



Opinion Paper

Information management hits and misses in the COVID19 emergency in Brazil

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ABSTRACT

Brazilian Federal Government created an emergency aid to face the COVID19 emergency. This aid provides monthly payments to low-income or unemployed citizens, informal workers, or individual micro-entrepreneurs. An intricate set of criteria made too complex the identification of all citizens eligible for emergency aid, considering there is no an integrated database to which they could apply these criteria. Consequently, lots of people who fulfilled the criteria were not able to receive the aid, and lots of people who were not supposed to get it ended up receiving it. In this context, the goal of this opinion paper is to discuss the process effectiveness and which issues related to information management hindered the positive program impact. Additionally, a less complex but relevant case of Rio Grande do Sul State is discussed. Both cases – the Federal Government and the state government – show the importance of effective information management to face very demanding situations and avoid the high social price to be paid by those who need this aid the most.

1. Introduction

Due to the COVID19 emergency, the Brazilian Federal Government decided to create an emergency aid, which provides monthly payments (starting on April 2020) of about Euro 105 initially for three months and later extended to five to low-income or unemployed citizens, informal workers, or individual micro-entrepreneurs. The applicants should fulfill the following criteria (Caixa, 2020):

- Be over 18;
- Have no active formal employment;
- Not receive social security, assistance benefits, or unemployment insurance;
- Choose either the emergency aid or Bolsa Família aid (permanent aid program for the poor);
- Have a family income per capita up to about half a minimum wage (about € 91) or total family income up to three minimum wages (about € 550);
- Not have received, in 2018, total family earnings above € 5000;
- Only two people per family can receive the benefit;
- Single mothers with children under 18 are entitled to a double aid (around € 182).

Despite the importance of establishing some criteria, these intricate ones made much complex the identification of all those citizens who were eligible to the emergency aid, considering there is no centralized or integrated database where they could apply these criteria. As a consequence, lots of people who fulfilled the criteria were not able to

receive the aid, and lots of people who were not supposed to get it ended up receiving it. The goal of this opinion paper is to discuss the process effectiveness and which issues related to information management hindered the program positive impact.

2. Information processes issues and its practical implications

There were several serious issues related to the process and to information management, which are discussed below. These issues created quite severe problems for the citizens that needed emergency aid, provided failures in the middle of an emergency make citizens fearful, uncertain and anxious (Chen et al., 2020).

2.1. The ones who were supposed to receive the aid

The emergency aid should be automatically deposited in the bank accounts of those who were registered at the Single Registry and was entitled to receiving it. This registry, maintained by Ministry of Citizenship, is a set of information about Brazilian families in situations of poverty and extreme poverty. This information is used by the Federal Government to implement public policies capable to improve the lives of these families.

For the citizens that were not register, or even the ones that were, but did not receive the aid automatically, it was necessary to access an application or the website of Caixa Econômica Federal (here identified as Caixa), a federal public bank responsible for implementing public policies for social security and assistance.

There were serious technical problems involving all stages of the

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initial applications for the benefit. Among the problems, the crash of the website and application through which registrations take place, the delay in analyzing orders, and the showing of messages that did not reflect the exact point of the process. When the aid was launched, Dataprev informed that almost 40 thousand requests were undergoing additional processing. Dataprev is a public IT company linked to the Ministry of Economy that controls the database of the country's social security system and that processes requests for the emergency aid.

Even though the families of inmates were eligible, they were not able to access the aid because of a processing error. This restriction can be seen as discriminatory. It also affects people who have recently been released from prison, but who have not yet had their status updated in government databases.

There were also cases of single mothers with children under 18 who were not successful in obtaining the double benefit, provided the consultation of meeting the criteria was not reaching the childbirth records that was under the responsibility of the ministry of Women, Family and Human Rights.

Additionally, 13.6 million informal workers had to re-register on Caixa application or website because the system was unable to identify whether they meet the criteria required to receive the benefit or not. This number represents 15 % of the economically active population.

Mid-May, the situation was so chaotic that it was not possible to download the application for days from iOS or Android stores. It happened because many of the citizens that were not being successful tried to start the whole process again, restarting with a more recent version of the application. Until that time, about 50 million people received the aid while the application was downloaded 86 million times, and the website was counting 836 million accesses and the support line received 153 million calls, showing that it was necessary to do the process over and over again. Without access to official information, misinformation took over, increasing the stress and anxiety of those looking for help, something that happened in China (Wang & Wang, 2020).

The problems above mentioned were just the beginning of the burden for those who did not have a bank account - about 45 million citizens, or 39.5 % of the population (IPEA, 2020) or did not have a taxpayer registration number, which made them 'invisible' for the federal government (Caixa, 2020). The situation of this group of citizens hinted that the government was not aware of it from the beginning or did not plan initially any procedure for those citizens.

2.2. The huge lines

All of the problems in the virtual processes forced people to go to Caixa branches. Across the country, there were scenes of very long lines and crowds, in the middle of the pandemic, provided people were trying to withdraw the aid or to solve the technological issues.

Many Brazilians also went to Caixa branches simply to regularize their taxpayer registration, because, without it, they would not receive the aid. Due to this problem, the Federal Government decided to allow the issuing or the regularization of this document by email.

2.3. The ones who were not supposed to receive the aid

Every day, examples of people who were not eligible but received the aid showed up in the media. The main groups of people who were not supposed to receive the aid were:

- Military personnel: 73,200 people linked to the Armed Forces had access to the benefit improperly. Among those who received the funds were active-duty soldiers, retired military personnel, and pensioners. It happened because the emergency aid system did not cross its data with the one from the armed forces;
- Employed people: being unemployed was one of the criteria to receive the aid. However, the emergency aid system did not cross its

data with the Ministry of Labor and Employment database;

- Inmates: they were not entitled to the aid, but lots of them received it, provided the emergency aid system did not cross its data with the Ministry of Justice database;
- Several people with savings in the bank, having a brand-new car, and family members without income but from well-off families received the aid. These groups were not considered in the criteria, or again databases were not crossed with ones of Central Bank, the federal car authority or the taxpaying system database.

Additionally, the protection against frauds seemed to be not effective, provided a number of people used someone else's data as their own, indicating their bank accounts for receiving the benefit.

3. "Burying pipes does not win votes" - or the issues on information processing

The Brazilian saying above is quite common in government related subjects, and means that just visible results, or "above the ground", are perceived as achievements of a public manager or a politician and consequently will yield votes. Sayings are very popular in the Brazilian culture, and many Brazilians consider them as wise, provided they are based on common sense and transmit popular experiences and knowledge.

Having that in mind, as well as the 6-D Hofstede's national cultural model (ref), long term planning is not a rule in Brazil. In governments it is more pronounced, provided even technical careers are influenced by the dynamics of political mandates. At the same time, citizens' lack of confidence in governments leads to the pressure to show prompt and constant results.

This context might clarify why federal government ministries' databases are segmented or are not efficiently connected. An integrated database would make possible to do the queries applying all the criteria all together. Most of the problems listed in the previous sessions were related to information management issues, such as information integrity, information integration, and information retrieval. The search of aid beneficiaries based on multiple filters and multiple databases is too complex and can lead to errors, especially considering the fact that the country-wide databases are enormous.

Even the e-government efforts do not commonly do the basic work and they focus more on what is visible. For example, in the last years, the efforts on digital services were more on moving face-to-face services to online ones, without previously discussing the necessary changes in the way the service is provided, on their concept or even if the services were still necessary.

Since "nobody sees the pipes", palliative solutions have been a constant, as it is more conspicuous now. They can last for a while, but when very demanding situations come up, the social price to be paid is very high. In this case, the price is paid by those who need this aid the most.

4. Controlled distance model in Rio Grande do Sul state

Rio Grande do Sul state government created and implanted a strategy to face COVID19 emergency in its 497 municipalities. It is called Controlled Distance Model and it was built based on health and economic activity criteria (Rio Grande do Sul State Government, 2020). A system of flags was created, based on key indicators, expert consultations, and enforceable processes (Woods & Lemos, 2020), with mandatory protocols and specific criteria to be followed by the different economic sectors. Compared to the federal emergency aid, the case is less complex but rather relevant.

Rio Grande do Sul state was divided into 20 regions, which were analyzed considering the speed of propagation of COVID19 and the health system's service capacity. Eleven indicators (such as the number of new cases, casualties, and available intensive care unit beds, among

others) determine the classification of the regions. Depending on the degree of health risk, each region receives a yellow, orange, red or black flag.

The monitoring occurs weekly, and the flag updates are released every Saturday. Mandatory protocols must be respected in all flags. Moreover, each economic sector has specific criteria that vary according to the flag. There is a dashboard open to the whole society, showing data such as confirmed cases, cases per 100 thousand inhabitants, cases per gender and age, casualties, people in hospitals, people in intensive care units, as well as the details of the strategy, the methodological notes and the database used for decision-making of the flag colors for each region.

This strategy was created, developed and supervised by the Data Committee, a multidisciplinary group formed by civil servants and coordinated by the Planning Officer. The Health Officer is in charge of the strategy execution. A scientific committee, formed by people from inside and outside government, supports the Data Committee on the decision-making.

Rio Grande do Sul State Government has been considered a model on the COVID19 combat (Woods & Lemos, 2020).

5. Implications for research

This difficult time and the Brazilian emergency aid issues showed the importance of focusing again on subjects that might be seen as old-fashioned or questions that might be seen as answered. Information quality was a significant subject until the 2000s, but after that it was put aside in favor of subjects that became more important in the Information System (IS) field. The search for legitimation, which means access to research funding, led researchers to these new subjects, and information quality remained overlooked. Data-driven decision-making and policymaking certainly need to rescue it.

Resilience after health emergencies deserves to be more studied in the academic IS field, focusing especially on people capacities for scenario analysis in the aftermath and on the lacking information or decision-making support for pandemics.

Citizens' information during an emerging global health crisis is a new topic (Pan, Cui, & Qian, 2020), which researchers need to address better.

6. Implications for practice

The two cases show how crucial good and timely information for decision-making and data-driven policymaking is. Quality of information cannot be taken for granted as it requests integrated databases and the discontinuity of standalone ones. Demanding times like a global health emergency show the collapse of continuing working on silos and not understanding the citizen journey. Moreover, it is difficult to properly retrieve information when citizens are registered several times on different databases and in different information standards.

State capacity is necessary for proper information management and

to avoid the mere search of legitimation through fashionable IT solutions. Technologies to avoid this problem are well known and easily accessible. Another aspect to highlight is the necessity to immediately create of a Chief Information Officer position in the federal, state and municipal governments. This executive would be in charge of arranging the strategic information to execute public policies, to coordinate the efforts with the public IT companies, to understand the citizens and other stakeholders' journey, as well as the necessary information to meet their needs.

7. Final remarks

The goal of this paper was to discuss the effectiveness of the Brazilian COVID19 emergency program and which issues related to information management hindered its positive impact.

Severe information treating issues impeded lots of people who fulfilled the criteria to receive the aid, at the same time, that lots of people who were not supposed to get it ended up receiving it.

Investments in information management, data governance, data-driven policymaking are necessary. At the same time, the IS field might conduct studies on subjects such as information-related subjects, data governance, and resilience after health emergencies. State capacity is necessary for proper information management, provided when very demanding situations come up, the social price to be paid is very high, especially by those who need these aids the most.

Appendix A. Supplementary data

Supplementary material related to this article can be found, in the online version, at doi:<https://doi.org/10.1016/j.ijinfomgt.2020.102194>.

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