the month of April, even in comparison with the recent trajectory of the Brazilian capital.

**Figure 2 | Cases per Million Inhabitants**



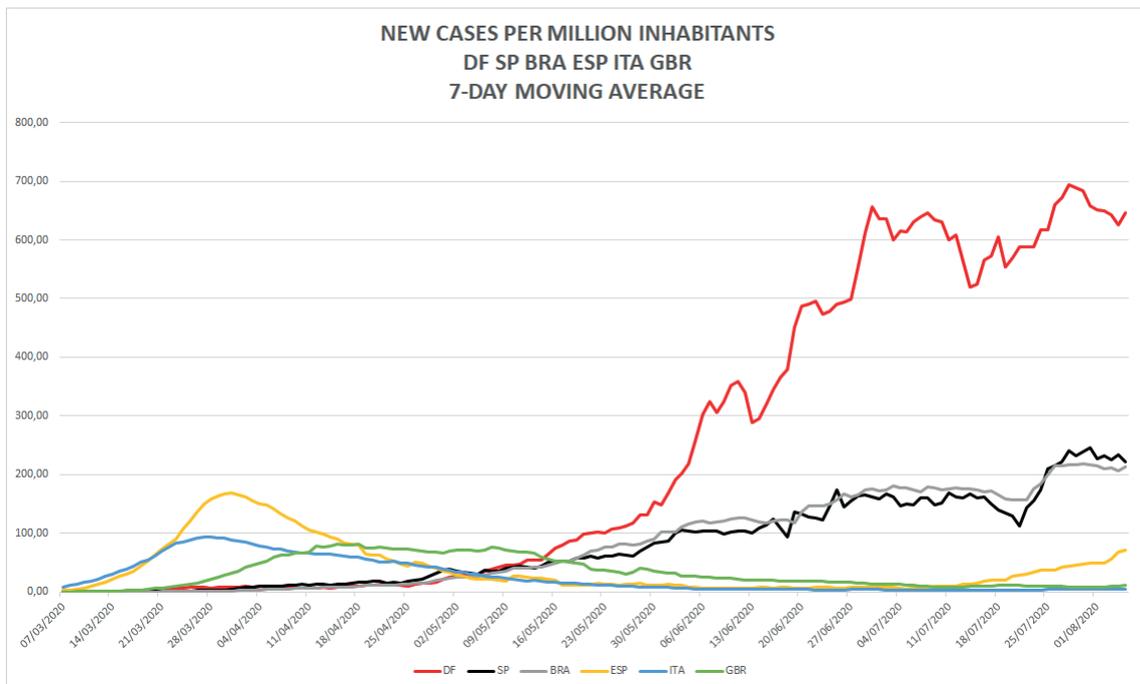
Source: Elaborated by the authors based on data from Brasil.io (BRASIL.IO, 2020) and OurWorldInData (ROSER *et al.*, 2020).

**Figure 3 | Deaths per Million Inhabitants**

Source: Elaborated by the authors based on data from Brasil.io (BRASIL.IO, 2020) and OurWorldInData (ROSER *et al.*, 2020).

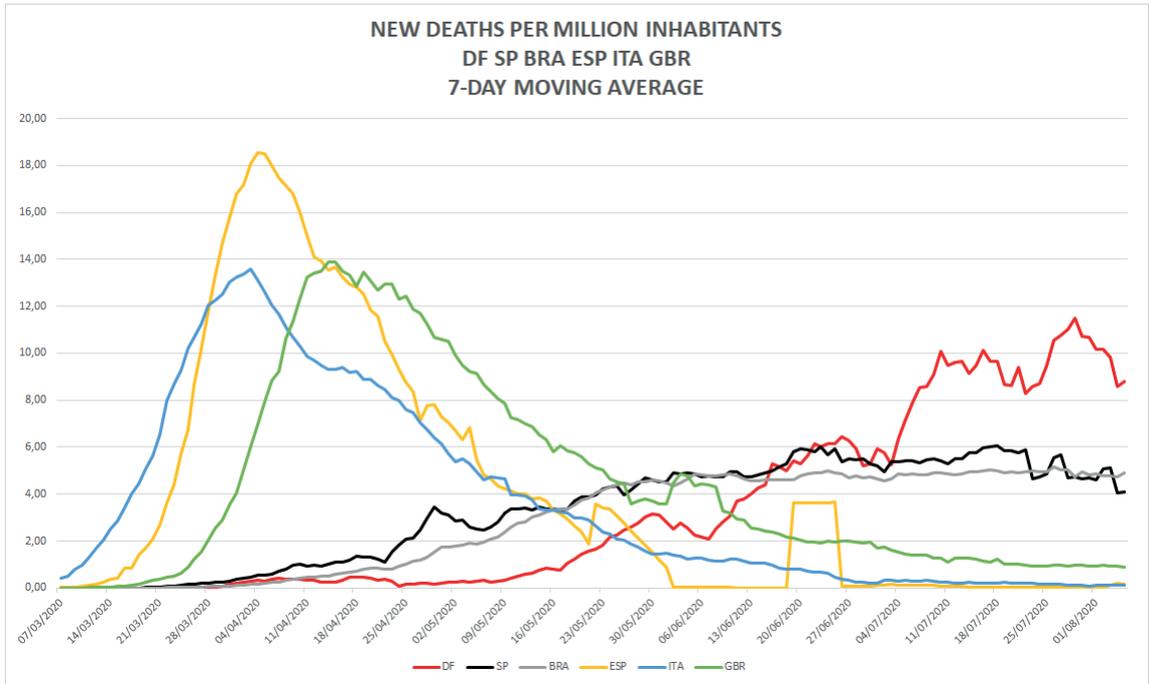
Figure 6 shows the variation of the moving average of cases and deaths in the last seven days. After a large positive variation of confirmed cases between July 27<sup>th</sup> and 31<sup>st</sup>, the curve has shown stability since then, except for the short period between August 2<sup>nd</sup> and 3<sup>rd</sup>. After a large positive variation in deaths until July 20<sup>th</sup>, the curve has shown stability since then, except for the short periods between July 28<sup>th</sup> and 30<sup>th</sup> and between August 2<sup>nd</sup> and 3<sup>rd</sup>.

Figure 4 | New Cases per Million Inhabitants



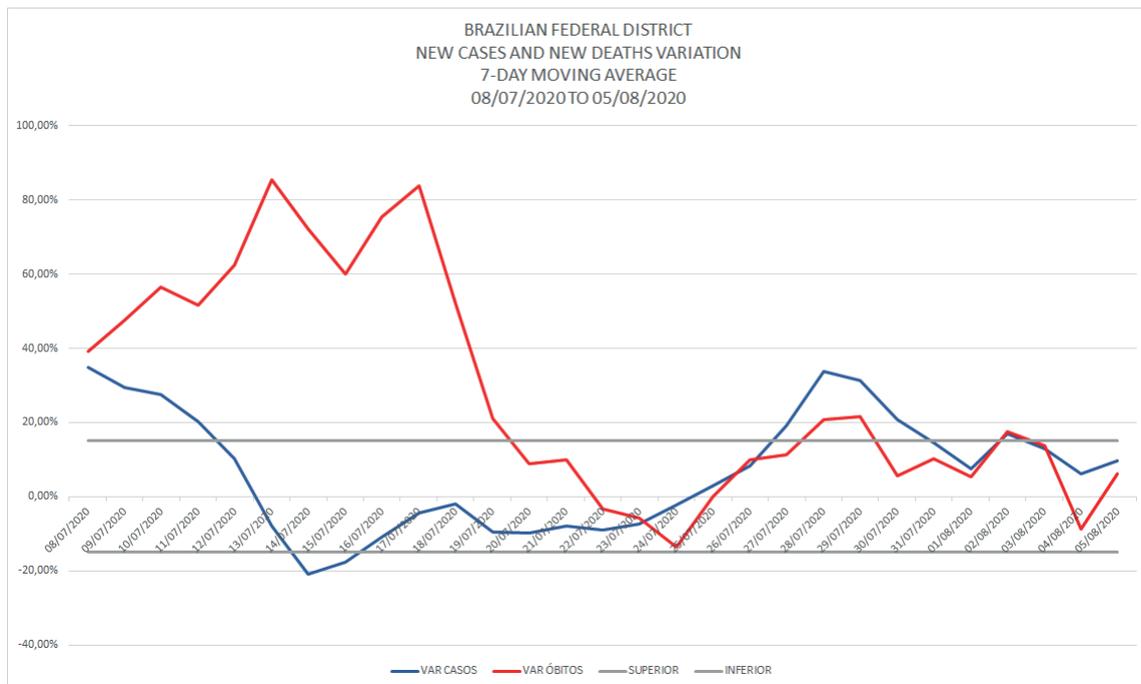
Source: Elaborated by the authors based on data from Brasil.io (BRASIL.IO, 2020) and OurWorldInData (ROSER *et al.*, 2020).

Figure 5 | New Deaths per Million Inhabitants



Source: Elaborated by the authors based on data from Brasil.io (BRASIL.IO, 2020) and OurWorldInData (ROSER *et al.*, 2020)<sup>8</sup>.

<sup>8</sup> Spain's figures were adjusted manually to exclude negative deaths between May 25 and 31.

**Figure 6 | Brazilian Federal District - Variation of new Cases and new Deaths**

Source: Elaborated by the authors based on data from Brasil.io (BRAZIL.IO, 2020).

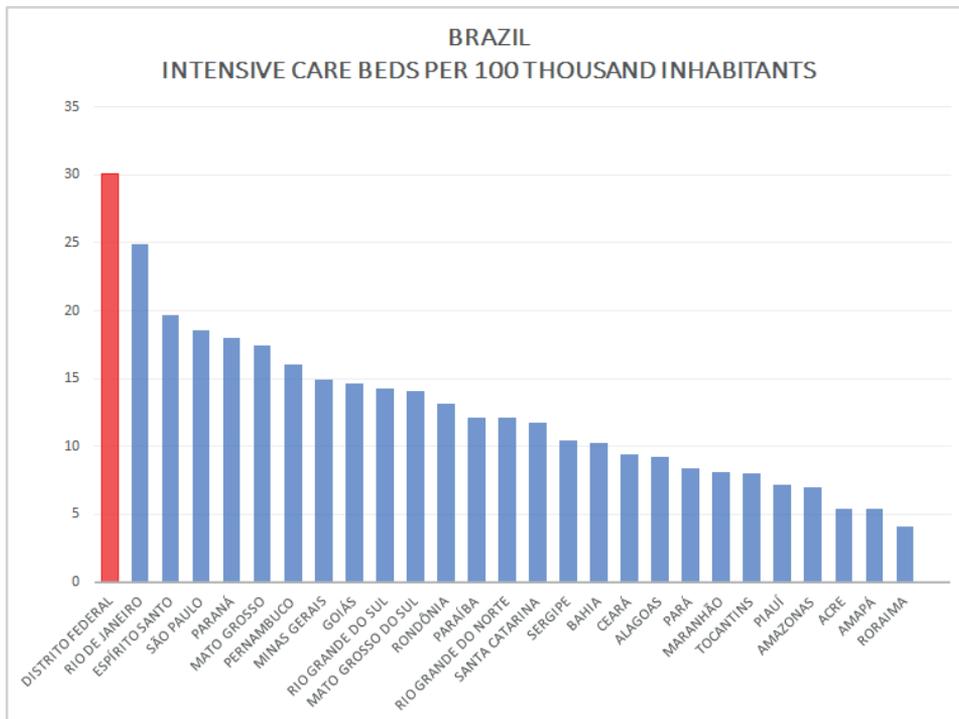
These results show the differences of the evolution of the pandemic among the selected contexts. They display that the Brazilian Federal District scenario was the worst among them in the research period but was trending to stability in mid-August. However, cases and deaths had different dynamics. While the stock of cases *per capita* in the Brazilian capital was the highest among the compared contexts, it was not true about deaths. Why?

Figures 7, 8 and 9 show, respectively, the comparisons of the stocks of intensive care beds and mechanical respirators, as well as the number of physicians per 100 thousand inhabitants in December 2019. The figures show that the Brazilian Federal District had, at that date, better indicators of stock of inputs and availability of physicians in relation to other Brazilian states. Probably, the numbers of deaths were not higher because the Brazilian capital medical-hospital capacity was the best of the country.

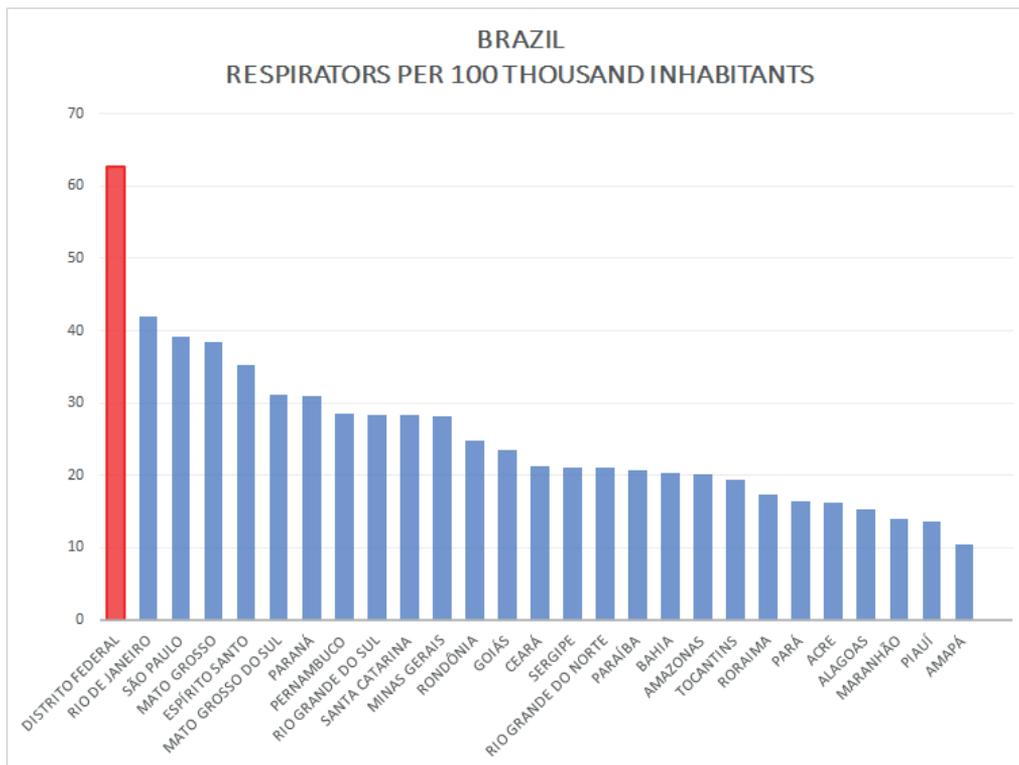
Figures 10 and 11 show the evolution of restrictions on economic and social activities in the Brazilian Federal District. From the variation of the Activity Index, it is possible to notice that the period of greatest restriction (index below 80%) was between March 18<sup>th</sup>,

with the publication of Decrees 40,529 and 40,537 (DISTRITO FEDERAL, 2020d, 2020e), and July 2<sup>nd</sup>, from the publication of Decree 40,939 (DISTRITO FEDERAL, 2020 h). In addition, it is possible to notice that the trend peak of new cases, on July 28<sup>th</sup>, and deaths, on July 29<sup>th</sup>, coincide with periods of lower restriction to activities, with the Activity Index at 86.3% in both cases.

**Figure 7 | Brazil - Intensive Care Beds per 100 Thousand Inhabitants**

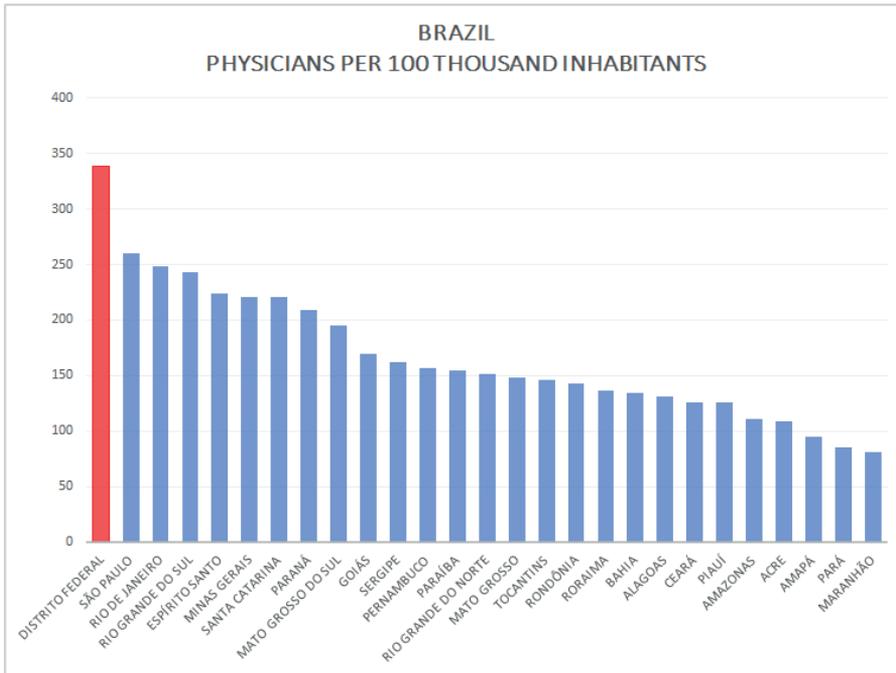


Source: Elaborated by the authors based on data from IBGE (BRASIL, 2020c).

**Figure 8 | Brazil - Respirators per 100 Thousand Inhabitants**

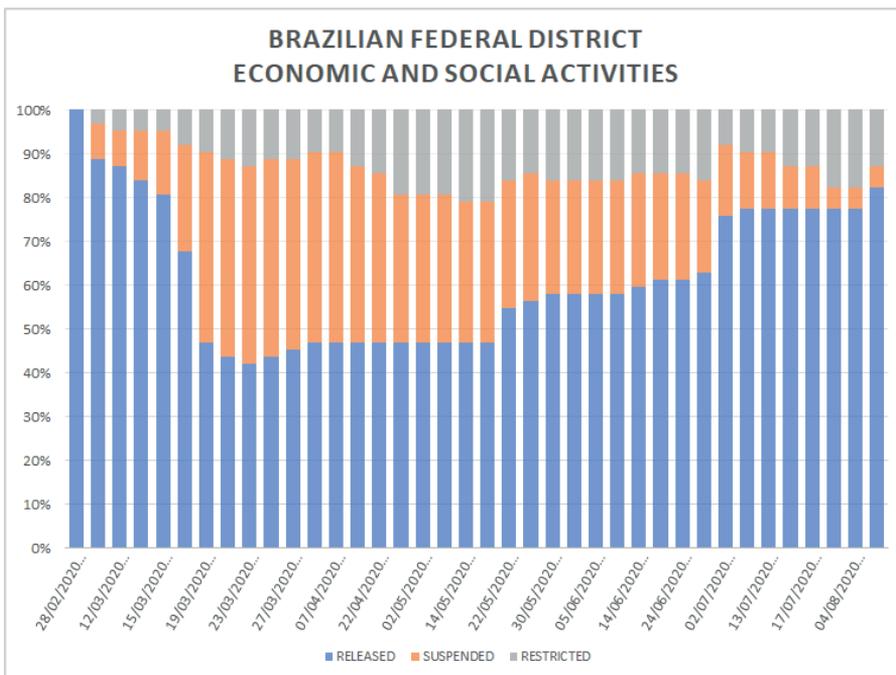
Source: Elaborated by the authors based on data from IBGE (BRASIL, 2020c).

Figure 9 | Brazil - Physicians per 100 Thousand Inhabitants



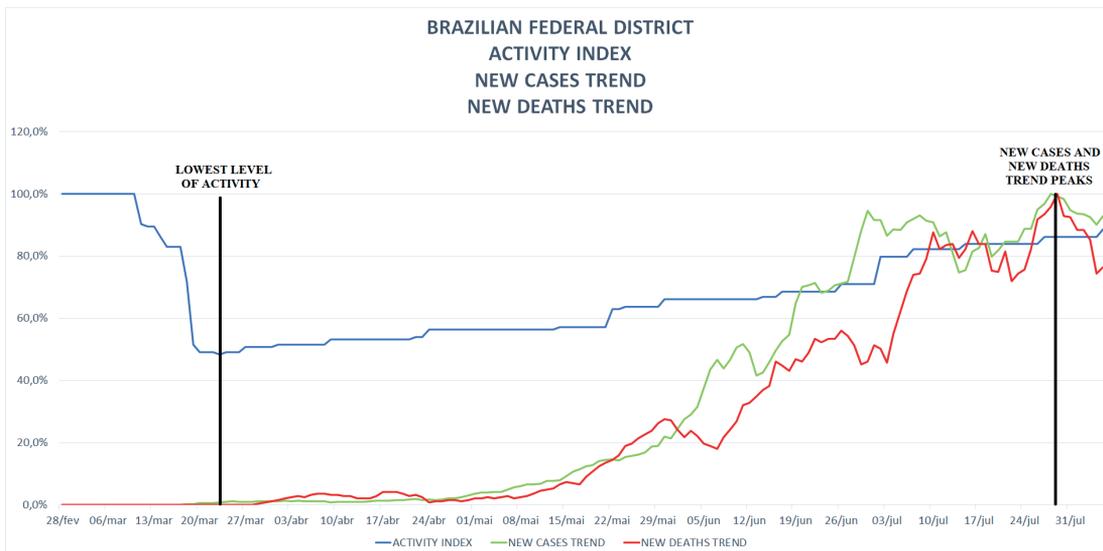
Source: Elaborated by the authors based on data from IBGE (BRASIL, 2020c).

Figure 10 | Brazilian Federal District - Restrictions on Economic and Social Activities



Source: Elaborated by the authors.

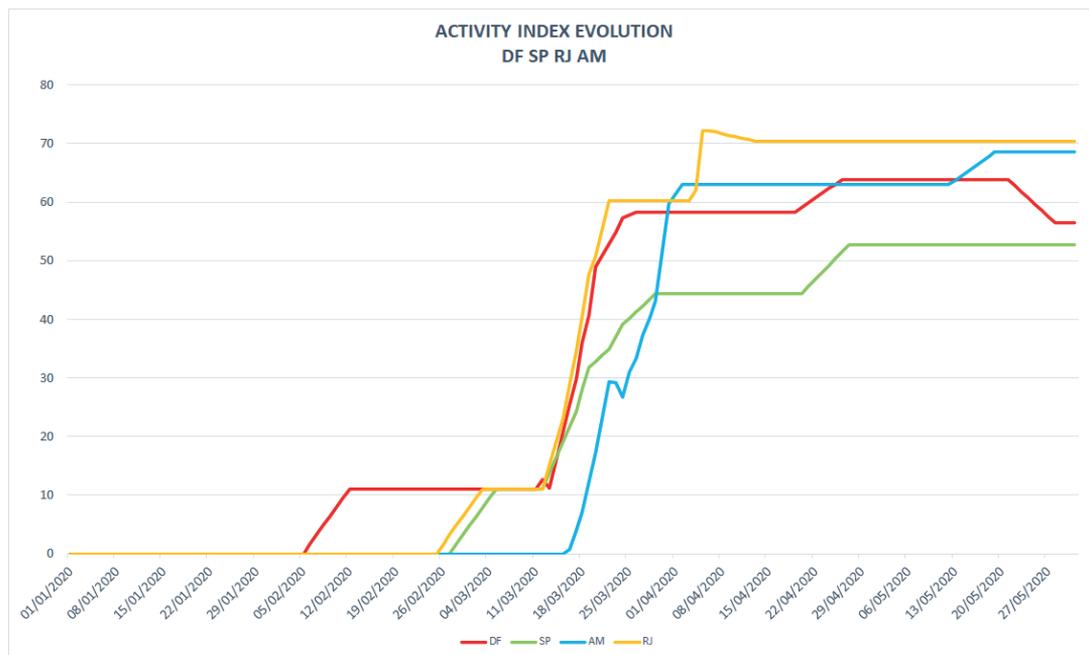
Figure 11 | Brazilian Federal District - Activity Index



Source: Elaborated by the authors based on data from Brasil.io (BRASIL.IO, 2020).

Figure 12 presents the comparison of the evolution of measures of restrictions on economic and social activities among the Brazilian Federal District, São Paulo, Amazonas, and Rio de Janeiro. The states of São Paulo, Amazonas and Rio de Janeiro were the epicenter of COVID-19 cases in Brazil during the first months of the epidemic. It is easy to notice that the measures restricting activities in the Brazilian capital were issued before the others. Unfortunately, the data available from the source consulted halted at the end of May, thus it is not possible to formulate an analysis of the period during greater flexibility.

In relation to the fight against the pandemic, the governor of the Brazilian Federal District was the first to establish restrictions on activities in the country (symbolism), even with only two confirmed cases and no deaths in the capital on March 11<sup>th</sup>. Clearly, it was pressuring the local economy. In the sequence, Governor Ibaneis has been easing these measures at a time when the variation of cases and deaths has been oscillating between high and stability (see figures 4, 5 and 6). Furthermore, the cumulative number of cases in the Brazilian capital, per million inhabitants, presents numbers much higher than those of São Paulo, Brazil, Spain, Italy, and the United Kingdom (see figure 2). The joint analysis of the stock of cases on August 5<sup>th</sup> (see figure 2), the comparison of the evolution of new cases among selected contexts (see figure 4), the variation of new cases in the Brazilian Federal District (see figure 6), the evolution of restrictions (see figure 10), the activity index (see figure 11), and the comparison of restrictions among Brazilian states (see figure 12) seem to suggest a lack of timing from the governor who imposed measures of restriction to activities at a time whose case progression curves were not yet aggressive and to make them flexible in a period of indicators, at least, stable, but at very high levels.

**Figure 12 | Comparison on Restrictions on Economic and Social Activities**

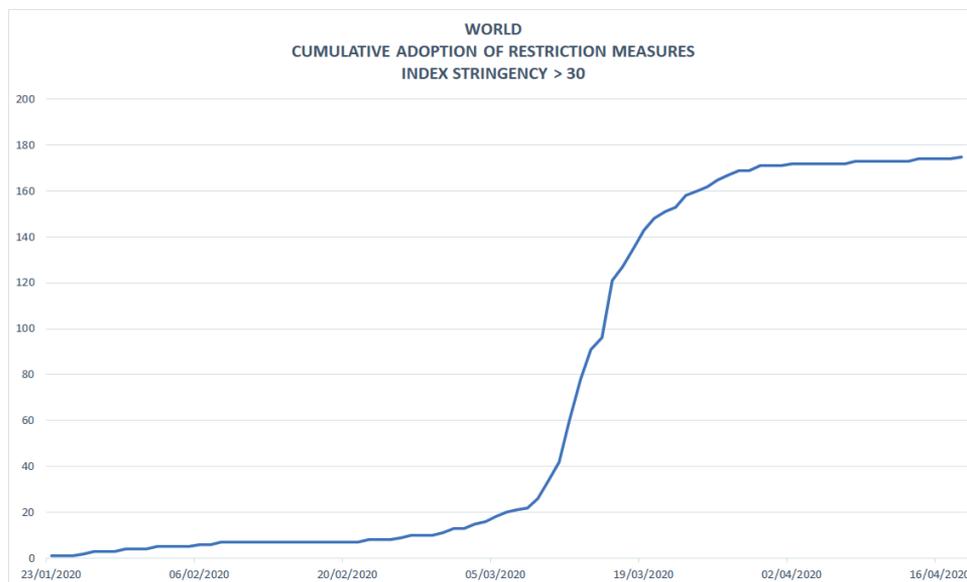
Source: Elaborated by the authors based on data from the University of Oxford (HALE *et al.*, 2020).

Regarding deaths, the cumulative figures, per million inhabitants, present median numbers among the selected contexts (see figure 3). Figures 7, 8 and 9 seem to suggest that the medical-hospital capacity installed in Brasília, the highest among the Brazilian states, reduced the impact on deaths resulting from the high number of cases. The joint analysis of the stock of deaths on August 5<sup>th</sup> (see figure 3), the comparison of the evolution the new deaths among the selected contexts (see figure 5), and the variation of new deaths in the Brazilian Federal District (see figure 6) shows that the situation has worsened recently, possibly due to the maintenance of cases at high levels and the increased pressure on the health system.

There are in the literature some theories and models designed to explain the public policy process. However, because of the dissemination of restrictions on activities among national and subnational political systems, the case on screen can be analyzed from the perspective of diffusion mechanisms, especially emulation. Figures 13 and 14 show, respectively, the accumulated number of adoptions, and the new adoptions of measures

restricting economic and social activities over time in the world. In the charts, it is easy to notice a typical policy diffusion behavior. The accumulated chart is s-shaped and the new case one is bell-shaped. In the latter, it is possible to demarcate the groups of adoption. If the Brazilian Federal District were treated as a country, due to the start date of the restriction measures, it would be part of the first majority. However, in the specific case of COVID-19 coping policies, it is necessary to consider the temporal lag of contamination between countries. In Italy, Spain, and the United Kingdom, the first cases were recorded between January 31<sup>st</sup> and February 1<sup>st</sup>, while in the Brazilian Federal District, the first case was recorded only on March 7<sup>th</sup>, that is, 35 days after. On average, the three countries took 36 days from the first case to achieve index restrictive measures (rigor) greater than 30. The Brazilian capital, on the other hand, reached this rate in only six days. If the first case in the capital had occurred on January 31<sup>st</sup>, maintaining the time lapse of the first case, the measures would have been triggered on February 6<sup>th</sup> (see figure 14). This would have inserted the Brazilian Federal District in the group of first adopters.

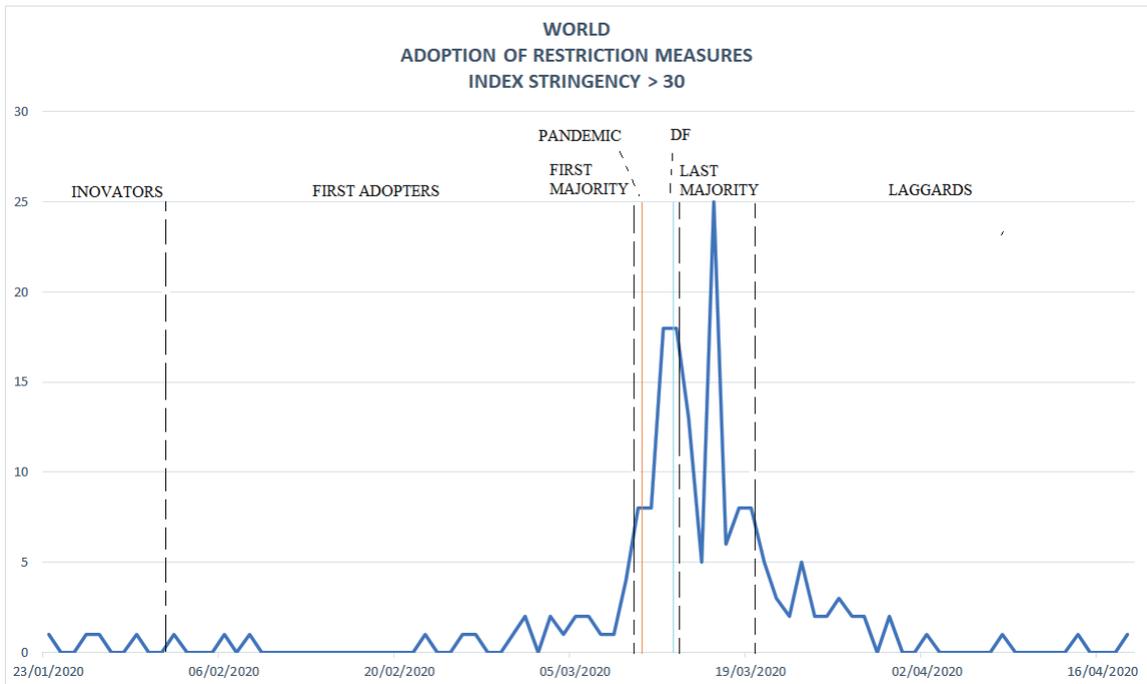
**Figure 13 | World – Cumulative Adoptions of Restrictions on Economic and Social Activities**



Source: Elaborated by the authors based on data from the University of Oxford (HALE *et al.*, 2020).

Figures 13 and 14 demonstrate the graphical compatibility of the distribution of adoptions, in time, at the international level, with the patterns of the curves described in the diffusion literature. From the point of view of the characteristics of the diffusion phenomenon, there is also congruence in relation to the policy process to cope with the pandemic. In this sense, the political choices of the first countries infected with the virus have altered the probability of the choice of policies adopted by the other countries or subnational governments, especially considering the recommendations issued by WHO. In the case of the Brazilian Federal District, the adoption of restrictive measures seems to be associated with three factors. First, the news from countries such as Italy, Spain and, the United Kingdom, which showed an aggressive increase of cases and deaths during the months of February and March (see figures 4 and 5). Secondly, the framing of the issue on the international press, linking the delay in applying strictly measures restricting economic and social activities, as shown in Table 2, with the worsening of the pandemic situation in these countries (BRAUN, 2020; PINEDO & CARREÑO, 2020; PYM, 2020). Third, the pandemic declaration on March 11<sup>th</sup> by WHO (WORLD HEALTH ORGANIZATION, 2020). These factors are compatible with the diffusion literature by shedding light on the interdependence of the adoption of convergent policies, either in a coordinated manner, if the WHO's action is considered, or uncoordinated.

**Figure 14 | World – Adoptions of Restrictions on Economic and Social Activities**



Source: Elaborated by the authors based on data from the University of Oxford (HALE et al., 2020).

With regard to the mechanism that triggered the adoption of measures restricting activities in the Brazilian capital, an analysis based on the decoupling between the progression of the epidemiologic situation (see figures 4 and 5) and the evolution of measures in the territory (see figures 10 and 11) seems to suggest a process of non-rational emulation of the policies adopted in Spain, Italy, and the United Kingdom. It took place without considering the local context. The adoption of restrictive measures gave the impression of an "appropriate behavior". It is important to remember that the dramatic situations faced in some European countries were associated with the collapse of the local health system. Regarding Brazilian Federal District situation, the stocks of intensive care beds and respirators, as well as the availability of physicians, as available in December 2019, presented the best per capita indicators in the country (see figures 7, 8 and 9). At the time of the activation of restrictions in the Brazilian capital, possibly, such medical-hospital capacity would be sufficient to mitigate the initial impacts of the spread of the virus in Brasilia, without the adoption of these restrictive measures. Figures

4 and 5, analyzed together, seem to corroborate this reflection. Although the escalation of cases in Brasília occurred from mid-May, the escalation of deaths only occurred almost a month later. Thus, the evidence suggests that the local health system had the capacity to absorb, for some time, the increase in demand. Nevertheless, the most appropriate data to confirm this analysis would have been the availability of beds, respirators, and physicians at the time, but they were absent.

**Table 2 | First Case, 500<sup>th</sup> Cases and Index of Restrictive Measures > 30**

Countries and Brazilian Federal District	Case 1	Case 500	Index > 30
Italy	31/01/2020	28/02/2020	22/02/2020
Spain	01/02/2020	06/03/2020	10/03/2020
United Kingdom	01/02/2020	11/03/2020	21/03/2020
Brazilian Federal District	07/03/2020	07/04/2020	13/03/2020

Source: Elaborated by the authors based on data from Brasil.io (BRASIL.IO, 2020), OurWorldInData (ROSER *et al.*, 2020) and University of Oxford (HALE *et al.*, 2020).

The diffusion literature also points out that the emulation mechanism is, in general, triggered by symbolic reasons resulting from the individual characteristic of the ruler.

## 7. Conclusions

The measures to restrict economic and social activities within the scope of policies to combat the pandemic in the Brazilian Federal District have shown to be out of line with the evolution of COVID-19 in the territory. To stimulate debate and without the intention of establishing definitive conclusions, this research presented data that seem to suggest that both the imposition of measures to restrict activities and their flexibility were premature. In this sense, the research listed arguments to suggest that the possible causes of decoupling may be associated with the diffusion by emulation of the measures adopted in Spain, Italy, and the United Kingdom, without proper contextualization to the reality of the Brazilian capital. This pioneering spirit may have generated early pressures on the local economy. In a second moment of flexibilization of measures, the governor

seems to have met the pressures of the economic sectors to relax measures, even in the face of increasing cases and deaths.

However, it is important to emphasize that the world is facing a major health crisis. This situation requires a quick response from rulers for the preservation of life, often based on limited data, uncertainties and experimentation. This is one of the alternatives to explain the uncoupling identified in this research.

Finally, as suggestions for a future research agenda, it is proposed to compare the progression of the epidemiological picture in territories with similar characteristics of population density, medical-hospital capacity, sanitation infrastructure and economic activity to the Brazilian Federal District. It would be interesting to analyze the dynamics of imposition and flexibilization of measures to restrict economic and social activities in these locations. In another line of research, it is suggested to use mobility data provided by Google to evaluate the success of the restriction measures imposed. In a third aspect, it is proposed to analyze the impact of different levels of federal coordination in federative countries on the quality of pandemic coping policies issued by subnational governments, evaluated according to the progression of the epidemiological picture in the territory.

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