

Enrollment and eligibility process of Brazil's *Auxílio Emergencial*

Data processing and use of administrative registries

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Index

| | |
|--|----|
| Executive Summary | 11 |
| Introduction | 17 |
| 1. <i>Auxílio Emergencial</i> in three implementation cycles | 19 |
| 1.1. Progression of the benefit and the eligibility rules | 21 |
| 2. Registration | 23 |
| 3. Eligibility verification | 27 |
| 3.1. Institutional attributions | 30 |
| 3.2. Analytical database and eligibility engine | 33 |
| 4. Limits and possibilities for the use of administrative registers for eligibility verification | 39 |
| 4.1. Family identification, links and incomes in perspective | 45 |
| 5. Lessons learned for the future of social protection in Brazil | 49 |
| References | 53 |
| Attachment 1 | 57 |
| Databases used for record validation by available characteristics | 57 |

All conversions from BRL amounts into American dollars observed the 5.23 exchange rate. (Average value of the "domestic currency per US dollar, period average" calculated by the IMF (2021b) Between January 2020 and July 2021 –cut point for other data presented in the text–).

Index of figures

| | |
|--|----|
| Figure 1. Progression of <i>Auxílio Emergencial</i> eligibility criteria for AE1 (AE2020), AE2 (AER), EA3 (AE2021) | 22 |
| Figure 2. Institutional responsibilities for eligibility criteria verification | 31 |
| Figure 3. Eligibility verification flow | 33 |

Index of graphs

| | |
|---|----|
| Graph 1. Increase in the number of beneficiaries and instalment reference values for AE1 (AE2020), AE2 (AER), AE3(AE2021) | 21 |
| Graph 2. Ratio between applicants and eligible recipients (million people) – AE1 | 26 |
| Graph 3. Increase in the number of beneficiaries by inflow (million people) – AE1 (AE2020), AE2 (AER), AE3 (AE2021) | 26 |
| Graph 4. Increase in the number of databases used for eligibility verification AE1 (AE2020), AE (AER), AE3 (AE2021) | 40 |

Index of tables

| | |
|--|----|
| Table 1. General characteristics of AE1 (AE2020), AE2 (AER), AE3 (AE2021) | 20 |
| Table 2. Incremental list of databases used for eligibility verification | 40 |
| Table 3. Characteristics of the main Federal Government databases used to verify links and incomes for <i>Auxílio Emergencial</i> | 42 |
| Table 4. Databases used to validate eligibility, by identification, link and income criteria for AE1 (AE2020), AE2 (AER), AE3 (AE2021) | 47 |
| Table 5. Overview of <i>Auxílio Emergencial</i> challenges, recommendations and legacies | 52 |

Index of boxes

| | |
|---|----|
| Box1. Single Registry qualification routines: foundations of model developed during AE | 28 |
| Box 2. Installed capacities and structures in the National Social Information Registry (CNIS) | 30 |
| Box 3. Disputes over the mandatory requirement of an individual taxpayer (CPF) number | 36 |
| Box 4. Confidentiality and data privacy | 38 |

List of Acronyms

ACP – Ação Civil Pública – Public Civil Suit

ACT – Acordo de Cooperação Técnica – Technical Cooperation Agreement

AE – *Auxílio Emergencial*

AGU – Advocacia Geral da União – Office of the General Counsel to the Federal Government

AER – *Auxílio Emergencial Residual*

BB – Banco do Brasil – Bank of Brazil

BEm – Benefício Emergencial para Manutenção do Emprego e da Renda – Emergency Benefit for Employment and Income Maintenance

BNMP – Banco Nacional de Monitoramento de Prisões - National Bank for Prison Monitoring

CadÚnico – Cadastro Único para Programas Sociais do Governo Federal - Single Registry for Social Programs of the Federal Government

CAGED – Cadastro Geral de Empregados e Desempregados - General Registry of Employed and Unemployed Individuals

Capes – Coordenação de Aperfeiçoamento de Pessoal de Nível Superior - Coordination for the Improvement of Higher Education Personnel

CEF – Caixa Econômica Federal – Federal Savings Bank

CGU – Controladoria Geral da União – General Controller’s Office

CNIS – Cadastro Nacional de Informações Sociais – National Social Information Registry

CNJ – Conselho Nacional de Justiça – National Council of Justice

CNPq – Conselho Nacional de Desenvolvimento Científico e Tecnológico - National Council for Scientific and Technological Development

CPF – Cadastro de Pessoas Físicas - Individual Taxpayer Registry

DEPEN – Departamento Penitenciário Nacional – National Prison Department

DIRPF – Declaração de Imposto de Renda sobre Pessoa Física – Individual Income Tax Return

DPF – Polícia Federal do Brasil - Brazilian Federal Police Department

DPU – Defensoria Pública da União - Public Defender’s Office of the Federal Government

FA – Forças Armadas do Brasil – Brazilian Armed Forces

FCDO – Foreign, Commonwealth & Development Office

FGTS – Fundo de Garantia do Tempo de Serviço - Guarantee Fund for Length of Service

GFIP – Guia de Recolhimento do FGTS e de Informações à Previdência Social - Length of Service and Social Security Information

IBGE – Instituto Brasileiro de Geografia e Estatística – Brazilian Institute of Geography and Statistics

INSS – Instituto Nacional do Seguro Social - National Institute of Social Security

IRPF – Imposto de Renda da Pessoa Física - Individual Income Tax

LGPD – Lei Geral de Proteção de Dados - General Data Protection Law

LOAS – Lei Orgânica de Assistência Social - Social Assistance Organic Law

MC – Ministério da Cidadania – Ministry of Citizenship

MCI – Marco Civil da Internet - Internet Civil Law

MDM – Master Data Management

ME – Ministério da Economia – Ministry of Economy

MEI – Microempreendedor individual - Individual Micro-Entrepreneur

MJ – Ministério da Justiça – Ministry of Justice

MJSP – Ministério da Justiça de São Paulo - São Paulo Ministry of Justice

MP – Medida Provisória – Provisional Measure

MW – Salário-mínimo – Minimum Wage

NIT – Número de Registro do Trabalhador - Workers’ Registration Number

PASEP – Programa de Formação do Patrimônio do Servidor Público - Civil Servant Training Program

PBF – *Programa Bolsa Família*

PIS – Programa de Integração Social – Social Integration Program

RAIS – Relação Anual de Informações Sociais - Annual Listing of Social Information

RFB – Receita Federal do Brasil - Brazilian Internal Revenue System

SAGI – Secretaria de Avaliação e Gestão da Informação - Secretariat for Information Assessment and Management

SECAD – Secretaria Nacional do Cadastro Único - Single Registry National Secretariat

SEEU – Sistema Eletrônico de Execução Unificado - Unified Electronic System For Execution

SENARC – Secretaria Nacional de Renda de Cidadania - National Secretariat for Citizenship Income

SIAFI – Sistema Integrado de Administração Financeira - Staff Administration Integrated System

SIAPE – Sistema Integrado de Administração de Pessoal - Staff Administration Integrated System

SINPA – Sistema Nacional de Passaportes da Polícia Federal - National Passport System of the Federal Police

SIRC – Sistema Nacional de Informações de Registro Civil - National Civil Registration Information System

SISOBI – Sistema de Informações de Óbito - Death Information System

SP – São Paulo

STI – Sistema de Tráfego Internacional - International Traffic System

STI – Subsecretaria de Tecnologia da Informação - Under Secretariat for Technology and Information

STJ – Supremo Tribunal de Justiça – Supreme Court of Justice

SUAS – Sistema Único de Assistência Social - Single Social Assistance System

TCU – Tribunal de Contas da União – Federal Court of Auditors

TIC – Tecnologias de informação e comunicação - Information and Communication Technology

TJSP – Tribunal da Justiça de São Paulo – São Paulo Court of Justice

TRF1 – Tribunal Regional da 1ª Região - Regional Court - First Region

TRF4 – Tribunal Regional da 4ª Região - Regional Court - Fourth Region

TSE – Tribunal Superior Eleitoral - Higher Electoral Court

Executive Summary

In order to support the systematisation of institutional learning processes provided by the implementation of *Auxílio Emergencial* in Brazil and disseminate the best practices derived from the Brazilian experience to social policy operators and administrators in other developing countries, the World Bank headed up a study on the social protection response to the Covid-19 pandemic in Brazil. Financed by the Foreign, Commonwealth & Development Office (FCDO), which is linked to the Foreign Secretary of the Government of the United Kingdom, this study was conducted at the request and with the cooperation of the Brazilian Government. This project encompasses the preparation of a main Report covering the stages of the *Auxílio Emergencial*, together with four Technical Notes exploring specific implementation aspects in greater depth. One of them addresses registration and eligibility verification strategies, which form the subject of this text.

General aspects of the programme in three implementation cycles

AE1 or AE2020 – Rated as one of the world's fastest and most wide-ranging responses to the Covid-19 crisis, in April 2020 Brazil's *Auxílio Emergencial* (AE1) response approved the payment of three instalments with a baseline value of BRL 600.00 (US\$ 114.72) each to beneficiaries of the *Programa Bolsa Família* (PBF), persons over 18 years of age (except for teen mothers) with no formal active employment link, casual workers, individual micro-entrepreneurs, persons not receiving social welfare and social security benefits from the government (except for the PBF), who had not declared taxable income of more than BRL 28,559.70 (US\$ 5,560.74) in 2018, and with monthly per capita family incomes of up to half a minimum wage (BRL 522.50 or US\$ 99.90) or up to a total of three minimum wages (BRL 3,315.00 or US\$ 633.84). A cap of two benefits per family was established. For single-parent family structures supported by women, the amount of the allowance was BRL 1,200.00 (US\$ 229.44), and could rise to BRL 1,800.00 (US\$ 344.16), if this family structure included a second eligible member.

During this first implementation cycle, the *Auxílio Emergencial* encompassed up to 68.3 million direct beneficiaries, equivalent to 23% of the Brazilian population, reaching 56% of the population when including both direct and indirect beneficiaries (calculated to include all family group members). Before paying out the third and final instalment, the Brazilian Government authorised the extension of this programme for two months, thus reaching a total of five payments between April and August 2020.

AE2 or EA Residual – A further extension was granted in September 2020 through Provisional Measure N° 1,000, which authorised the payment of residual instalments (AE2) through to December this year. This Provisional Measure introduced a monthly review of eligibility status, lowering the benefit reference value by 50%. The number of direct beneficiaries fell to 56.8 million individuals.

AE3 or AE2021 – After a three-month gap (between January and March 2021), with Covid-19 infection rates persisting, while social and economic conditions deteriorated, *Auxílio*

Emergencial returned in April 2021 (AE3). With a further reduction in the amount of the instalments and more restrictive eligibility criteria, this coverage was limited to 39.4 million direct beneficiaries. The AE 2021 established a cap of only one beneficiary in each family, with the practical outcome of altering the programme reference unit to the family, moving away from its previous focus on the individual.

The justification is presented by the Brazilian Government for altering the eligibility rules and benefit values included the need to comply with State financing capacities and to focus the programme more tightly, due to the shift in its implementation timeframe.

General characteristics of AE1 (AE2020), AE2 (AER), AE3 (AE2021)

| | AE1 Auxílio Emergencial 2020 | AE2 Auxílio Emergencial Residual | Pause | AE3 Auxílio Emergencial 2021 |
|-----------------------------------|---|---|----------------------|--|
| | April – August 2020 | September – December 2020 | January – March 2021 | April – October 2021 |
| Regulation | Law N° 13,982/2020 Decree N° 10,316/2020 MC Edict N° 351/2020 Decree N° 10,412 | Provisional Measure N° 1,000/2020 Decree N° 10,488/2020 | | Provisional Measure N°1,039/2021 Decree N° 10,661/2021 MC Edict N° 620/2021 Decree N° 10,740 |
| Reference Value | 5 x BRL 600 (5 x US\$ 114.72) | 4 x BRL 300 (4 x US\$ 57.36) | | 7 x BRL 250 (7 x US\$ 47.80) |
| Income cap for eligibility | Per capita family income up to half MW OR total family income up to three MWs | Per capita family income up to half MW OR total family income up to three MWs | | Per capita family income up to half MW AND total family income up to three MWs |
| Family quota cap | 2 (possibility of single mother with the right to double benefit + another family member) | 2 (capped at two individual benefits or just one double benefit for single mothers) | | 1 (individual benefits only, with an extra BRL 125.00 for single mothers, and reduction of BRL 100 for single-person households) |
| Coverage | 68.3 million | 56.8 million | | 39.4 million |
| Budget | BRL 231 billion (US\$ 44.16 billion) | BRL 64 billion (US\$ 12.23 billion) | | BRL 43 billion (US\$ 8.22 billion) |

Elaboração dos autores com base em outras fontes (GoB, CGU 2021a; GoB, Min. Cidadania 2020a, 2021c, 2021f; GoB, Pres. da República 2020b, 2020f, 2020c, 2021e, 2021b, 2021a; Lara Lara Ibarra 2021; Yamasaki e Rodopoulos 2021).

Nota: Dados referentes a cobertura e orçamento do AE3 referem-se a informações consolidadas em julho de 2021.

Registration

Single Registry (Cadastro Único) – The selection of the public targeted by the *Auxílio Emergencial* was handled through three inflows. The first two are anchored on the Single Registry for Social Programs of the Federal Government, and are subdivided into beneficiaries and non-beneficiaries of the *Programa Bolsa Família* (PBF).

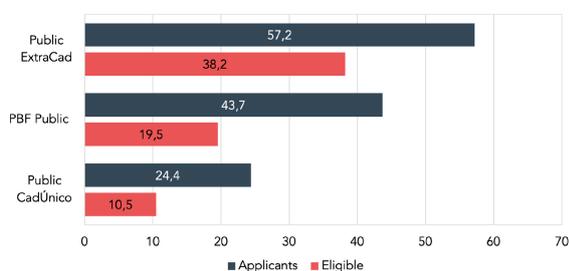
The 24 million people over 18 years of age who were listed on the Single Registry national database by August 2, 2020, non-beneficiaries of the *Programa Bolsa Família* (PBF), were considered to be automatic applicants for the new benefit. This group was assessed in compliance with the *Auxílio Emergencial* eligibility criteria. For the families already receiving the Bolsa Família (around 14 million of them, equivalent to 43.7 million people) the amount paid was replaced by the *Auxílio Emergencial*, in situations where this is deemed to be more advantageous.

Digital Registration – The third stream was underpinned enabled by a mobile application that targeted unregistered and self-employed workers impacted by the pandemic and whose profiles had not yet been addressed in the Single Registry.

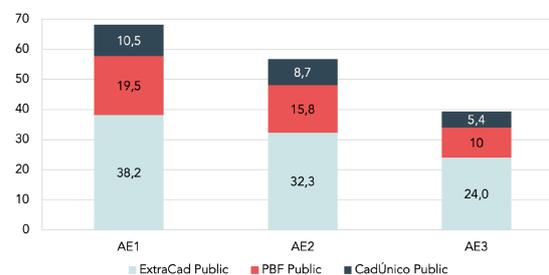
The app received 57.2 million requests¹, of which 38.2 million were considered eligible for AE1. This information gave rise to a new social registry, called ExtraCad. This is a database focused on individuals, but allows the configuration of family groups, as self-declared by its applicants through the registration software. This configuration is taken into consideration at the eligibility stage of the programme, for determining the number of benefits granted to each family. The merits of this database include the visibility conferred on segments of the population excluded from government databases until now.

However, registration restricted to digital media is one of the controversial aspects of *Auxílio Emergencial*, as it imposes immediate constraints on the portion of the population with no Internet access. Yet, the registration track record for vulnerable and ultra-vulnerable population segments and the Single Registry's active outreach to traditional populations help to extend the benefit to the digitally excluded. The possibility of assisted registration was offered at post offices, but with a very low take-up rate.

Ratio for applicants and eligible people (million people) – AE1



Increase in the number of beneficiaries by inflow (million people) – AE1, AE2, AE3



Prepared by the authors. Source: Portal Visdata <https://aplicacoes.mds.gov.br/sagi/vis/data3/data-explorer.php> (Braz. Gov., Min. Citiz. 2021).

Note I: The AE1 and AE2 data reflect monthly coverage peaks during these phases, while the EA coverage data reflect the monthly coverage peaks consolidated through to July 2021.

Note II: The number of applicants for the Single Registry (CadÚnico) and the Programa Bolsa Família (PBF) reflects the total number of sign-ups in April 2020.

¹ Data provided by the Single Registry National Secretariat (SECAD) of the Ministry of Citizenship.

Another controversial aspect is the centralisation of its implementation in the Federal Government, despite a robust structure providing care for vulnerable segments of the population through sub-national entities, under the aegis of the Unified Social Assistance System (SUAS), which was not formally included in the *Auxílio Emergencial* implementation strategy.

The submission of applications was limited to the first implementation cycle, whereby only applicants included in the previous cycle could be reviewed in AE2 and AE3.

Eligibility verification

All applications were run through an eligibility verification process, based on cross-referencing information provided by the applicants with government databases. This process was coordinated by the Ministry of Citizenship, with the direct involvement of the Single Registry National Secretariat (SECAD), the National Secretariat for Citizenship Income (SENARC) and the Under Secretariat for Technology and Information (STI). Data processing is handled by the Social Security Technology and Information Company (Dataprev). The Federal Court of Auditors (TCU) and the General Controller's Office (CGU) provide support for part of this process through oversight and control tracking, requests for suspensions and cancellations, and also by database sharing.

Although incipient experiences of registry verification are already underway in the *Programa Bolsa Família*, the *Auxílio Emergencial* ushered in a procedural change for the PBF, which does not require cross-checks between administrative records for granting the benefit. The controls currently applied to the Single Registry and the PBF include the actions of a decentralised welfare network – the Unified Social Assistance System (SUAS) – as well as in-person interviews and home visits, in addition to review and verification strategies applied periodically to the Single Registry database.

Analytical database

An Analytical Database obtained from the CNIS (National Social Information Registry) with information on more than 250 million Individual Tax (CPF) numbers was the resource used by Social Security Technology and Information Company (Dataprev) to run eligibility checks on AE1, AE2 and AE3 applicants. This base serves as a gateway to the programme's data infrastructure, consolidating information from the current 42 administrative registers used in the cross-checks.

In operating terms, a processing engine locates Individual Taxpayer (CPF) numbers of *Auxílio Emergencial* applicants in this database, and assesses whether they comply with all the eligibility stages. Each stage is covered by an exclusion/inclusion rule, returning a binary yes or no answer. The final composition of these answers defines an applicant's eligibility or ineligibility. The same applies to the monthly benefit review.

The processing handled by this database is automated, except for data updating, which requires the most recent information to be included at the start of each period.

Databases

The starting point of the Analytical Database is the National Social Information Registry (CNIS), to which external administrative records have gradually been added, some of which are under decentralised management.

The choice of the CNIS is strategic. In addition to ample coverage, the administrative records that constitute it have consistent data management and validation mechanisms, which enhances the confidence level of the results.

The absence of a national identity system that could constitute a unique data processing key was remedied through the use of the Individual Taxpayer Registry (CPF), together with other data on civil and labour documentation already on record with the CNIS. However, the registration requirement of providing Individual Tax (CPF) numbers was apparently questioned, due to the constraints imposed on vulnerable segments of the population by the need to obtain and regularise this document.

By defining a verification strategy that relies on other databases, *Auxílio Emergencial* presumes, with some margin of error, that these databases can portray reality. This assumption proved valid to some extent, although also highlighting one of the most sensitive points of this operation: outdated records.

The eligibility verification experience of the *Auxílio Emergencial* shows that even the most consolidated databases have limitations, especially when subjected to new uses and when tested on such a large scale as that required for *Auxílio Emergencial*. Among the main bottlenecks identified are:

- latency of updated information, resulting from different time frames for administrative records;
- outdated records in some of the administrative registers;
- difficulties in accessing information on state, district and municipal civil servants, who have Special Social Security Systems (RPPS) and do not transmit information regularly to the CNIS;
- lack of integration among administrative records for civil servants with the Legislative and Judiciary Branches, and the Brazilian Armed Forces;
- absence of information on family composition that, among other aspects, imposes limits on the verification of the arrangements indicated by applicants at the time of registration;
- absence of information on unregistered workers; and
- limitations on the information available on the incomes of self-employed workers.

Part of the difficulties encountered during eligibility verification were and continue to be addressed by the information provided by data available at the CNIS which, together with the Analytical Database, allows decisions to be made on conflicting information, in order to select the most reliable data. Calculations able to minimise the impact of delays in the finalisation of employment links and the inclusion of income predicting variables based on assets and consumption shown in Individual Income Tax declarations are added to the alternatives used by the *Auxílio Emergencial* management.

The contrast between the objectivity of the registration form submitted through the app and the complex verification system set up to validate *Auxílio Emergencial* applications is also worth mentioning. If, on the one hand, the applicant was invited to provide the minimum information required for their application, on the other hand, this same information continues to run through a detailed scrutiny that involves cross-referencing with the largest volume of information ever used to grant access to a social protection measure in Brazil.

Lessons learned

Auxílio Emergencial benefits from a previous structure already in place within Brazil's social safety net system, particularly the Single Registry, the *Programa Bolsa Família* and the CNIS. The expertise brought up over decades and an already consolidated technical apparatus were absorbed by the AE, providing the conditions needed for its implementation.

The programme also ushered in countless innovations, which leave significant institutional lessons for social protection policies in Brazil and elsewhere in the world, particularly with regard to the limits and possibilities of using digital resources to reach out to vulnerable segments of the population, large-scale registration strategies, and processing large volumes of information. It also leaves material progress in interoperability among government databases.

Its legacies include new social registry with information on more than 38 million individuals and an Analytical Database with information on more than 250 million Individual Tax (CPF) numbers and 42 administrative records.

Given the challenges identified during the *Auxílio Emergencial* implementation, some recommendations are relevant for the Brazilian Government, also inspiring other developing countries that have adopted or wish to adopt similar measures:

- the combination of digital strategies with in-person service channels, for both registration and in questioning eligibility results, including mainly the SUAS social welfare network;
- the adoption of clear and straightforward communications with users, providing for information on granting or denying the rights sought;
- investment in strategies that make it easier for users to request changes to their data in the administrative records;
- investment in qualification mechanisms of the data collection, management and storage media;
- definition of threshold quality standards for the use of administrative records as a means of verifying eligibility;
- investment in transactional models of interaction among databases;
- expansion and updating the social and economic information collected by ExtraCad and the resulting inclusion of the public addressed by these records, in the scope of action for Brazil's social safety net; and
- investment in data protection and confidentiality strategies along the lines proposed by the General Data Protection Law (LGPD), promulgated through Law N° 13,709 on August 14, 2018 and becoming fully effective on August 2, 2020.

Introduction

In response to the social and economic crisis triggered by the Covid-19 pandemic, the Brazilian social safety net system implemented a set of actions aimed at the extremely poor and unregistered workers. Although it is not yet possible to measure the real impacts of the Covid-19 pandemic, it is already known that they extend way beyond health issues, permeating and significantly undermining many different aspects of social and economic dynamics, particularly burdening the most vulnerable. In Brazil, the pandemic has deepened the vulnerability of a portion of the population still suffering from the effects of the economic crisis that began in 2014, with progressively worse levels of inequality and utter poverty during the past five years (Lara Ibarra 2021; World Bank Group 2020).

Despite a polarised political context and the conflicts between the Federal Government and the sub-national entities over the coordination of measures intended to combat the coronavirus (Machado 2021), Brazil's social safety net system was able to offer a vigorous response in support of this population. A set of well-oiled actions succeeded in expanding assistance offered to the very poor, helping mitigate the repercussions of the pandemic on rising numbers of unregistered workers.

Among the steps taken by the Federal Government, *Auxílio Emergencial* is the most prominent², reaching out to more than 68 million people in 2020 alone. Characterised as an exceptional and temporary income transfer measure, this programme targeted the beneficiary families of the *Programa Bolsa Família* (PBF) and unregistered workers, either self-employed or with no active formal employment link (no workbooks) who meet the income criteria. Supported by structures already available for the implementation of social welfare programmes under the Ministry of Citizenship such as the Single Registry (Cadastro Único), *Auxílio Emergencial* reached 68.3 million direct beneficiaries between April and December 2020, equivalent to 32% of the Brazilian population, and encompassing 56%³ of Brazilians when considering its direct and indirect beneficiaries⁴. This impressive coverage ranks Brazil's pandemic response fifth worldwide, in absolute terms. With a variation of 140% over the average amount paid out under the *Programa Bolsa Família* (PBF), Emergency Aid also stands out among the most generous grants (Gentilini, Almenfi, and Dale 2020). This experience is also noteworthy for its streamlined payments, which began 27 days after the initial social isolation measures, ranking it sixth for this aspect among 53 low- and medium-income countries (Beazley, Marzi, and Steller 2021).

2 Additional measures allowed the horizontal expansion of the *Programa Bolsa Família* (Provisional Measure N° 929, promulgated on March 25, 2020), resulting in the inclusion of 1.2 million new registrations, the easing of the eligibility criteria for the Continuous Cash Benefit (BPC) and the anticipation of the payment of this benefit to applicants awaiting approval of their applications (Joint Edict N° 3, promulgated on May 5, 2020) (GoB, Min.

Cidadania/INSS 2020; GoB, Pres. da República 2020e). But the context ushered in by the pandemic forced the expansion of the protective responses offered by policies already in place, such as the Program Bolsa Família and BPC. In this context, in addition to *Auxílio Emergencial*, the Emergency Benefit for Employment and Income Maintenance (BEM) was approved by Law N° 4,020, promulgated on July 6, 2020), aimed at segments of the population at imminent risk of losing their jobs.

3 Data taken from the Visdata Applications Panel – *Auxílio Emergencial*. Available at: <https://aplicacoes.mds.gov.br/sagi/vis/data3/?g=2>. Accessed on August 6, 2021.

4 When including all the members of the household with at least one member eligible for *Auxílio Emergencial*.

Beginning in April 2020 and with this implementation planned for three months, the programme went a series of extension stages, characterised by the adoption of more restrictive selection criteria and reductions in the number of beneficiaries. Stubbornly high infection rates and unstable employment, income and working conditions extended *Auxílio Emergencial* over an initial cycle of nine months, between April and December 2020. After three-month gap (from January to March 2021), payments resumed in April this year for another cycle, scheduled to end in October 2021. Changes in the rules and eligibility criteria during its implementation have imposed constraints on coverage and cut back on the amounts initially paid out. The base benefit of BRL 600.00 (US\$ 114.72) per person was constantly tweaked, dropping to BRL 250.00 (US\$ 47.80) in 2021, when the number of direct beneficiaries fell to 39.3 million people.

The possibility of incorporating a model similar to *Auxílio Emergencial* has prompted sweeping discussions in the social protection field in Brazil, spotlighting the challenges and possibilities of digital registration strategies and the use of administrative records as a means of eligibility verification. Among the many aspects related to the implementation of the *Auxílio*, mechanisms for accessing target publics have spurred in-depth discussions within the civil service and elsewhere, especially over the possibility of using similar models for implementing non-emergency policies. The adoption of a more inclusive protective response during the pandemic raised a challenge for the Brazilian State: identifying a public that is not only more inclusive, but is also not encompassed by the official labour market records. A complex chain of procedures has been developed in response to this need, including strategies that combine registration with subsequent eligibility criteria verification through cross-referencing different administrative records. In an experiment that involved the use of more than forty databases, *Auxílio Emergencial* makes it clear that trustworthy information is vital for identifying more vulnerable groups and their needs. The innovations and constraints are displayed during this process are extending discussions on strategies for registration, qualifying registration data and interactions among different information systems.

These and other aspects are addressed by an *Auxílio Emergencial* research agenda funded by the Foreign, Commonwealth & Development Office (FCDO), which is a government agency linked to the UK Foreign Secretary, implemented by the World Bank at the request of the Brazilian Government. The purpose is to support the systematisation of institutional learning by the civil service in Brazil, while also disseminating best practices drawn from the Brazilian experience to the managers and operators of social policies in other developing countries, particularly in Africa. This project includes the preparation of a main Report that covers all the *Auxílio Emergencial* stages, together with four Technical Notes that go deeper into specific aspects, one of which is access strategies and records verification. This is the subject of this text, which also strives to shed light on operating issues that are often left in the background during programme analyses.

The findings shared in this document are the outcomes of a document analysis and interviews with key actors, engaging 63 people from the operating and management areas of eleven different institutions, among which the Ministry of Citizenship and the Social Security Technology and Information Company (Dataprev) are particularly noteworthy. The document is organised into five sections, deepening discussions on the registry verifications for *Auxílio Emergencial* beneficiaries. In doing so, it imposes a cut-off point for the wider design of the programme. Consequently, several other equally important elements are not presented for consideration. For a more complete analysis, we recommend reading the main Project Report⁵, which also offers details of the methodology used in the study.

⁵ World Bank (2021). *Auxílio Emergencial: lessons from Brazil's flagship social protection response to the COVID 19 crisis*.

1. *Auxílio Emergencial* in three implementation cycles

Launched in April 2020, the first implementation cycle of the *Auxílio Emergencial* scheme guaranteed the payment of five instalments with a baseline value of BRL 600.00 (US\$ 114.72) to *Programa Bolsa Família* beneficiaries and people with no registered labour links and a total family income of no more than three minimum wages or half a minimum wage per capita. The *Auxílio Emergencial* proposal was presented through Draft Bill N° 1,066 on March 30, 2020. With the enactment of Law N° 13,982, promulgated on April 2, 2020, a monetary allowance of BRL 600.00 (US\$ 114.72) was established, payable to persons over 18 years of age (except teen mothers) who met pre-established employment link and income criteria, capped at two benefits per family. For single parent households supported by women, the allowance rose to BRL 1,200.00 (US\$ 229.44), and could reach BRL 1,800.00 (US\$ 344.16) for households with a second eligible member. Eligible individuals were people with no an active registered employment links, unregistered workers, individual micro-entrepreneurs, people not receiving government welfare and social security benefits (other than the *Programa Bolsa Família* – PBF), who had not declared any taxable income of more than BRL 28,559.70 (US\$ 5,460.74) in 2018, and with monthly family incomes of up to half a minimum wage per capita or up to three minimum wages in total (GoB, Min. Cidadania 2021c). The benefit was extended to beneficiaries of the *Programa Bolsa Família*, whenever the *Auxílio Emergencial* was viewed as more advantageous⁶. The initial proposal was for a benefit paid out in three instalments between April and June 2020, later extended to five instalments with the promulgation of Decree N° 10,412 on June 30, 2020, keeping the same amounts and selection criteria. This first round of payments was known as AE2020 or AE1.

Promulgated on September 2, 2020, Provisional Measure N° 1,000 authorised the payment of residual instalments through to December that year, with a 50% reduction in the Reference Value. While the first implementation cycle defined the receipt of a fixed number of five instalments, *Auxílio Emergencial* Residual (AER or AE2) had a variable number of instalments, depending on the date of the first AE1 payment. Thus, applicants eligible in April, when the first payments were made, were entitled to four residual instalments. Beneficiaries who joined the programme later, in August for example, were not affected by AE2, as the five AE1 instalments would be paid out through to December 2020. This new implementation cycle brought additional changes to the eligibility conditions. The cap of two beneficiaries per family was maintained, but female-headed households (entitled to a double benefit), could no longer have a second eligible member, as permitted for AE1. The amount of the benefit was also lowered, down by 50%. The Reference Value of BRL 600.00 (US\$ 114.72) was cut to BRL 300.00 (US\$ 57.36).

After a three-month gap (between January and March 2021), with Covid-19 infection rates stubbornly refusing to yield, while social and economic conditions deteriorated, *Auxílio Emergencial* resumed in April 2021, with a further reduction in the amount of the instalments. *Auxílio Emergencial* 2021 (AE3) was regulated by Provisional Measures N°

⁶ The *Programa Bolsa Família* does not allow two benefits cumulatively per household, upholding the logic of the family benefit concept, with the Head of Household (HoH) as the recipient.

1,037, N° 1,038 and N° 1,039 issued on March 18 (GoB, Pres. da República 2021c, 2021d, 2021e). Provisional Measure N° 1,039 updated the rules for granting the benefit, while the others authorised extraordinary credit lines in the government budget. The baseline value of the instruments in this third round of payments was lowered to BRL 250.00, except for single-parent families with female breadwinners, where it reached BRL 375.00. For single-person households, it fell to BRL 150.00, with a new cap of only one beneficiary per family. In practice, this altered the unit of reference from the individual to the family, following in the footsteps of the *Programa Bolsa Família*. Provisional Measure N° 1,039 established the payment of four instalments, extended without seven through Decree N° 10,740, promulgated on July 5, 2021, which extended AE3 for an additional three months, while upholding the same rules and amounts already established in Provisional Measure N° 1,039.

Table 1. General characteristics of AE1 (AE2020), AE2 (AER), AE3 (AE2021)

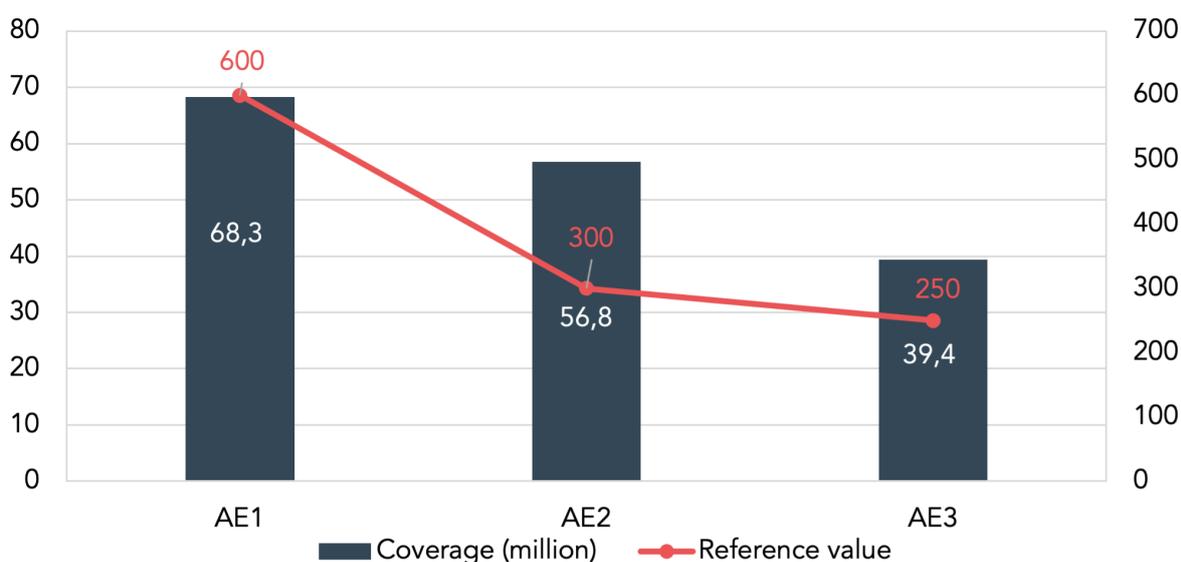
| | AE1 Auxílio Emergencial 2020 | AE2 Auxílio Emergencial Residual | Pause | AE3 Auxílio Emergencial 2021 |
|-----------------------------------|---|---|----------------------|--|
| | April – August 2020 | September – December 2020 | January – March 2021 | April – October 2021 |
| Regulation | Law N° 13,982/2020 Decree N° 10,316/2020 MC Edict N° 351/2020 Decree N° 10,412 | Provisional Measure N° 1,000/2020 Decree N° 10,488/2020 | | Provisional Measure N° 1,039/2021 Decree N° 10,661/2021 MC Edict N° 620/2021 Decree N° 10,740 |
| Reference Value | 5 x BRL 600 (5 x US\$ 114.72) | 4 x BRL 300 (4 x US\$ 57.36) | | 7 x BRL 250 (7 x US\$ 47.80) |
| Income cap for eligibility | Per capita family income up to half MW OR total family income up to three MWs | Per capita family income up to half MW OR total family income up to three MWs | | Per capita family income up to half MW AND total family income up to three MWs |
| Family quota cap | 2 (possibility of single mother with the right to double benefit + another family member) | 2 (capped at two individual benefits or just one double benefit for single mothers) | | 1 (individual benefits only, with an extra BRL 125.00 for single mothers, and reduction of BRL 100 for single-person households) |
| Coverage | 68.3 million | 56.8 million | | 39.4 million |
| Budget | BRL 231 billion (US\$ 44.16 billion) | BRL 64 billion (US\$ 12.23 billion) | | BRL 43 billion (US\$ 8.22 billion) |

Prepared by the authors and from other sources (GoB, CGU 2021a; GoB, Min. Cidadania 2020a, 2021c, 2021f; GoB, Pres. da República 2020b, 2020f, 2020c, 2021e, 2021b, 2021a; Lara Lara Ibarra 2021). Note I: The cap of two benefits per family under AE1 and AE2 was not valid for the Bolsa Família segment. Note II: Data on the AE3 coverage and budget refer to information consolidated in July 2021.

1.1. Progression of the benefit and the eligibility rules

More stringent selection criteria shrank the number of beneficiaries by 40% between AE1 and AE3. During the same period, the reference value for the instalments paid out fell by 58%. The progression of the eligibility rules led to the gradual adoption of more restrictive inclusion criteria. In addition to capping the number of quotas per family, per capita or total family incomes are also mentioned as an alteration with significant potential impacts on the number of beneficiaries. In 2020, during the first two rounds, applicants could earn family incomes of up to half a minimum wage per capita OR a total family income of up to three minimum wages. In AE3, the per capita and total income limits became concomitant, so that applicants could have incomes up to half a minimum wage AND total family incomes of up to three minimum wages. These and other alterations described in Figure 2 led to a drop of around 40% in coverage between AE1 and AE3. During this same period, the benefit Reference Value shrank by 58%. Justification is presented by the Federal Government for this reduction include the purported need to align with State financing capabilities and keeping public debt under control. On this point it is worth mentioning the steady shrinkage in the budget allocations for this programme: down from BRL 231 billion (AE1) to BRL 64 billion (AE2) and finally BRL 43 billion (AE3)⁷.

Graph 1. Increase in the number of beneficiaries and instalment reference values for AE1 (AE2020), AE2 (AER), AE3(AE2021)



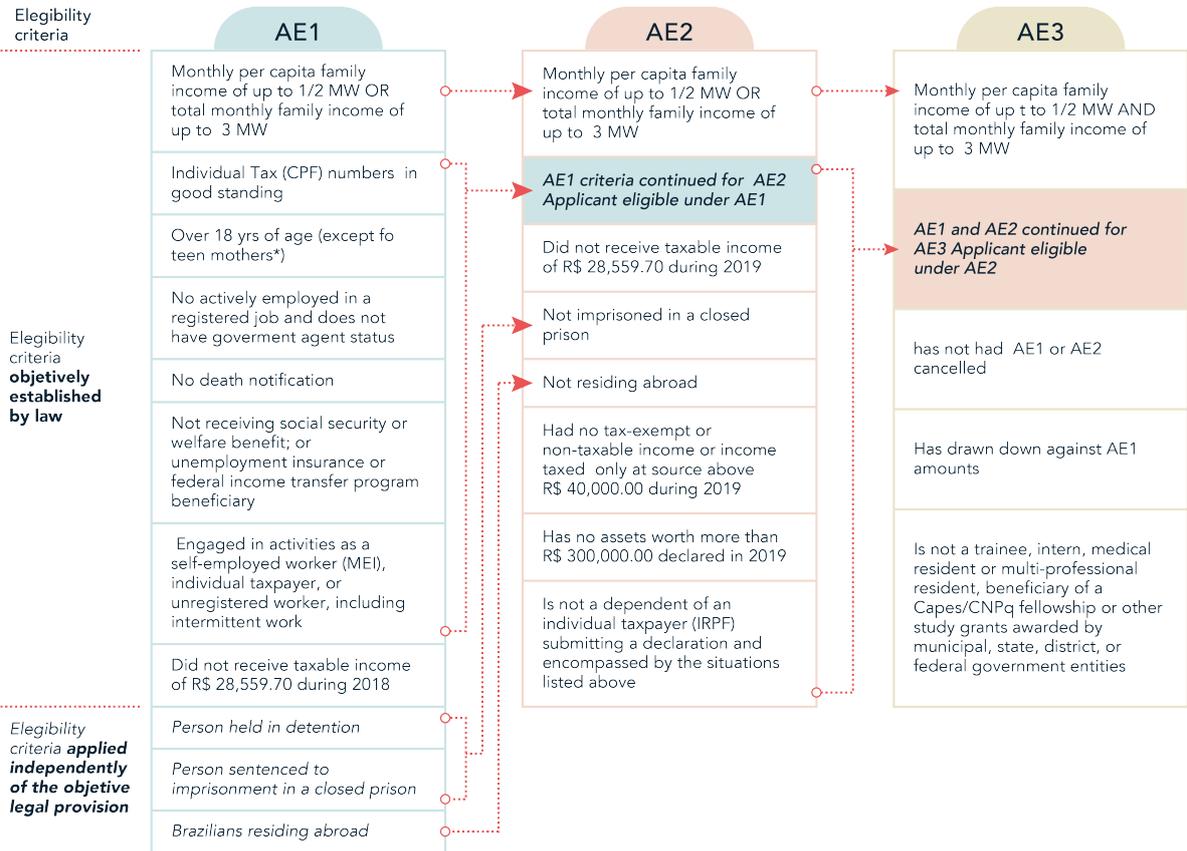
Prepared by the authors. Based on sundry sources (GoB, CGU 2021b; GoB, Min. Cidadania 2021a, 2021b, 2021c; Lara Ibarra 2021; Yamasaki e Rodopoulos 2021).

Note: Data on the AE3 coverage and budget refer to information consolidated in July 2021.

⁷ It is important to bear in mind that, as explained in the Summary Note of this Project, Constitutional Amendment EC N° 106, dated May 7, 2020, relaxed the rules on the control of public spending until year-end 2020, introducing what was called the War Budget and stressing the exemption from compliance with the legal provisions that forbid financial income arising from indebtedness (credit transactions) to exceed capital expenditures -investments, financial investments and debt amortisation (Rule of Other)-. With the expiration of the War Budget in December 2020, a similar measure was approved through Constitutional Amendment EC N° 109 (GoB, Congresso Nacional 2021), which regularised credit operations that had already exceeded capital expenditures by 7.45% by June 2021 (GoB, Tesouro Nacional 2020). For further details on the budgetary issues arising from *Auxílio Emergencial*, see the main Project Report.

After a comprehensive initial response to the crisis, constant changes in the Auxílio Emergencial eligibility criteria sought to enter this programme with a tighter focus and greater effectiveness. The three *Auxílio Emergencial* implementation cycles are major milestones for the review of the programme and consequently the eligibility criteria. But the managers and technicians interviewed in this study indicate a faster pace of change in these rules. Some were established throughout the implementation and subsequently reflected in edicts and decrees – a trend that was most apparent during AE1 (Figure 1). Adaptations were predictable and expected, given the record-breaking timeframe for benefit payments and the need to make the selection processes more efficient, including in terms of its focus. However, the persistence of the crisis prompts discussions over the impacts of restrictive alterations on vulnerable segments of the population. Indeed, the pace at which these changes occurred helped undermine procedural stability, leading to difficulties in automating eligibility verification routines.

Figure 1. Progression of Auxílio Emergencial eligibility criteria for AE1 (AE2020), AE2 (AER), EA3 (AE2021)



Source: Prepared by the authors from the reference legislation mentioned in Table 1 and the Business Rules documents of the Social Security Technology and Information Company (Dataprev) (GoB, Dataprev 2020a, 2020b, 2021c).

2. Registration

The target audience for the programme was selected on the basis of three distinct inflow streams. The first two are based on the Single Registry and are subdivided into beneficiaries and non-beneficiaries of the *Programa Bolsa Família* (PBF). The main tool for the identification and characterisation of families in situations of social and economic vulnerability in Brazil, the Single Registry for Social Programmes run by the Federal Government was the starting point for the *Auxílio Emergencial* registration strategy. The 24 million people over 18 years of age listed in the Single Registry national database by April 2, 2020 who were not beneficiaries of the *Programa Bolsa Família* (PBF), were ranked as automatic applicants for the new benefit. This group was assessed against the *Auxílio Emergencial* eligibility criteria. The date defines the time the data was extracted from the Single Registry, which remained static for the purposes of granting *Auxílio Emergencial* until AE3. This means that families added to the Single Registry after April 2, 2020 cannot be considered as automatic applicants for the benefit, and it was up to their members to apply through the app until the deadline of July 2 this year (when the registration window closed).

For families that were already beneficiaries of the *Bolsa Família* (around 14 million, equivalent to 43.7 million people), the amounts paid out were replaced by *Auxílio Emergencial*, in situations where this was considered more advantageous.

The third inflow was underpinned by digital registration through a mobile phone app developed by the Federal Savings Bank (CAIXA – Caixa Econômica Federal). The magnitude of the turmoil caused by the pandemic revealed another group of vulnerable people: a mass of unregistered workers not protected by social security but not eligible for income transfer measures although bordering on the poverty line, and still lacking profiles targeted by the Single Registry. Identifying this public was one of the main challenges to the implementation of *Auxílio Emergencial*. The solution presented by the Brazilian Government was the creation of an online registration platform, accessed by mobile phone.

This registration app was made available through the main virtual stores, with more than 115 million downloads (GoB, Agência Brasil 2020). An agreement between the Brazilian Government and telecoms operating in Brazil allowed this platform to be used free of charge. Consequently, the CAIXA was able to lower access costs, in addition to offering a lightweight tool that could be used by even the simplest smartphones. The app also had the advantage of automatic updates, with no for requests, endowing the system with a rapid pace of improvement during the first month of the programme, with ten versions delivered to users with no software update requests.

Just over 38 million people were selected remotely, giving rise to a new social register. Remote registration led to just over 57 million application uploads⁸, of which 38.2 million were rated as eligible for AE1. This information gave rise to a new social register, called ExtraCad.

⁸ The number of applicants was made available directly by the Single Registry National Secretariat (Secad) at the Ministry of Citizenship. Other information was taken from the Visdata Applications Panel – *Auxílio Emergencial*. Available at: <https://aplicacoes.mds.gov.br/sagi/vis/data3/?g=2>. Accessed on August 6, 2021 (GoB, Min.Cidadania 2021).

This database confers visibility on a portion of the population about which very little was known until then, but with significant constraints regarding social and economic characterisations. The profile of the target public of this registry, with an average education level equivalent to primary schooling (Gonzales, Barreira and Pereira, undated), the need for a rapid response, and a form designed for self-completion, all led to the definition of a simplified data collection tool limited to basic information on personal identification, income, work activity and family composition⁹.

Limited registration to the app raised an immediate barrier for part of the 44 million Brazilians (21% of the population) with no Internet access, particularly those in less privileged social and economic situations. The premise of simplification guiding the definition of this new registration model has at least two negative aspects. One is the Internet access barrier raised right from the start for 21% of the population (CGI.br, 2019). In classes C, D and E, exclusion levels reach 43%, clearly reflecting how social and digital inequalities are reinforced (CGI.br, 2019). It is a fact that the pandemic has stepped up the use of online media, as several platforms in different areas are offering alternative ways of dealing with social distancing. According to data from the -Information and Communication Technology (TIC) COVID Panel (2021), the upsurge in the use of digital public services was more marked precisely in classes C, D and E. But this movement is still far from being evenly distributed and to an even greater extent from offering the necessary connectivity conditions needed for mass access strategies that are intended to be fully digital. Even if digital tools are widely disseminated, consideration must still be given to difficulties in coping with these platforms, especially in generational terms.

Some of these access barriers were surmounted by the decision on the automatic inclusion of *Auxílio Emergencial* applicants already listed on the Single Registry. It was thus possible to reach out more easily to exactly the most vulnerable sectors, as 53% of the people registered are in families with per capita household incomes of up to BRL 89.00 (US\$ 17.01). This is the Reference Value for inclusion in the *Programa Bolsa Família*, which is below 10% of the minimum wage paid in January 2021 (BRL 1,100.00 or US\$ 210.32). Furthermore, earlier active searches of traditionally ultra-vulnerable groups that – such as people living in the street, indigenous people and the residents of old runaway slave communities (quilombolas), also contributed to the inclusion in the programme of some of the digitally excluded.

Specialists argue that hurdles to accessing technology could have been surmounted by the participation of the social welfare network during registration. However, constraints on Internet access are related to another controversial point in the implementation of *Auxílio Emergencial*: its implementation is centralised with the Federal Government, despite a robust care structure reaching out to vulnerable segments of the population through the sub-national entities under the Unified Social Assistance System (SUAS), underpinned by the experience built up by this structure in the management of the Single Registry and the *Programa Bolsa Família* (PBF). Experts argue that the formal participation of social welfare entities could have resolved difficulties related to accessing technology (Barros and Machado 2021), among other

⁹ The app requested the following information: a) declaration of compliance with programme eligibility criteria and declaration of authorisation to use personal data for eligibility criteria validation; b) personal identification (name, Personal Tax CPF N°, date of birth, and mother's name); c) mobile phone number and carrier; d) income and professional activity; f) State, city of residence and Zip Code (CEP) of residence; g) number of household members and their respective Personal Tax CPF N°s, dates of birth and degrees of kinship; h) current bank account for benefit transfer (if the applicant already has an account in their name), i) civil identification document (identity card or driving license) for opening a Digital Social Savings Account (PSD); j) verification of the summary of the information declared and declaration of consent to the terms of the programme. These registrations gave rise to an individual-based registry, but with the possibility of configuration into family groups, based on declarations of the number of household members and their respective personal identification data. This configuration was checked at the eligibility stage to determine the number of benefits granted to each family. Source: Tutorial online de cadastramento da CAIXA, accessed on August 23, 2021 (GoB, Caixa Econ. Fed. 2020).

aspects. In actual practice, municipal agents mobilised in many places in improvised ways in order to reach out to this clientele, although interactions with the Federal Government was absent throughout this process¹⁰.

Faced by the heavier impacts of these constraints on ultra-vulnerable segments of the population, the possibility of in-person registration was opened up through an assisted registry, totally 11,312 eligible people. This listing was handled by the Brazilian Posts and Telegraph Company (Post Office), whose choice was justified by its nationwide capillarity. Using an alternative system developed by the Social Security Technology and Information Company (Dataprev), this channel received a total of 14,554 applications, of which 11,312 were rated as eligible for the programme (GoB, Min.Cidadania 2021c; GoB, TCU 2020d) which is a clearly residual figure compared to the 68.3 million beneficiaries reached in 2020. This almost unplanned scheme was launched only in June, with a registration timeframe of less than thirty days, which helps explain this unimpressive outcome. However, it is also important to recall that Post Offices are not usually frequented by vulnerable segments of the population, which may have raised resistance among part of this public who found it hard to recognise these agencies as a place of support, with Post Office clerks finding it hard to provide the necessary assistance, due to a lack of proper training. It seems likely that running the scheme through the SUAS care network would have ensured better access to ultra-vulnerable people and increase the number of assisted applications, as active outreach and supplies of services to the most vulnerable are precisely the responsibilities of the social welfare oversight entities (GoB, Min. Cidadania 2012)¹¹.

Applications submitted over the Internet through the App were limited to the first three months of the AE implementation, between April 7 and July 2, 2020. The App remained available for adjustments until October 17, 2020, but only for alterations to applications already submitted. Both the *Auxílio Emergencial* Residual (AE2) and the 2021 versions (AE3) of the Programme were run with no possibility of including new applicants. Eligibility criteria were reviewed for granting the AE2 and so then the AE3 only for applicants already rated as eligible for AE1.

Keeping a database of applicants closed to new registrations through both the mobile app and the Single Registry is one of the controversial points of the Programme. This characteristic was particular attention when it involves the implementation of an emergency measure in a crisis situation, precisely when social dynamics are more subject to unexpected shifts. Technical arguments, presented by the Federal Government strive to justify this decision. They include the award coverage achieved during the AE1 stage that, as already mentioned, assisted 68.3 million people, receiving more than 150.6 million applications¹². Although these applications cannot be transposed directly into individuals – as a person may submit more than one application – the figures help put each of the initial registration drives into perspective, compared to Brazil’s total population of 211 million, according to IBGE estimates for 2020. Another aspect stands out in the discourse on constraints during the application period: granting the benefit required clustering into family groups that could be denied, should further

10 The main Report on the Project offers examples of this mobilisation in municipalities. Technical Note N° 3 of this project discusses cross-state links at the nationwide level in greater depth, within the *Auxílio Emergencial* implementation context.

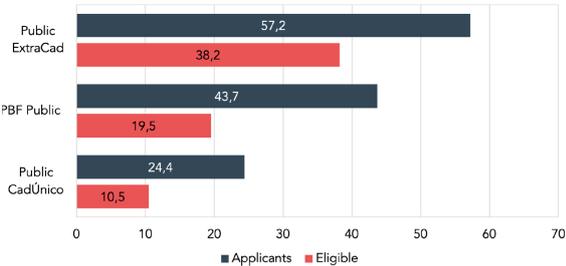
11 Further details on channels of communication established with ultra-vulnerable segments of the population, as well as the “voluntary” participation of the SUAS in this *Auxílio Emergencial* implementation stage may be accessed in the main Report of the Project.

12 The number of 150.6 million applications in all three inflows was provided directly by the Single Registry National Secretariat (Secad) at the Ministry of Citizenship during the interviews.

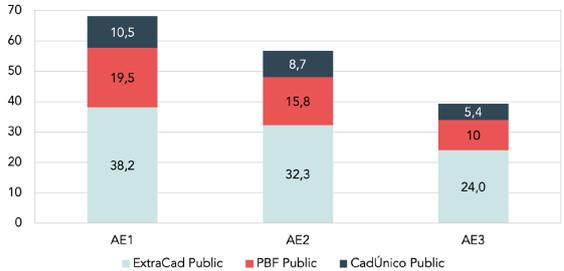
applications be submitted. The complexity involved in restoring or setting up new family groups would be close to reassessment at the very start of registration, thus undermining the feasibility of the process.

The analysis of the different inflows underscores the prevalence of the ExtraCad public in terms of individual (direct) beneficiaries. In AE1 and AE2, 56% (38 million) of the direct beneficiaries originated from the ExtraCad registry. The remaining 44% were distributed between *Programa Bolsa Família* (PBF) beneficiaries (29% or 19.5 million) and the Single Registry of Bolsa Família non-beneficiaries (15% or 10.5 million). This trend continues in AE3 with 61% (24 million) ExtraCad beneficiaries, 13% (5.3 million) not PBF beneficiaries on the Single Registry, and 26% (10.1 million) beneficiaries of the *Programa Bolsa Família* (PBF).

Graph 2. Ratio between applicants and eligible recipients (million people) – AE1



Graph 3. Increase in the number of beneficiaries by inflow (million people) – AE1 (AE2020), AE2 (AER), AE3 (AE2021)



Prepared by the authors. Source: Portal Visdata <https://aplicacoes.mds.gov.br/sagi/vis/data3/data-explorer.php> (GoB, Min.Cidadania 2021).

Note I: The data for AE1 and AE2 reflect monthly coverage peaks during these phases, while the AE3 coverage data show the monthly coverage peaks consolidated in July 2021.

Note II: The number of applicants on the Single Registry and the Programa Bolsa Família (PBF) refer to the total number of registrations in April 2020.

Looking at the family unit (direct and indirect beneficiaries), the Bolsa Família stands out, with almost complete coverage. As explained in the main Report on this Project, the coverage expressed in terms of families (including indirect and indirect beneficiaries) shows that, although the AE has covered 55.6% of the population for all groups as a whole, this indirect coverage rate reached 95% in the specific case of the PBF public (Gob, Min.Economia 2020). The difference discloses the duality faced by the Programme during its two first phases (AE1 and AE2), when it was presented as an individual benefit, but with a cap on the number of beneficiaries in each family¹³.

13 World Bank (2021). *Auxílio Emergencial: lessons from Brazil's flagship social protection response to the COVID 19 crisis*.

3. Eligibility verification

All *Auxílio Emergencial* applications were run through a verification process, conducted by cross-checking the information provided by applicants against government databases. Only after verification and validation of the compliance with the criteria for granting the benefit, were applicants added to the payment lists. Applications failing to comply with the criteria were rated as ineligible, with the possibility of filing a protest. Under Law N° 13,982, promulgated on April 2, 2020, AE1 verification was limited to qualification for the first instalment, with no need for revalidation for receiving the subsequent four instalments.

From September 2020 onwards, with *Auxílio Emergencial* Residual approved for four months, Provisional Measure N° 1,000 authorised monthly reviews of some eligibility criteria, in order to continue receiving each instalment. These monthly reviews were guided by the Federal Court of Auditors (TCU) through Judgement N° 2.282 2020, which was initially refuted by the Ministry of Citizenship, arguing that it ran counter to the public interest, in view of the duration of the Programme, which was in principle intended to last only three months, urging that civil service efforts should instead be focused on its implementation, mitigating the impacts of Covid-19 on the most vulnerable segments of the population (GoB, TCU 2020b). Moreover, the Brazilian President vetoed the section of Law N° 13,982/2020 that addresses the review. Although the recommendation handed down by the Federal Court of Auditors (TCU) prompts discussions over the risks to income guarantees for persons subject to constant income variations, particularly in a crisis context, this was accepted by the Ministry of Citizenship in September 2020, after the benefit was extended.

According to the Ministry, as a result of changes to the Programme implementation timeframe, the rule contributes to a tighter focus, while also removing people who returned to the formal job market or were receiving social benefits (Yamasaki and Rodopoulos 2021). In operating terms, the review addresses a subset of the bans established by law, limited to analysing death notifications, receipt of unemployment insurance, social security or welfare benefits, and registered labour links. Criteria such as income declared to the Brazilian Internal Revenue System, possession of assets, residence abroad, and serving a prison sentence were not included in the monthly review. Beneficiaries whose registrations were cancelled through this procedure are also entitled to protest, in the same way as people waited as ineligible during the first round of processing.

Protests questioning the outcomes of the *Auxílio Emergencial* eligibility verification procedures are handled through administrative and extrajudicial channels. The former is requested through the registration app, with the application reviewed in the following month by Dataprev's Eligibility Engine, based on the most recent data. The extrajudicial option is underpinned by a Technical Cooperation Agreement signed with the Federal Public Defender's Office (DPU), opening up the possibility of introducing documentary evidence refuting the reason for ineligibility or cancellation of the benefit. In order to support the processing of this information, the Dataprev provided the DPU with a system through which, after analysing the documents, the defender indicated confirmation or reversal of the cancellation. However, as

the main Project Reports explain in greater detail¹⁴, this initiative was considered as limited in scope by the DPU itself, partly because its activities were limited to State capitals and 43 other cities. This Cooperation Agreement was not renewed in 2021.

Auxílio Emergencial implied a procedural change in the practices adopted by the Programa Bolsa Família, which does not require cross-checks with administrative records for granting the benefit. The controls currently applied to the Single Registry and the PBF include the operations of a decentralised care network through the Unified Social Assistance System (SUAS), in-person interviews and the possibility of home visits, as well as review and verification strategies applied periodically to the Single Registry database. However, mention is made of the existence of incipient and not yet regulated data matching experiments within the scope of the *Programa Bolsa Família* (PBF), which were raised to a scale four times higher for *Auxílio Emergencial*, considering the number of beneficiaries of both Programmes in December 2020. Cross-checking information from PBF applicants with the General Register of Employed and Unemployed Individuals (CAGED) and the Annual Listing of Social Information (RAIS) records already allows the identification of families with undeclared income in the Single Registry. The Death Information System (SISOBI) is also included in the validation routines of the CAIXA (the Single Registry's operating agent). These two systems (Single Registry and SISOBI) are already unified, so that confirmation of death is available in the Single Registry system in the form of a pending record, forcing the municipality to address the inconsistency during updates.

¹⁴ The Summary Note on the project devotes a specific chapter to complaint management, debugging errors, blocking frauds and pursuing refunds.



BOX 1.

Single Registry qualification routines: foundations of model developed during AE

The Single Registry was set up in 2001 to select the beneficiaries of social welfare programmes targeting low-income segments of the population (families with per capita incomes does of no more than half a minimum wage or whose total income is equal to or less than three minimum wages). In operating terms, the Single Registry is a database fed by information on applicants (head of household) collected through standardised forms, as well as other family members. The information in the Single Registry national database is subject to control and qualification routines conducted by SECAD and SENARC, involving three main processes: Record Verification, Record Review and Exclusion through Logic.

Record Verification defines the administrative procedures for systematic and periodic verification of the data consistency through cross-checks with other databases, with steps for dealing with inconsistencies. The Record Review establishes data update mechanisms

that periodically verify the social and economic conditions of beneficiaries and non-beneficiaries of social welfare programmes using the Single Registry. According to Edict N° 617 issued by the Ministry of Social Development on August 11, 2020, the "Record Review" is conducted annually after releasing the list of people whose records have been out of date for more than two years. On the other hand, Record Validation is regulated by Edict N° 94 issued by the Ministry of Social Development on September 4, 2013, and must be performed at the convenience or need of the Ministry of Citizenship (GoB, Min.Desenvolvimento Social 2013). In both cases, the municipal administration of the Single Registry must locate families with inconsistent or outdated registration data in their respective territories, using lists provided by SENARC/SECAD, and notify them to update these records. Both procedures have repercussions on beneficiaries of the *Programa Bolsa Família* (PBF) and other programmes using Single Registry, such

as the Social Electricity Tariff (TSEE), with foreseen suspensions and cancellations.

Exclusion through Logic is applied to records that have been outdated for four years or more.

Families that do not update their records within four years are subject to Exclusion through Logic, with these records being ranked as “excluded”, although kept in the consultation database.

The procedures described above adopt an offline data verification model, applied to the Single Registry since 2005 and refined over time.

From 2005 onwards, the declared income of registrants has been systematically and routinely cross-checked against other administrative records. Since then, the database matching methodology has been evolving. In 2012, the National Secretariat for Citizenship Income (Senarc) entered into discussions with the Social Security Technology and Information Company (Dataprev) and the National Institute of Social Security (INSS) on setting up an official partnership that would underpin systematic matchups between the National Social Information Registry (CNIS) database and the Single Registry, for example.

A Working Group was set up in 2019 to review the Single Registry’s qualification strategies. This Group headed up a study in partnership with the Social Security Technology and Information Company (Dataprev), analysing the formal income links of people listed on the Single Registry, in a model very similar to that used for *Auxílio Emergencial* (Cardoso, 2020). In 2020, the Joint Operating Instruction N° 03/2020/SAGI/SENARC/MC defined the introduction of monthly inquiries, once again using the National Social Information Registry (CNIS), more specifically the data for insureds under the INSS, the Length of Service Guarantee Fund (FGTS) Collection Form with Information for Social Security (GFIP), the eSocial scheme, and the Annual Social Information Report (RAIS). Despite introducing the monthly check requirement, the repercussions on *Programa*

Bolsa Família (PBF) beneficiaries, with suspensions followed by cancellations, are dependent on identifying registration discrepancies for three consecutive months, after which the beneficiary has thirty days to update the information at the Single Registry offices and other social welfare facilities, where they are supported by the basic welfare network. This format differs from the Monthly review adopted by the *Auxílio Emergencial* from the residual instalments onwards. The proposed monthly verifications halted in March 2020 due to the constraints imposed by the pandemic.

The accumulated experience of the Single Registry built up through managing and qualifying its data is the foundation for implementing the *Auxílio Emergencial* initiative, and is one of the factors buttressing its success.

As a comparison between the Verification processes conducted for the Single Registry and eligibility verification for the *Auxílio Emergencial* Programme, the Single Registry data were cross-checked against approximately seven databases in the 2018 and 2019 Verifications. This represents 18% of the databases used in the AE cross-checks, considering the consolidated files, as shown in Graph 6. The Record Validation for the two years included the Individual Income Tax (IRPF/RFB), the Staff Administration Integrated System (SIAPE), the INSS payroll for welfare and social security benefits (Maciça), the Annual Social Information Report (RAIS), the General Register of Employed and Unemployed Individuals (CAGED)¹, the Length of Service Guarantee Fund (FGTS) Collection Form (GFIP) and the Integrated System of Financial Administration (SIAFI). Although the difference in the number of databases is significant, the volume of data available for cross-referencing is not so different, as the most comprehensive and consistent administrative records are already encompassed by the checks conducted for the Single Registry.

1 The General Register of Employed and Unemployed Individuals (CAGED) is not listed among the administrative registries used to verify *Auxílio Emergencial* eligibility, as its replacement by the eSocial is at an advanced stage. As expressed in Edict N° 1,127 issued by the Special Secretariat for Social Security and Labour on October 14, 2019 the CAGED registry was transferred to the eSocial platform from the reference month of January 2020 onwards. This system remains open only to establishments for which the eSocial is not yet mandatory, under the implementation calendar defined in Joint Edict N° 71, issued by SEPRT/RFB/ME on June 29, 2021.

3.1. Institutional attributions

The cross-checks were handled through the Social Security Technology and Information Company (Dataprev), a government-run information and communications technology company linked to the Brazilian Ministry of the Economy that is in charge of data management for the National Institute of Social Security (INSS) and the National Social Information Registry (CNIS). Rated as a benchmark for processing of huge amounts data, this institution is assigned the custody and management of the CNIS system, which is connected to several administrative registers, allowing automatic access¹⁵ to social and welfare rights by citizens. During the Programme implementation, four agreements were signed by this company with the Ministry of Citizenship. A team of some twenty people¹⁶ was engaged in responding

¹⁵ The term “automatic” is used by the CNIS when referencing the possibility accessing social and welfare rights without beneficiaries having to present documentary evidence of their links of contribution to the Social Security system. The information needed to assess requests is provided automatically by the INSS system linked to the CNIS.

¹⁶ Figure indicated during the interviews, which also mentioned two people directly in charge of data processing.



BOX 2.

Installed capacities and structures in the National Social Information Registry (CNIS)

Rated as the largest database in Latin America today, the CNIS gathers together 35 billion records with personal and work data, endowing it with a prominent position in *Auxílio Emergencial* eligibility verification. The agility of the *Auxílio Emergencial* response is underpinned by a set of capabilities in the Direct and Indirect Civil Service structure, with rules already addressed in the Brazilian legal arrangements. With the necessary adaptations, an already consolidated technical apparatus was absorbed by the Programme, offering the conditions needed for its implementation (Cardoso 2020). The CNIS was fundamental for this purpose. The management of this registry appears in the discourse on *Auxílio Emergencial* as one of the justifications for selecting the Social Security Technology and Information Company (Dataprev) as the *Auxílio Emergencial* operating agent¹. According to this institution, the CNIS is the largest database in Latin America today, gathering together 35 billion records with personal and work data, with 1.2 billion links and 28 billion wages².

The CNIS is an information aggregator system used to manage public policies, which collects data from more than twenty administrative registers that are logically interconnected.

Access to administrative records is handled through an integration concept among databases that, although physically separate, are logically interconnected by the Master Data Management (MDM) tool. An MDM comprises a master set of data management processes and resources that can define business rules for the treatment of regular data in diverse systems, underpinning their collection, aggregation, combination, and consolidation, whose quality checks of distributed information (Krishnan 2013). Since 2019, this system has been expanded and strengthened, based on the guidelines set forth in Decree N° 10,047/2019 that, among other aspects, proposes the integration of new government bases within its logic structure.

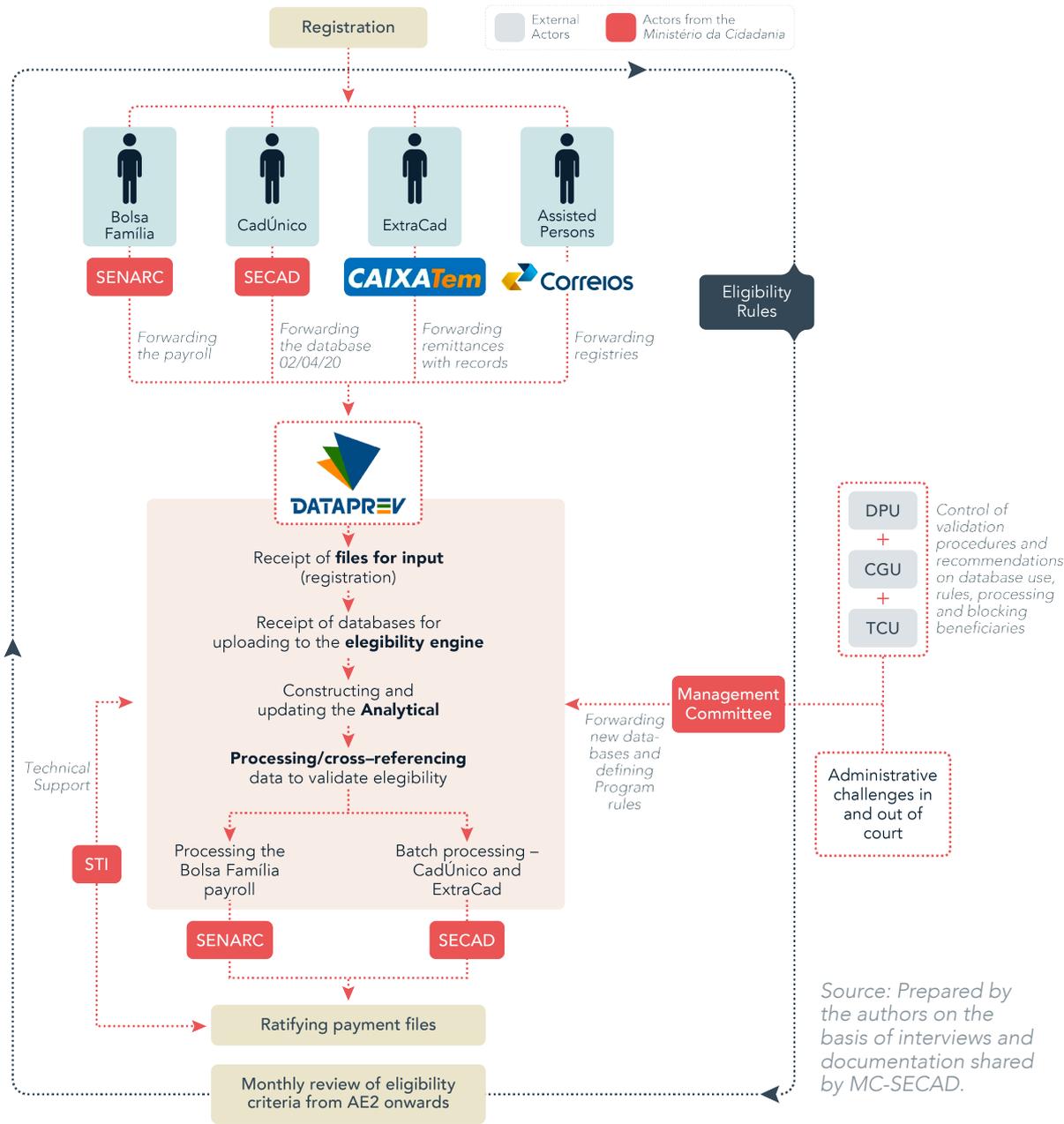
¹ Setting up AE, Law N° 13,982/2020 define the institution in charge of verifying applicant eligibility as the “Operator Agent”, which is why Dataprev is identified in this manner throughout this document (Braz.Gov, Braz.Pres. 2020d). However, it is important to explain that the role played by this company is different from that handled by the CAIXA under the aegis of the *Programa Bolsa Família*, where it also holds the position of operator. While Dataprev is assigned responsibility only for checking *Auxílio Emergencial* eligibility and imposing suspensions and cancellations, CAIXA serves as the financial and IT agent for this programme, endowing it with the function of the database administrator and benefits payer.

² Data taken from the Dataprev Portal on July 9, 2021. <https://portal3.dataprev.gov.br/solucoes-exclusivas/cnis> (Braz.Gov., Dataprev 2021a).

to *Auxílio Emergencial* demands, with technical and staff support from SAS Analytics, a private data intelligence institution that was already working with the Social Security Technology and Information Company (Dataprev) on other projects.

The process of verifying compliance with the *Auxílio Emergencial* eligibility criteria is coordinated by the Ministry of Citizenship, directly involving three areas: the Single Registry National Secretariat (Secad), the National Secretariat for Citizenship Income (Senarc) and the Undersecretariat for Technology and Information (STI). Also noteworthy is input from the Executive Secretariat of this Ministry that, according to the respondents, centralised much of the decision-making for the Programme, including the definition of rules and adjustments to what is called the Eligibility Engine (described below). The spheres of competence and responsibilities accepted by each of these Secretariats are illustrated in the flow shown in Figure 2.

Figure 2. Institutional responsibilities for eligibility criteria verification



The Federal Court of Auditors (TCU) and the General Controller's Office supported part of this process, strongly influencing the verification routines. Technical Cooperation Agreements signed by the Ministry of Citizenship with these entities steered the oversight and control actions already established in their mandates. In addition to suggestions for suspensions and cancellations based on indications of irregularities, the Federal Court of Auditors (TCU) and the General Controller's Office issued a set of recommendations that would introduce changes to the verification dynamics. The recommendations were assessed by the *Auxílio Emergencial* Management Committee, under the coordination of the Executive Secretariat of the Ministry of Citizenship¹⁷. The oversight entities attended as observers, and consequently with no voting rights. The adoption of monthly eligibility checking routines and the inclusion of new databases in the processing system are among the recommendations issued by the Federal Court of Auditors (TCU) and the General Controller's Office that were approved by this Committee.

During AE1 and AE2, the STI and SENARC played important roles in reprocessing the initial eligibility checks performed by the Social Security Technology and Information Company (Dataprev) and imposing suspensions and cancellations to benefits. The list of eligible recipients generated by the Social Security Technology and Information Company (Dataprev) is ratified by SECAD and SENARC. During AE1 and AE2, the results (already approved) of the initial eligibility checks run on the non-PBF Single Registry and ExtraCad publics were sent to the STI each month, so that the payment of other instalments could be processed. This reprocessing stage was intended to adjust the eligibility checks to information available in databases already shared with the Ministry of Citizenship but not yet included in the eligibility engine of the Social Security Technology and Information Company (Dataprev). The STI was also assigned the task of imposing suspensions and cancellations suggested by the oversight agencies. The same procedures were performed by SENARC for the *Programa Bolsa Família* public. Under a new AE3 implementation agreement, the Social Security Technology and Information Company (Dataprev) accepted responsibility for the monthly reviews of criteria compliance and the generation of beneficiary pay-out lists for the remaining instalments, in addition to the initial eligibility checks, as well as imposing suspensions and cancellations (GoB, Min. Cidadania and GoB, Dataprev 2020).

During the AE1 stage, 3,715,184 benefits were cancelled, equivalent to 5% of the 68.3 million beneficiaries in this cycle, most of them (51%) originating from the ExtraCad registry. For example, according to the TCU, between the payment of the second and fifth instalments during the AE1 stage, 3,715,184 benefits were cancelled, 51% of them related to the ExtraCad registry, 29% tied to the Single Registry public but non-beneficiaries of the *Programa Bolsa Família* (PBF), with a further 20% consisting of *Programa Bolsa Família* (PBF) beneficiaries (GoB, TCU 2020c)¹⁸. Although the findings of the oversight agencies are reviewed by the Ministry of Citizenship and may be refuted, they may well indicate that the registration of applicants from the *Programa Bolsa Família* and the Single Registry showed fewer inconsistencies when

17 The following hold seats on this Committee: Executive Secretariat (Coordination); Information Assessment and Management Secretariat; Single Registry National Secretariat; Funds Transfers Management Secretariat; National Secretariat for Citizenship Income; Special Internal Control Advisory Unit; Legal Affairs Advisory Unit; Under Secretariat for Planning, Budget and Governance; and Undersecretariat of Information Technology. Its purpose is to support the Administration of *Auxílio Emergencial* Actions addressed in Article 2 of Law N° 13,982, promulgated on April 2, 2020. (Edict N° 408, promulgated on June 8, 2020) (GoB, Min. Cidadania 2020).

18 According to the Federal Court of Auditors (TCU), cancellations are the result of adjustments made while assessing eligibility and were due mainly to comments from the oversight agencies, involving: repeated NIS; possession of vessels; holder of elective office; family income above the limit; municipal or Federal Government agent; member of the Armed Services; included in the BEM base; has registered employment; death certificate; receives social security or welfare benefit; receives protective or unemployment insurance; received taxable income exceeding BRL 28,559.70 in IRRF-2018 declaration; and employee of Federal Government enterprise, among other justifications (GoB, Min. Cidadania 2020).

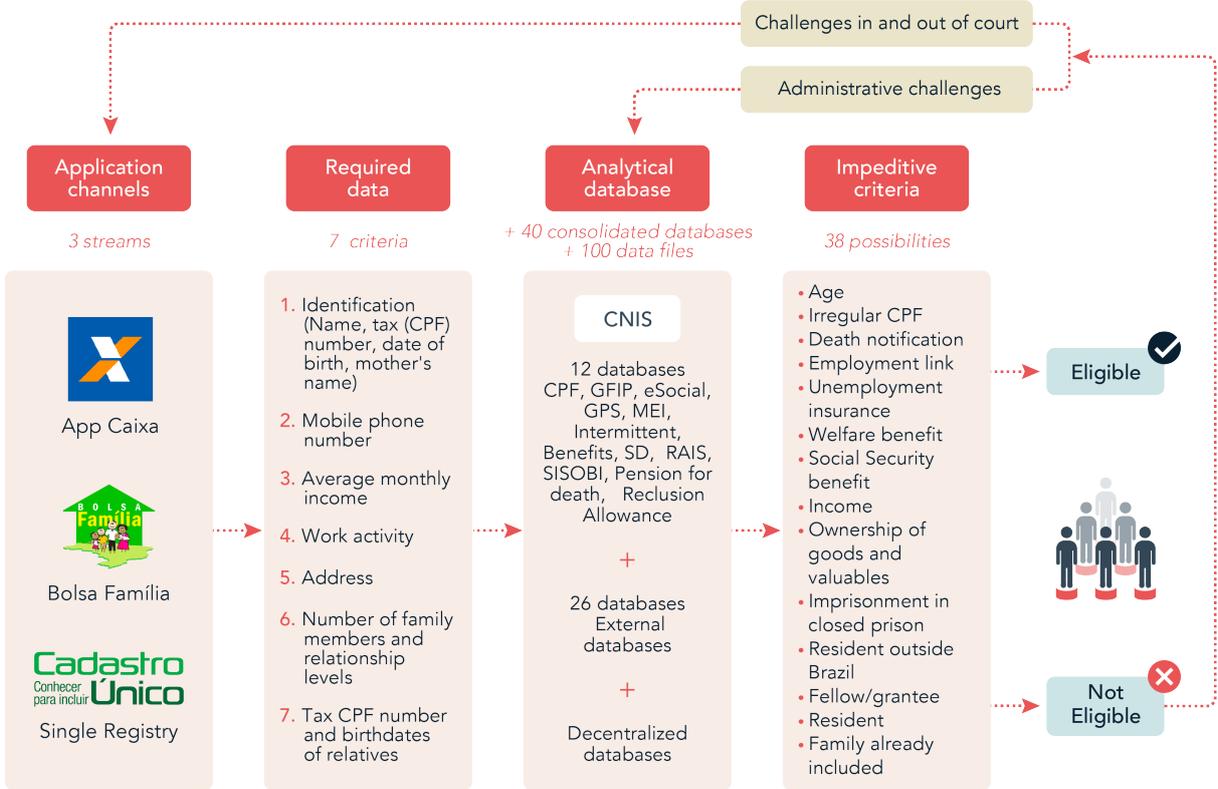
compared to the ExtraCad registry. This might be due to a combination of an in-person registration model with robust qualification routines, as shown in Box 1. Recommendations are not binding, but interviews indicate that the Ministry of Citizenship opted to initially accept suggestions on suspensions for, submitting cases for subsequent review by the Emergency Assistance Management Committee, which could then confirm the cancellation or restore the instalments with retroactive payment.

3.2. Analytical database and eligibility engine

An Analytical Database with information on over 250 million Individual Tax (CPF) numbers was the technological resource used for Auxílio Emergencial eligibility verification.

Technology was the major ally of government authorities when implementing this Programme, not only for registration, but also processing the collected information. As already mentioned, the complexity and massive data volumes involved demanded powerful processing tools. An Analytical Database with information on more than 250 million Individual Tax (CPF) numbers was the resource used by the Social Security Technology and Information Company (Dataprev). This database serves as a gateway to the Programme’s data infrastructure, consolidating information from the 42 administrative records currently used for cross-referencing purposes. Among the advantages of this system is the ability to optimise models, with shorter processing and consultation times. An analytical database allows the transformation, generation, aggregation, analysis and visualisation of data to support strategic decision-making activities. Compared to relational databases, analytical databases are faster and easier to scale.

Figure 3. Eligibility verification flow



Source: Prepared by the authors on the basis of interviews, the Business Rules documents of Dataprev (GoB, Dataprev 2020a, 2020b, 2021b), and the online registration tutorial offered by the Caixa (GoB, Caixa Econ. Federal 2020), accessed on August 23, 2021.

On the other hand, relational databases are useful for low-volume transactions of more immediate interest (Krishnan 2013). Like the other *Auxílio Emergencial* stages, the Analytical Database posts record figures: the system was developed in just five days, enabling the first batch of payments to be made the very next day.

The model developed by the Social Security Technology and Information Company (Dataprev), with the support of the CNIS data intelligence, allows programmes to be set up that identify the latest data and decide which databases should be assigned priority for conflicting information. These decisions are supported by the CNIS Master Data Manager (MDM), which accumulates information intelligence that can deploy the prevalence rules used by the system. Not static, these rules obey the delivery logic of each right and are influenced by changes in legal frameworks. Among the administrative records used for the *Auxílio Emergencial* scheme, the eSocial system is currently rated as prevalent, competing with updates keyed in by civil servants at social security agencies that are forwarded to the consolidated links and remunerations database and the INSS database. The GFIP, FGTS and RAIS follow along, in other strata of this pyramid (GoB, Dataprev 2019). The link between the Analytical Database and the CNIS data management system allows the application of these and other date treatment rules even before the information is uploaded into the Analytical Database. See the example of death notifications, mentioned in Note 28.

A processing engine locates the Individual Tax (CPF) numbers of Auxílio Emergencial applicants in this database, and assesses whether they comply with every eligibility stage. Each stage is subject to an exclusion/inclusion rule, returning a binary yes/no response. The final composition of these responses defines the eligibility or ineligibility of the applicant. In metaphorical terms, the eligibility engine resembles an obstacle course, where competitors must surmount all the hurdles – the impeditive criteria – to attain a positive outcome.

In this race, the Bolsa Família public is referenced to the *Programa Bolsa Família* (PBF) payroll, as *Auxílio Emergencial* pay-outs should align with the Bolsa Família schedule, in order to ensure stability and regularity for the benefit and the suitability of the most advantageous criterion applied to this group¹⁹. For others, the processing is run in batches that are defined by application dates specific characteristics of the population group, such as one-person families, for example. Ten batches were processed for the payment of the first instalment, which increased progressively up to the 36 mark. The data cross-referencing mechanism used in this database was adjusted throughout the implementation, and databases, together with changes in the Programme rules defined by the manager, as explained in the previous section.

Although not ranked a national identity document, the Individual Taxpayer Registry (CPF) numbers were used as key variables for identifying applicants in the various databases. Complexities related to processing, such as the need for reconciliation between databases with different formats and data structures, are present in the narratives, particularly among decentralised records. Some of these difficulties are due to the absence of a national identity document that could constitute a unique key, for easier communication among administrative records and fewer chances of errors through dual records. Despite this complicating element, solutions already implemented in the CNIS have allowed the use of Individual Tax (CPF) numbers as a key for cross-referencing information. Described above as an MDM, the CNIS

¹⁹ It is important to recall that the expertise built up by the *Programa Bolsa Família* and the CAIXA in paying out large-scale benefits is another factor that ranks high among the reasons for the rapid response to Covid-19 achieved by Brazil's social safety network. Further information on the payment system used for the *Auxílio Emergencial* scheme may be accessed in the specific Technical Note on this matter.

management system uses a link database with consolidated information on persons registered with the system in order to locate Individual Tax (CPF) numbers of *Auxílio Emergencial* applicants, even when they are not a related variable in the databases used for the Analytical Database. The link database collects information about the various identification numbers associated with each individual, such as: the Social Integration Programme/Civil Servants Assets Formation Programme (PIS/PASEP)²⁰, Worker Registration Number (NIT) and Individual Taxpayer (CPF) numbers. The MDM collates this information, which is then fed into a database of individual persons (CNIS-PF), that is also uploaded to the *Auxílio Emergencial* analytic environment. Although the solutions already used by the CNIS have been sufficient to handle cross-referencing, managers and specialists urged that a single registry would offer greater security for processes involving information exchanges among databases.

The notification model offered to applicants with benefits denied after eligibility verification is one of the weaknesses of the Analytical Database. The messages forwarded by this app do not allow identification of the administrative record(s) that assigned ineligible status to the applicant. The absence of this information or its incomplete availability undermines the analysis of prevalence of use for the databases. More important still, it does not provide citizens with an accurate response on the origin of the information that may have led to the denial of a right. This point clashes with issues related to the right to privacy and personal data management, as explained in Box 4. However, it is important to acknowledge the progress of the system in this regard, although it still does not guarantee an association between the database and the reason for ineligibility in all cases.

The Social Security Technology and Information Company (Dataprev) uses a technological solution provided by the SAS Analytics Institute, whose staff also provides data processing support. While ensuring performance gains, this also required redoubled security systems, as the entire *Auxílio Emergencial* operation runs on personal data. According to information released on the company's website²¹, the partnership allowed the processing time for each batch to be shortened from eighteen hours to five hours. Although the gain in performance is evident, easy access to personal data by third parties is a point for attention, with regard to privacy guarantees and standards, even if the agreement signed with the company establishes confidentiality rules.

20 In addition to the Personal Tax (CPF) number, Brazil's legal framework encompasses a set of other personal identification documents introduced over time for different purposes. They include the Social Identification Number (NIS), the Social Integration Programme (PIS), the Civil Servants Asset Formation Program (PASEP), and the Worker Registration Number (NIT), used by the CNIS/Dataprev in their links database. The Social Identification Number (NIS) is an identification register for accessing social security and welfare benefits, administered by the Caixa Econômica Federal (CAIXA) and linked to the Social Integration Programme (PIS) which is also run by the CAIXA; the Civil Servants Asset Formation Program (PASEP) is coordinated by the Bank of Brazil (Banco do Brasil); and the Worker Registration Number (NIT) may be issued by citizens themselves directly through the National Register of Social Information (CNIS) portal or at Social Security Agencies (APS). All four records present at the same numerical format, distinguished by their point of origin. For employees hired by the private sector, a PIS number is issued; when employed by the government, this is a PASEP number; for registration with the National Institute of Social Security (INSS), an NIT number is required; and for granting benefits, a NIS. NIS, PIS, PASEP and NIT number is used to set up the Social Identification Number (NIS) in the administrative register managed by the CAIXA that provides access to social security and welfare benefits, establishing a direct interface with the CNIS/Dataprev. Two other civil identification documents warrant attention: the Civil Birth Register (RCN), with registration mandatory within fifteen days after the birth of a child; and the General Civil Identity Register (RG) which is issued by State Secretariats for Public Security. This RG document is one of the most commonly used by Brazilians. Although recognised nationwide, the absence of an integrated identification system allows a person to have more than one RG identification number at different locations, which is why it is unlikely to be used as a secure identification key. Other documents that may be added to this list: the Social Security and Work Book (CTPS), the Voter Card, and the Passport.

21 Source: Dataprev news portal (GoB, Dataprev 2021b), accessed on August 20, 2021.



BOX 3.

Disputes over the mandatory requirement of an individual taxpayer (CPF) number

Among the requirements established for access to *Auxílio Emergencial* is the need for regularised and active Individual Tax (CPF) numbers with the Brazilian Internal Revenue System (RFB). This mandatory requirement prompted heated public discussions and actions by different agencies that, on one hand, supported its establishment and, on the other, urged the suspension of this eligibility condition. Set up between 1965 and 1968, Individual Tax (CPF) numbers are registry kept by the Brazilian Internal Revenue Service (RFB) that underpins personal income tax declarations. Not rated as a civil identification document, this is not mandatory for the entire population. However, this document qualifies its holders for services involving fiscal and tax responsibilities, such as opening bank accounts and receiving social security benefits from the INSS.

The discussions swirling around this requirement prompted by the vulnerable status of many applicants. The condition of having a regularised Individual Taxpayer (CPF) number for receiving *Auxílio Emergencial* evokes an issue raised by Arruda and Santos (Arruda and Santos 2020). The authors reflect on the extent to which “the *Auxílio Emergencial* public policy reaches out adequately to underprivileged subjects, with positive impacts on the lives of these people” (Arruda and Santos 2020, 145). The analysis of the social characteristics of the population segments applying for the benefit (unregistered workers, the jobless, and individual micro-entrepreneurs) reveals a vulnerable social segment that often lacks documentation, or may not be regularised, whose members might not even be aware of their rights under certain public policies. Given such conditions, one of the immediate effects of the requirement of a CPF in good standing for receiving *Auxílio Emergencial* was a rush to official agencies – like the RFB, CAIXA, BB and Post Offices – to obtain or regularise this document. The process drew large crowds and jeopardised their health, as they were unable to comply with the social distancing measures established to deal with the Covid-19 pandemic (G1 2020).

Despite lawsuits filed with the Brazilian Courts questioning the need to regularise this document, but the Higher Court of Justice validated the criteria established by the Ministry of Citizenship. The Pará State Government

filed an interlocutory appeal with the Federal Regional Court – 1st Region (TRF-1), calling for the immediate suspension of this requirement (G1 2020). The Court granted the request, extending it nationwide. The decision considered that attracting crowds ran counter to the purposes of the *Auxílio Emergencial*, and that the State had exceeded its regulatory powers by establishing this requirement through only a Regulatory Decree, as this aspect was not mentioned in Law N° 13,982/20 which set the rules for receiving *Auxílio Emergencial*. The Federal Attorney General (AGU) lodged an appeal against the TRF-1 decision, which was granted by the Higher Court of Justice (STJ) (Braz.Gov., STJ 2020). The AGU argued that there was legal support for the requirement in the rules adopted for the national financial system, that the measure served to combat fraud, that the suspension of the requirement would cause delays in the process of granting the allowance, and that the Federal Government agencies would establish steps for the remote regularisation of Individual Taxpayer (CPF) numbers.

After a favourable decision was handed down by the STJ, the RFB expanded its digital service channels for the regularisation of Individual Taxpayer (CPF) numbers, completing the automatic regularisation of 12 million CPFs. Among other measures, corporate e-mail boxes and a chat room were introduced, with extended support on weekends and holidays. Furthermore, Ruling 2351 handed down by the Federal Court of Auditors (TCU) decided that 12.2 million CPFs with inconsistencies associated with the Electoral Courts (discrepancies between data registered with the Higher Electoral Court and CPFs, absence of voter registration card, etc.) were automatically and exceptionally regularised, as well as those with pending issues related to the absence of an Annual Tax Exemption Declaration, accepting requests for the withdrawal of the CPFs of the children of applicants sent in by e-mail (GoB, TCU 2020a). Despite the extension of digital channels for CPF regularisation, the repercussions mentioned by Arruda and Santos remain, as the target population of the *Auxílio Emergencial* policy is the most vulnerable segment, with limited access to digital technology, among other weak points GoB, STJ 2020).

All processing handled within this database is automated, except for data updating, which requires uploads of the most recent information at the beginning of each period.

This procedure results in information latency for the Analytical Database, due to the fact that information uploaded other than the reference date is not the same as the latest data, until a new upload is performed. At each monthly update, the Analytical Database reflects the most accurate picture available in the databases, which does not mean that all the elements in this picture are changed at the same frequency.

Changes to a transactional environment are being studied at the Social Security Technology and Information Company (Dataprev) and the Ministry of Citizenship, paving the way for better data verification processes involving different administrative records.

Two possibilities are presented for the situation: setting up a transactional database with information cross-referenced a posteriori, but with automated update routines that allow direct and immediate access to the most recent data as soon as it is available in the registry of origin; and an online transactional database with the possibility cross-referencing in real time with automated data update routines (already used for integrating SISOBI and the Single Registry, as explained in Box 1).



BOX 4.

Confidentiality and data privacy¹

The privacy of personal data is a right ensured by Brazilian legal system. However, the reality of digital technologies linked to the Internet has raised new challenges to guarantees protecting these data. Data privacy and information autonomy for citizens is a recurrent theme in democracies; in Brazil, this requirement is already addressed at the highest legal tier: its 1988 Constitution. However, the reality of digital technologies accessing the Internet has raised new challenges for data protection guarantees. On the one hand, digital environments allow easy data collection and highly efficient data processing. On the other, they are extremely vulnerable to cyber-attacks and low security levels that may result in data leaks or improper access to personal data.

The *Auxílio Emergencial* implementation did not require the definition of any additional regulations on data protection, as compliance with the governing law was already enough. During the past decade, government authorities have introduced several regulations on data sharing among government entities and with authorised third parties, all designed to ensure data protection and privacy. Consequently, there was no need to issue additional *Auxílio Emergencial* regulations for data protection, as compliance with current legislation was already sufficient. For example, Brazil's Internet Civil Law framework (MCI), which was established through Law N° 12,965/2014, moves ahead with protecting citizens' rights by bringing together precepts scattered throughout different legislations, from the Brazilian Constitution to the Consumer Protection Code. Decrees N° 10,046/2019 and N° 10,047/2019 regulate the manner and circumstances in which government agencies may share data among themselves. There is also Decree N° 6,135/2007 and Edict N° 10/2012, which establish the procedures for sharing information from the Single Registry and guide transfers of personal and confidential data under the management of the Ministry of Citizenship.

Specifically with regard to data protection, the progression of Brazil's legal arrangements culminated in the enactment of a General Law that establishes protection mechanisms for both the physical and digital environments. Enacted through Law N° 13,709 in 2018, the General Data Protection Law (LGPD) authorises the treatment and shared use of personal data as required to implement government policies covered by laws, were also laying down limits and criteria for these sharing processes.

During interviews with the administrators of entities involved with the *Auxílio Emergencial*, it became clear that the urgency of the necessary steps forces them to initially focus their attention on laws that were already in full effect. Although it was enacted in 2018, the provisions of the LGPD came into effect on a staggered schedule. For example, the National Data Protection Authority was established only in August 2020, and articles on administrative sanctions will be required only from August 2021 onwards.

The *Auxílio Emergencial* administrators felt that there was enough legal support for the *Auxílio Emergencial* process, with agency actions adapting to LGPD requirements in stages, as addressed in its implementation schedule. Nevertheless, it is important that this adaptation is handled quickly and fully, encompassing all actions related to the *Auxílio Emergencial*, as the involvement of several agencies and authorised third parties form weak points for security and data protection, particularly in view of recent episodes leaking the personal data of Brazilian citizens. The Ministry of Citizenship has already started to take steps in this direction, by appointing a Data Officer (GoB, Min. Cidadania 2021e), together with the implementation of the "Moving towards LGPD Adaptation" initiative (GoB, Min. Cidadania 2021d) from January 2021 onwards.

¹ The Summary Note on the Project devotes a specific chapter to data privacy.

4. Limits and possibilities for the use of administrative registers for eligibility verification

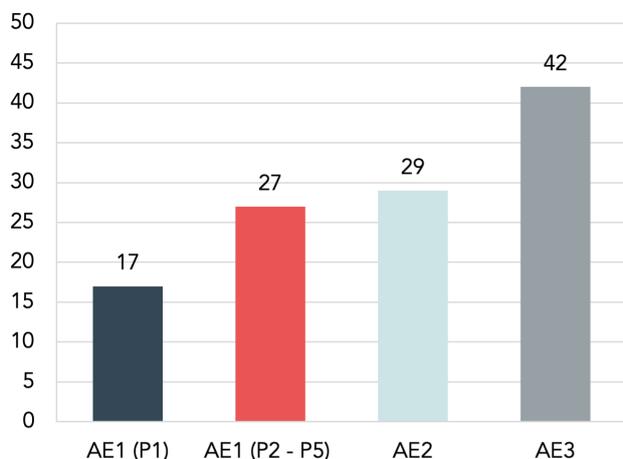
Eligibility verification for granting *Auxílio Emergencial* is based on the concept of interactions among information systems, buttressing a trend already underway in the Brazilian Government. The *Auxílio Emergencial* Programme placed interoperability right at the centre of the governmental agenda, reopening discussions that heated up with the promulgation of Decree N° 10,046, on October 9, 2019. Among other aspects, this Decree streamlined data sharing among federal civil service agencies and entities. Efforts by the Brazilian Government to develop strategies allowing communications among databases are also reflected in the administration of the Single Registry, which has been conducting studies since 2012 on the introduction of automated cross-referencing routines with other databases (GoB, Min. Cidadania 2018). Already mentioned above, the proposal to expand the CNIS is another example of this trend. In this sense, the *Auxílio Emergencial* experiment is a laboratory, helping define boundaries and possibilities for the use of administrative records as tools underpinning the identification of vulnerable groups.

Following this logic, the initial version of the tool used for cross-referencing the data of *Auxílio Emergencial* applicants allowed for exchanges of information among seventeen administrative registers, steadily increasing throughout the implementation period, until reaching 42 by AE3. The latest version of the system developed by the Social Security Technology and Information Company (Dataprev) brings together 42 databases, Edict N° 620, issued by the Ministry of Citizenship on March 26, 2021. The starting point was the CNIS, to which external administrative records were gradually added, some of which were decentralised. A verification for payment of the first instalment (AE1) in April 2020 was based on information from seventeen databases, including the Single Registry, the *Programa Bolsa Família* (PBF) payroll, and the ExtraCad register. For payment of the second instalment the following month, this figure rose to 27, reaching 42 in 2021 (AE3).

Despite its strategic character and broad coverage, the CNIS imposed constraints on the coverage of the information required for verification and eligibility, with the main hurdle related to the registration of informal workers and the self-employed²². The choice of the CNIS is strategic in nature. In addition to its broad coverage, the administrative records that constitute it are endowed with consistent data management and verification mechanisms, enhancing the confidence levels of the results.

²² Decree N° 10,316/2020, which regulates *Auxílio Emergencial*, includes the self-employed in the unregistered workers category (GoB, Pres. da República 2020a). However, some authors highlight differences between the two. According to Santiago and Vasconcelos (Santiago and Vasconcelos 2017, 29) "...self-employment is necessarily informal if analysed exclusively from the sectoralist approach, which prioritises differences between typically capitalist enterprises and enterprises with small-scale production and low productivity run by workers who make up the structural surplus. On the other hand, if the criterion is that economic units and workers are – by law and in practice – covered by formal arrangements, not all self-employed workers are informal".

Graph 4. Increase in the number of databases used for eligibility verification AE1 (AE2020), AE (AER), AE3 (AE2021)



The graph presents the consolidated figures, as data sharing involves a larger number of files that hovers around a hundred, although no accurate figure is available, according to reports from the respondents. The various decentralised databases provided by the General Controller's Office that were added as verification for payment of the second instalment of AE1 and then subsequent payments, for example, are grouped together under the "municipal, state and district civil servants – General Controller's Office" category (Table 3). Similarly, the Higher Electoral Court forwarded separate files for the terms of office of Senators; Mayors and Town Councillors; the President, the Vice President, Federal, State and District Representatives, and State Governors, all entered as "Elective Terms of Office, Higher Electoral Court" (Table 3).

Source: Prepared by the authors from interviews and Business Rules documents, Social Security Technology and Information Company (Dataprev) (GoB, Dataprev 2020a, 2020b, 2021c) and Edict N° 620, issued by the Ministry of Citizenship on March 26, 2021 (GoB, Min. Cidadania 2021f).

Table 2. Incremental list of databases used for eligibility verification

| AE1 (P1) | AE1 (P2 a P5) e AE2 | AE3 |
|--------------------------------------|---|---|
| CadÚnico | BEM | CNPq /MCT Fellows/Grantees |
| CNIS Social Security Benefits & LOAS | BNMP/CNJ | Payer: commitment allowance |
| CNIS CPF | DEPEN/MJ (National) | Payers: Pension for death |
| CNIS eSocial | DEPEN/MJSP | Medical residents /Capes/ME |
| CNIS GFIP | DEPEN/MJSP – Imprisoned | Civil servants, trainees and interns – National Council of Justice |
| CNIS GPS | Members of the Armed Forces – Ministry of Defense | Civil servants, trainees and interns – Higher Military Court |
| CNIS intermittent | Politically exposed | Civil servants, trainees and interns – Higher Electoral Court |
| CNIS Unemployment Insurance | Prisoners in closed prisons/SP | Civil servants, trainees and interns – State Courts of Justice |
| DIRPF/RFB | Persons sought by the Courts | Civil servants, trainees and interns – State Military Courts of Justice |
| ExtraCad | Residents abroad/DPF | Civil servants, trainees and interns – Regional Labor Courts |
| PBF Payroll | SEEU/CNJ | Civil servants, trainees and interns – Regional Electoral Courts |
| TSE Elective Terms of Office | Municipal, state, and district civil servants - CGU | Civil servants, trainees and interns – Federal Regional Courts |
| MEI | | SIAPE - Trainees, interns, and residents |
| RAIS (2018 & 2019) | | |
| SIAPE | | |
| SIRC | | |
| SISOBI | | |

Source: Prepared by the authors from interviews and Business Rules documents, Social Security Technology and Information Company (Dataprev) (GoB, Dataprev 2020a, 2020b, 2021c) and Edict N° 620, issued by the Ministry of Citizenship on March 26, 2021 (GoB, Min. Cidadania 2021f).

However, these databases also have limitations, especially when deployed for new uses and when tested on such a huge scale, with Publix as large as those required for the *Auxílio Emergencial* Programme. The main bottlenecks are undoubtedly a lack of information on unregistered workers – when services are rendered with no means of formalisation – and the flimsiness of the data available on self-employed workers -who render economic activities on their own account, which may be regulated by some entity or even by a work contract.

Although not covered by labour legislation, both (unregistered and self-employed) can act as individual contributors to the social security system, by paying Social Security Slips (GPS). This offers them access to social security rights, such as retirement by age, for example, and consequently registration in government databases. One way of formalising self-employed workers is the Individual Micro-entrepreneur (MEI) registry. Introduced by Complementary Law N° 128 on December 19, 2008, this simplified process allows them to work as corporate entities²³.

The records of Individual Taxpayers and micro-entrepreneurs, which are the closest to the unregistered sector, include the CNIS and consequently the eligibility verification system for *Auxílio Emergencial*, but are not included in the income calculation. The Social Security Slip (GPS) completed by individual Social Security contributors records only the amounts paid in to the INSS. Although these levies are compulsory for all workers, data provided by the Inter-Union Department of Statistics and Socio-Economic Studies (DIEESE 2019) indicate high rates of non-adherence to social security. In 2018, these rates reached around 69% and 85% among the self-employed and workers with jobs not registered in their workbooks. Moreover, low-income workers are allowed to pay their levies on a quarterly basis. The Individual Micro-entrepreneur (MEI) database records the value of the gross annual revenue for the previous year. Only amounts paid as Tax on the Circulation of Goods and Services (ICMS), Tax on Services (ISS), and dues paid to the National Institute of Social Security (INSS) are deducted. This is the reason why neither the GPS nor the MEI Register appear as trustworthy registers for assessing income.

The absence of integrated data within the civil service is another constraint that hampers access to information on workers in the State, District, and Municipal Executive Branches, as well as the Legislative and Judicial Branches at all levels of the Brazilian Federation. Another bottleneck in the *Auxílio Emergencial* eligibility verification process is access to information on civil servants in sub-national executive branches, as well as of the legislative and judiciary branches at all levels of the Brazilian Federation, including members of the Brazilian Armed Forces (AF). With some exceptions, Federal Government databases have gaps in the data collected on these groups or simply does not address them. For example, the Staff Administration Integrated System (SIAPE) is limited to federal civil servants, excluding the legislative and judicial branches and the military, as well as sub-national entities and the private sector. Although the Annual Listing of Social Information (RAIS) covers the public and private sectors at all three tiers of government, this is an annual registry and is thus less suitable for monitoring certain social dynamics, especially in contexts of interrupted regularity such as the circumstances imposed by the Covid-19 pandemic. The FGTS and Social Security Information Form (GFIP) is mandatory for all employers (legal entities or individuals), but sub-national entities are not required to complete it for civil servants affiliated to their own social security system (RPPS).

23 The Micro-Entrepreneur Portal provides information on this profile, together with the rights and obligations established by law for the Individual Micro-Entrepreneur (MEI): <https://www.gov.br/empresas-e-negocios/pt-br/empreendedor>.

Although still under implementation, the eSocial system is the most regular and comprehensive Federal Government database on employment links and incomes, including civil servants covered by the RPPS social security scheme. The eSocial system is an exception to the rule outlined above, as it gathers together information on everyone engaged in an employment relationship that results in benefits and labour, social security or tax obligations in the public and private sectors at all three tiers of government. Set up in 2014 to replace a set of legal obligations to which employees and employers are subject (including RAIS and GFIP), this system is still being implemented. Nevertheless, it is already rated the most regular and comprehensive Federal Government database on employment links and incomes. Not by chance, the eSocial system holds a prominent position in the CNIS prevalence pyramid, second only to the INSS consultation bases (GoB, Dataprev, 2019).

Table 3. Characteristics of the main Federal Government databases used to verify links and incomes for *Auxílio Emergencial*

| Registry | Concept | Public | Update |
|-------------------|--|--|---|
| eSocial | Labour, social security and tax data collection system whose purpose is to standardise the transmission, validation, storage and distribution of this information, thus constituting a national virtual environment. | Everyone in a labour relationship that results in labour, social security or tax benefits and obligations. | Different deadlines, depending on events, with a recommendation on immediate forwarding, right after the occurrence. |
| GFIP ¹ | Mandatory declaration for all employers (individual or corporate) on Labour links giving rise levies payable to the Length of Service Guarantee Fund (FGTS) or Social Security. | People with formal employment links (includes federal civil servants). | <ul style="list-style-type: none"> • Monthly • By the seventh day of each month, and open to correction at any time. |
| RAIS ² | Administrative register for public and private sector census purposes, with information on organisations and employment links. | People with formal employment links (includes federal civil servants and all three tiers of government). | <ul style="list-style-type: none"> • Annual • Completed between February and April in each calendar year, and open to corrections up to one month after submission. |
| SIAPE | Payroll processing centralisation system for civil servants in the federal civil service. | Federal civil servants (except members of the Armed Forces). | <ul style="list-style-type: none"> • No defined date³ • Open to correction at any time. |

1 The RAIS and GFIP are being replaced by the eSocial system. Details of the eSocial implementation schedule are available on the Federal Government website.

2 The RAIS and GFIP are being replaced by the eSocial system. Details of the eSocial implementation schedule are available on the Federal Government website.

3 Although the SIAPE has no set deadline for updating its registration data, the latest version of this database was provided on a monthly basis for the *Auxílio Emergencial* cross-checks..

Source: Prepared by the authors on the basis of the reference legislation and the technical handbooks for each administrative register. Further details on the administrative registers used for AE eligibility verification are available in the Attachment appended to this document.

Information on employment links and incomes for state, district and municipal civil servants, as well as the Legislative and Judiciary Branches, were made available by the General Controller's Office. Although bridging an important gap, the files raise challenges in terms of standardisation, qualification and coverage. The decentralised databases from which the records of civil servants at other tiers of government could be drawn present some challenges, including data standardisation and quality. Run by sub-national entities, these databases are subject to the realities of each administration. Furthermore, these data are not available for access by the Federal Government, nor are the databases for civil servants with the Legislative and Judiciary Branches. Attempting to bridge some of these gaps, the General Controller's Office and the Federal Court of Auditors (TCU) began to search the *Auxílio Emergencial* databases and other databases with restricted access for information on these groups of civil servants. Under the Technical Cooperation Agreement (ACT) signed with the Ministry of Citizenship (GoB, Min. Economia 2019; GoB, Pres. da República 1970, 1999, 2014)), the findings have been forwarded to this Ministry from May 2020 onwards. This Agreement also allowed these entities to interact with sub-national entities for approving direct access to these data files by the Ministry of Citizenship. But the challenges of standardisation and quality still persist. According to the respondents, data made available by the General Controller's Office (CGU) and the Federal Court of Auditors (TCU) do not cover the whole of Brazil, and are not provided with any regularity that would allow access to more recent information. Furthermore, they require additional efforts from processing staff who must consolidate files in a wide variety of formats and configurations, with the possibility of loss of information. In any case, the inclusion of databases for these categories in the processing engine helps understand the rising curve for the three *Auxílio Emergencial* implementation cycles.

In the specific case of the Armed Forces, it is worth mentioning that this group of civil servants was expected to be covered by the Annual Listing of Social Information (RAIS), but evidence of improper awards raised by the Federal Court of Auditors (TCU) revealed flaws in the records. At the recommendation of the oversight entities, the Ministry of Defence began to make listings of active and retired military personnel available to the Ministry of Citizenship. But this step was accompanied by a reverse effect, such as improper cancellations of the benefit for conscripts or people no longer connected to the Armed Forces. The is episode heralds another problem: outdated records in some of the databases. Referrals involving the Armed Forces led to in adjustments in checking compliance with the criteria for employment links among military personnel, with applicants on Ministry of Defence lists submitted to the validation on the payroll, also provided by this entity.

The rising number of administrative registers used for the *Auxílio Emergencial* implementation also stems from the introduction of new eligibility rules for the verification process, despite the absence of prior legal provisions. In this sense, it is worth mentioning the inclusion of six administrative registers related to the prison system during the AE1 stage, for the purpose of "barring" applicants serving prison sentences²⁴. This matter is emblematic to the extent that it initially results from different interpretations of a provision not included in the EA1 eligibility criteria, and noted only in the AE2 and AE3. reference legislation. Second, it reflects the weaknesses of successive databases for providing the desired information. In another example, the International Traffic System and the Federal Police's National Passport System (SINPA) were also added to AE1 for verifying people living outside Brazil, although this impeditive status would be explicitly stated only in the AE2 regulations (as indicated in Figure 1).

24 The databases of the Ministry of Defence, the Higher Electoral Court and state, district and municipal civil servants are among those with merely sporadic updates.

For people convicted of crimes by the Courts, the initial understanding of the Ministry of Citizenship classified everyone serving prison sentences as ineligible, although this provision was not included in Law N° 13,982/2020. The Federal Public Defender's Office (DPU) questioned this guideline, assuming that prisoners in open and semi-open presence might be eligible for the Programme (Public Civil Suit filed with the Porto Alegre Judiciary Subsection in Rio Grande do Sul State). Accepted by the Ministry of Citizenship, this reinterpretation required the administrators to identify detainees and the types of systems within which they were serving their sentences. The databases of the National Prison Department under the Ministry of Justice (DEPEN/MJ) and the Department of Justice in São Paulo State (DEPEN/SP) – a State housing one third of Brazil's prison population – were added to the reprocessing conducted by the International Traffic System (STI) from the payment of the second AE1 instalment onwards. However, the DEPEN/MJ databases proved insufficient to verification, despite having information from every State in Brazil, as they do not indicate the type of prison where sentences are served, do not keep records of departures from the prison system, and are not regularly updated. A cooperation agreement signed with the National Council of Justice (CNJ) allowed a second verification of this public in the -Unified Electronic System for Execution (SEEU) which, although providing information on prison regimes, is still awaiting implementation in some courts, including the São Paulo Court of Justice (TJSP) and the Regional Court -Fourth Region (TRF4) in Porto Alegre.

When defining a verification strategy that relies on other databases, *Auxílio Emergencial* assumes, with some margin of error, that these databases can actually portray reality. This assumption proved valid to some extent, but it also highlighted one of the most sensitive aspects of this initiative: outdated records. Three aspects call special attention in this regard. First, the inclusion of new databases to the eligibility validation engine throughout the implementation proved to be an efficient strategy to ensure a tighter focus for the Programme, but also brought instability to the process. This is because these databases are precisely the ones that have the most implications related to data updates. Most ad hoc databases do not have regular data update routines, or even if they do, they do not provide timely data updates to the Social Security Technology and Information Company (Dataprev)²⁵. Second, even databases with periodic updating routines follow their own timelines and it is not always possible to ensure reconciliation between them, especially in a complex system like that developed for *Auxílio Emergencial*. Finally, the processing model itself generates an automatic latency of information, tied to reference dates when uploaded into the eligibility engine. Each period reflects a snapshot that will be updated only for the next period. And as each database has its own routine, the time lapses between the most current data in the source register and data keyed into the *Auxílio Emergencial* system may vary, depending on the source.

It is nevertheless important to acknowledge that steps designed to mitigate the impacts of outdated records on verification registries were taken by the Ministry of Citizenship and the Social Security Technology and Information Company (Dataprev). The most important of them was the definition of an algorithm that detects whether an employment link is no longer active. The calculation for checking and active formal employment link addressed the

²⁵ Databases were included for the National Prisons Department under the Ministry of Justice (DEPEN/MJ), the National Prisons Department in São Paulo State (DEPEN/MJSP), for Closed Prison Sentences of the São Paulo State Prisons Department, the Wanted by the Courts under Felony Warrants – National Council of Justice (CNJ), the Unified Electronic System For Execution under the National Council of Justice (SEEU/CNJ) and the National Database for Prison Monitoring under the National Council of Justice (BNMP/CNJ). Subsequently, data on the institutional commitment allowance payer was added to this list, taken from the INSS Social Welfare and Pensions Benefits Database.

hypothesis that people with an open link in the databases, but with no remuneration for three months or more, may be rated as eligible. The subtext here is that the suspension of payments owed to a worker for three payment periods or more is an indication that the employment link has been terminated, even if there is a delay by the employers in reporting the termination.

Possible improprieties in the use of the information might also be mentioned, although they refer to specific niches with lighter quantitative impacts on processing. The use of a list of people who have held public office during the last five years and called “politically exposed”, as a link predictor, serves as an example, as this list includes family members and people close to the holders of such positions. Based on international transit control systems²⁶, the definition of residence outside Brazil is also questionable, as a series of hypotheses could indicate arrival or departure from Brazil with no records in the system, especially along national borders. In addition to political office holders, the Higher Electoral Court databases also include their alternates, who are not engaged in remunerated activities. Some of these inadequacies were resolved by the eligibility engine during implementation, as occurred with the Higher Electoral Court. The questionable use of some databases relates to specific niches with lighter quantitative impacts, that are not echoed in the databases rated as key factors for assessing *Auxílio Emergencial* eligibility for *Auxílio Emergencial*. Nevertheless, they are still relevant, particularly in an emergency situation like that caused by the Covid-19 pandemic, where the risk of having no substitute income steps up the importance of the benefit for the livelihoods of the most vulnerable segments of the population.

4.1. Family identification, links and incomes in perspective

Although rated as an individual benefit, granting *Auxílio Emergencial* was conditional on the applicant’s family structure, reflected in the family quota cap and the calculation of incomes earned by everyone in the same household²⁷. It is worth noting that this concept of ‘family’ is not based on blood relationships, but rather refers to people living in the same household, with their expenses met or contributing to its income. In addition to ensuring a tighter focus, this strategy offers the advantage of preserving the social welfare care model, ensuring easier dialogues with other initiatives in the basic protection field, such as the *Programa Bolsa Família*.

However, the absence of databases with information on family composition is an additional complicating factor in an already complex eligibility verification process. As shown in Table 5, the records entered for *Auxílio Emergencial* (Single Registry and ExtraCad) are references for identifying family groups. In this regard, Paiva et al. (2021) argue that the Single Registry is actually one of the few national registers with solid information on family composition, despite constraints related to working age men being under-reported. Otherwise, only the Personal Income Tax (IRPF) database records information on family structure, although also offering the possibility of breaking domestic groups down for different income tax returns. Consequently, family group composition and per capita income for *Auxílio Emergencial* applicants were the outcomes of information provided during registration.

26 Ministry of Justice and Public Security (MJSP) database, with information from the International Traffic System (STI) and the National Passports System (SINPA).

27 The Single Registry already identifies applicants an individual and family terms. The CAIXA registration app requests applicants to declare persons living in the same domicile, complete with their respective Personal Tax (CPF) numbers, used as the key factor for setting up a family database associated with the Analytical Database associated with the Analytical Database, and for cross-checking data when verifying compliance with family income criteria.

In order to extend eligibility verification beyond the applicant, family identification keys were defined for establishing links among people declared as members of the same group in the Single Registry and ExtraCad. Based on individual identification reference documents, keys were set up for establishing links among people declared as belonging to the same family, using the Individual Tax (CPF) numbers of the household members declared in the registration, as a processing key. As explained above, the complexity of this process is one of the justifications for freezing the Single Registry reference date and not opening new application windows. The Programme Administration assumed that lagging input costs would be less expensive than redefining the links among applicants and their family members. It is thus possible to say that, in operating terms, a strictly individual benefit would have streamlined *Auxílio Emergencial* implementation, allowing updates of applicant records or opening new application windows throughout the three implementation phases of this Programme. Furthermore, it is important to bear in mind that this approach would expand the coverage and consequently ratcheting up budgetary pressures on the Programme.

In contrast to what is noted with family identification, categories aggregating administrative records on links and incomes reveal a good State coverage capacity. However, this capacity reaches out to unregistered workers to only a very limited extent. The same gaps that required the registration of unregistered workers for granting *Auxílio Emergencial*, also hampers identification of their earnings. Personal Income Tax Declarations (DIRPF) were used as an alternative for estimating these amounts, giving rise to exclusion criteria that consider taxable and exempt income, in addition to the ownership of assets and properties reported to the Federal Revenue authorities. As shown in Figure 1, everyone qualifying for mandatory presentation of personal income tax declarations were rated as ineligible.

The use of personal income tax (IRPF) data reflects efforts to define categories related to goods and consumption as income predictors. Although Internal Revenue System data are consistent, they are nevertheless subject to a one-year update intervals. Meanwhile, attention should be paid to massive swings that affect the unregistered labour market, even under normal conditions, with this situation becoming even more dire in contexts of structural shock like the Covid-19 pandemic. During AE1 (between April and June 2020), data drawn from 2018 Personal Income Tax declarations (IRPF 2018) were taken as references, with a lag of over a year. From AE2 onwards (September 2020), the reference period was the 2019 baseline year.

The extensive analysis of database matches and mismatches is not intended to question the robust search system developed for the implementation of the *Auxílio Emergencial*, but rather to present elements that may add to discussions on interoperability, contributing to the construction of even more reliable data interaction structures. Along these lines, the administrative records used for *Auxílio Emergencial* verification have specific purposes that shape their own data input and management rules. These rules define the profiles of the registered publics, the collection methods and the updating routines. Even the most consolidated databases may present data registration delays. There is an acceptable time lag between the trigger event and the information, with these gaps likely to have been lengthened by the pandemic. In any case, it is vital to distinguish predictable delays from weak or even absent routines for collecting, treating and updating data. The use of less consolidated registries may have repercussions on the Programme management, possibly even leading to an upsurge in queries, challenges, protests and lawsuits (judicialisation). It is important to note that Social Security Technology and Information Company (Dataprev) has specific database verification stages, while CNIS management tools work with the *Auxílio Emergencial* Eligibility Engine to provide information that is as consistent as possible²⁸.

²⁸ An example of this is the manner in which death notifications are handled before they are entered in the Analytical Database. Information provided by Registry Offices is consolidated through cross-referencing with other

Table 4. Databases used to validate eligibility, by identification, link and income criteria for AE1 (AE2020), AE2 (AER), AE3 (AE2021)

| Administrative register | Aggregate Criteria | | | |
|--|-------------------------------------|------|---------------|----------------|
| | Individual or Family Identification | Link | Wage Brackets | Consumer Goods |
| CadÚnico | ◇ | | | |
| CNIS Individual | ◇ | | | |
| ExtraCad | ◇ | | | |
| BPF Payroll | ◇ | | | |
| SIRC | ◇ | | | |
| SISOBI | ◇ | | | |
| CNIS eSocial | | ◇ | ◇ | |
| CNIS GFIP | | ◇ | ◇ | |
| CNIS intermittent | | ◇ | | |
| TCU Elective Terms Off. | | ◇ | | |
| Mil. /Min. Def. | | ◇ | ◇ | |
| RAIS | | ◇ | ◇ | |
| Civil servants, trainees & interns – CNJ | | ◇ | ◇ | |
| Civil servants, trainees & interns – Judiciary (7 Courts)* | | ◇ | ◇ | |
| Mun. state & district civil servants – Gen. Con. Off. | | ◇ | ◇ | |
| SIAPE | | ◇ | ◇ | |
| CNPq /MCT Fellows | | | ◇ | |
| CNIS Soc.Sec. Benefits & LOAS | | | ◇ | |
| DIRPF/RFB | | | ◇ | ◇ |

Source: Prepared by the authors on the basis of interviews, and the Business Rules documents of the Social Security Technology and Information Company (Dataprev) (GoB, Dataprev 2020a, 2020b, 2021c) and Edict N° 620 issued by the Ministry of Citizenship on March 26, 2021 (GoB, Min. Cidadania 2021f).

Note: The list of Courts included in this category is shown in Table 2.

At this point, the complexity of the *Auxílio Emergencial* application verification system is quite clear. This complexity contrasts with the straightforward design the registration form. If, on the one hand, applicants are required to provide the minimum amount of information needed for identification, on the other, this information is subject to detailed scrutiny, cross-checked against the largest amount of data ever used to grant access to a social protection measure in Brazil. The forty-plus databases analysed in this section underpin a search system that assesses the employment, social security, welfare and prison history of each applicant, as well as their income conditions and family members. The latest version of the rules documented by Dataprev requires cross-checking 38 criteria that would prevent *Auxílio Emergencial* grants. In the view of programme administrators, this process has tightened its focus, and the progression of the system upgrading its processes and outcomes.

However, this model has an undeniable cost: judicialisation, reflected in a massive upsurge in lawsuits. Figures released by the Federal Public Defender's Office (DPU) and the National Council of Justice (CNJ) are revealing, on this aspect. More than 200,000 Legal Aid Procedures have been filed with the DPU and over 225,000 lawsuits related to *Auxílio Emergencial* had been filed by May 2021, according to the CNJ²⁹. It must be recalled that the statistics include only people able to access the Justice system, so the verification errors are undoubtedly even greater. Opening up enough channels that are also appropriate and easily accessible, with the possibility of documentary proof, could ease the burden on citizens, particularly during an emergency health crisis such as the Covid-19 pandemic. But as noted in the main Reports on this Project, this alternative has been side-lined in the design of the programme, which had instead invested in reprocessing as a means of analysing these complaints.

sources: the Mortality Information System (SIM) run by the Ministry of Health, the Internal Revenue Service and information collected by the INSS. The sensitivity of this process lies in the fact that some 30% of the information provided by Registry Offices is incomplete, including the absence of Personal Tax (CPF) numbers. When unable to confirm a death, the CNIS assigns it suspected death status which, for *Auxílio Emergencial* purposes, does not lead to ineligibility or cancellation of the benefit. For other CNIS clients, such as the INSS, suspected death status leads to the suspension of the benefit for three months, during which the beneficiary may contact social security agencies and update the information. Does not occur, suspected death status is converted into cancellation. For the *Auxílio Emergencial* programme, a death notification is rated as impeditive only if supported by the various databases taken into consideration for calculating the indicator.

²⁹ Data taken from the DPU Panel: <https://www.dpu.def.br/dados-auxilio-emergencial> and the National Observatory for Highly Complex Environmental, Economic and Social Issues with Broad-Ranging Impacts and Repercussions run by the CNJ <https://observatorionacional.cnj.jus.br/observatorionacional/acoes-judiciais/> (Braz.Gov., CNJ 2021; Braz.Gov., DPU 2021). Accessed on August 14, 2021.

5. Lessons learned for the future of social protection in Brazil

Targeting beneficiary families of the *Programa Bolsa Família* (PBF) and unregistered workers or those with no active formal employment links, *Auxílio Emergencial* has greatly expanded the coverage of income transfer policies in Brazil. Although a positive response to the magnitude of the crisis caused by the Covid-19 pandemic, this shift posed major challenges from the outset. They were addressed through intensive technology use, together with the institutional capacities already in place throughout the civil service.

The experience built up by the Single Registry and the *Programa Bolsa Família* ranks among the core elements for the success of the *Auxílio Emergencial* initiative. Rated among the world's most and broad-ranging responses to the crisis triggered by the Covid-19 pandemic, the *Auxílio Emergencial* initiative benefited from an earlier structure already in place within Brazil's social safety net system, particularly the Single Registry and the *Programa Bolsa Família*. The expertise built up over decades and a technical infrastructure that was already firmly consolidated were absorbed by the AE, providing the conditions needed for its implementation.

But the scope of *Auxílio Emergencial* and the specific characteristics of its operating model raised challenges for its implementation, particularly when identifying its target public. This issue was addressed by setting up a new social registry that endows more than 38 million unregistered workers with greater visibility, as this profile has not yet been addressed through the Single Registry. Although studies of this group are still scarce, preliminary tests indicate that some are in a transition zone between an active employment link and joblessness, or between registered and unregistered work (Gonzales, Barreira and Pereira, 2020). The introduction of this registry puts this public on the social protection radar.

The challenge of reaching out to unregistered workers with handled through the use of technology. Registration by mobile phones was fast and comprehensive, but may have been a barrier for part of the population with no Internet access. Digital registration endowed the benefit application process with greater agility, streamlining processes that that would not have worked as quickly for in-person contexts, when serving a public of this size. With about 115 million downloads (GoB, Agência Brasil 2020), 57 million applications, and 38.2 million approvals and grants, the mobile app proved able to reach out to a significant number of Brazilians.

However, digital registration may have raised immediate hurdles for population segments with no Internet access. Although the digital registration figures are impressive, consideration must also be given to the that using only online channels may have raised immediate hurdles to segments – around 21% of the Brazilian population – with no Internet access.

The automatic qualification of people on the Single Registry as *Auxílio Emergencial* applicants helped surmount part of the access barrier raised by limited Internet access and use. The history of registering vulnerable and ultra-vulnerable segments of the population,

together with a track-record of actively reaching out to traditional communities, underpins the inclusion of some digitally excluded segments in this benefit. Although fundamental, this strategy was not enough to ensure unrestricted access to *Auxílio Emergencial* for its target public.

The use of the Brazilian Post Office for handling the assisted registration of ultra-vulnerable segments of the population is among the most questionable aspects of the *Auxílio Emergencial* implementation. Initially, this is because post offices are not a focus of attention for vulnerable segments of the population; second because Brazil's social safety net has a robust outreach network with high capillarity of care. The use of this structure should have been imperative, particularly the Centres of Reference for Social Assistance (Cras) –whose Coverage Rate reaches 89%³⁰– to support registration activities, as these facilities offer a large proportion of the services directed towards vulnerable families and individuals.

The progression of the *Auxílio Emergencial* technological legacy should take into consideration the fact that the risks of digital exclusion weigh more heavily on the public in need of social protection. Consequently, and in light of the Single Registry experience, it is suggested that digital strategies be combined with in-person outreach channels that involve the SUAS care network. These recommendations are echoed in the arguments put forward by some authors, according to Paiva et al (2021). For example, digital tools for accessing social policies are strengthened when supplemented by in-person registration options that can also be used to reassess eligibility through pinpointing mistakes in the electronic format.

The sustainability of the new social registry created from the CAIXA app is also an issue to be addressed, as its launch was prompted by the need to grant *Auxílio Emergencial*. A possible merger with the Single Registry is hampered by structural differences between them. This and other aspects leave the future of the ExtraCad registry still hazy, while the need for solutions that endow mapping efforts with continuity remains latent. These solutions should ideally include strategies for expanding the social and economic information collected by ExtraCad and a proposal for updating this registry. Updating the records of more than 38 million people is not a trivial task; to be successful it must have the necessary incentive. This means the inclusion of this public within the social protection scope and supplying services and benefits, so that visibility becomes more advantageous to the unregistered than remaining invisible in the eyes of the State.

Technology was also applied to the mass data processing to check applicant eligibility, underpinning the development of an Analytical Database with more than 250 million Individual Tax (CPF) numbers and forty-two administrative registers. In practice, this verification encouraged interactions several Federal Government agencies and other State structures for sharing information and defining data submission protocols. As a result, an Analytical Database was set up with more than 250 million Individual Tax (CPF) numbers and information on links and incomes from more than forty administrative registers. The tool is rated as a breakthrough for handling large amounts of data, significantly reducing the time needed, with better working conditions. This structure and its surrounding interactions helped strengthen the CNIS, consolidating a process already underway within the Social Security Technology and Information Company (Dataprev) and the INSS which has been striving to develop data processing and security technologies for decades.

³⁰ The Coverage Rate addresses the proportion of Centres of Reference for Social Assistance (Cras) in place for assisting families listed on the Single Registry, taking into consideration the recommended number of families listed with CRAS under the Basic Social Protection rules, for municipal population size, within a set geographical area, for the year in question. Source: Early Childhood Legal Framework Observatory (OBSERVA 2021).

Advances in strategies and the possibilities of interoperability among government databases is an obvious benefit of the *Auxílio Emergencial* eligibility validation process. But the sustainability of the Analytical Database is conditional on its development.

Recognising the Analytical Database as part of the *Auxílio Emergencial* legacy, it is important to spotlight its limitations and discuss ways of mitigating them, so that this model can provide input for future initiatives.

The impacts on applicant eligibility of out-of-date registries, and even inconsistencies in some databases, calls for reflection on the available information quality.

It is a fact that many databases – and thus more data to be checked – leads to a tighter focus. But as information quality degrades, due to infrequent updating, among other reasons, operating costs also increase, reflected in exclusion errors, challenges, protests and lawsuits. As argued, is certain time lapse is considered acceptable between the generating fact and entering the information. But it is to distinguish predictable delays from weak or even absent data collection, treatment and updating routines. It is also important to remember that the State's decision to use outdated data inappropriately transfers the burden of seeking a fair hearing to citizens

This issue may be addressed by defining a trade-off between quantity and quality, in addition to establishing mitigation mechanisms, as the use of administrative registers with some level of outdated is inevitable.

The selection of administrative registers with pre-defined updating routines, and prior assessments of databases that allows the adoption of qualification mechanisms and data consistency analyses, may be resources used to define which databases should be assigned higher priority for inclusion in future eligibility systems. Investments in data management tools (such as a variables dictionary) and the inclusion of key variables are also essential. Another alternative is to define steps intended to mitigate the impacts of outdated data, such as those adopted by *Auxílio Emergencial* when constructing an algorithm that can detect whether an employment link is no longer active, by relating the link to remuneration over the past three months, qualifying the information despite any delays in its disclosure.

The processing model used in the Analytical Database also influences the timeliness of the information.

The monthly updates of this Analytical Database are performed from a reference date onwards, for all the administrative records, which makes it hard to compatibilise databases with different logics and update timeframes. Due to the latency of the Analytical Database information, it is important to underscore the significance of the shift to a transactional format, which will allow automatic and immediate input as soon as updates are completed in the registries of origin, with fewer errors caused by delays in data uploads, as it already happens with the CNIS. Ideally, this database should evolve to an online consultation model.

Another issue that demands attention in relation to the setup of the eligibility verification system is the notification model advising applicants that their benefits have been denied after eligibility verification.

Incomplete information undermines the database use prevalence analysis, while curtailing access to information that may, on the bottom line, lead to the curtailment of a right. Consequently, ineligibility, suspension or cancellation messages must clearly indicate the reason and origin of the information affecting the benefit. This is the only way to ensure an effective right of response. While advances in the notification messages generated by the Social Security Technology and Information Company (Dataprev) must be acknowledged, there is still room for improvement, particularly through upgrading the technology used to construct the reference database. On this aspect, technical difficulties and red tape must be surmounted, allowing users to request alterations to their data in the source records and in the consolidated files.

Finally, there is a clear need to implement the General Data Protection Law (LGPD) enacted through Law N° 13,709 of August 14, 2018 and coming into full effect on August 2, 2020. The Brazilian experience shows that technology played a key role in the *Auxílio Emergencial* implementation process. But the future outlook for the increasing presence of digital mechanisms for selecting and granting of social benefits must consider the fact that these solutions usher in new complexities, while also requiring specific investments in data security. The challenges of managing and sharing information, especially personal data, the importance of transparent policies and compliance with safeguards and risk mitigation mechanisms already in place throughout the Brazilian legal system, and particularly the LGPD, and international standards.

The following table summarises the challenges still raised by *Auxílio Emergencial* eligibility verification that require broader social protection, in addition to the main recommendations and legacies of this experience.

Table 5. Overview of *Auxílio Emergencial* challenges, recommendations and legacies

| Challenges | Recommendations | Legacies |
|--|--|---|
| <ul style="list-style-type: none"> • Absence of family identification databases • Absence of income information for unregistered and self-employed workers • Absence of a single nationwide identity number that could be used as a key for cross-checking data among administrative registers • Outdated records in administrative registers administered at three tiers of the civil service • Difficulties and constraints on data-sharing interactions among government entities • Sustainability of the Unregistered Workers Social Register (ExtraCad) | <ul style="list-style-type: none"> • Expansion and update of social and economic data collected by ExtraCad • Combination of digital strategies and in-person service channels for registration and protesting eligibility results • Clear and straightforward communications with users, including full information granting or refusing claimed rights • Definition of quality standards for use by administrative registers as means of reaching out to vulnerable segments of the population • Use of alternative income protection mechanisms for unregistered workers • Investments in data collection, management and storage media qualification mechanisms • Investments in transactional models for database interactions • Investments in strategies allowing users to easily alter their data in administrative records • Use of the Unified Social Assistance System network in registration, update and eligibility protest processes | <ul style="list-style-type: none"> • Institutional learning process on the limits and possibilities for using digital resources to reach out to vulnerable segments of the population • Data-sharing interactions among the structures of entities at different tiers of government • Progressing with strategies and exploring interoperability possibilities among government databases • Analytical Database consolidated data on more than 250 million de Individual Tax (CPF) numbers and over forty administrative registers. • Consolidation of the CNIS as a benchmark for interaction and communication among databases • Development of technology and logistics for large-scale registration drives • Development of technology for processing massive amounts of data • New social register with more than 38 million people registered |

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Attachment

Databases used for record validation by available characteristics*

| Registry | Description of Content | Administrator | Update Period | Eligibility Criteria |
|--------------------------------------|---|---|------------------------------|--|
| CNIS | Individual Tax (CPF) Number | RFB/Dataprev | Sporadic | Age, Individual Tax (CPF) numbers not located, resident abroad, death notification |
| CNIS GFIP | Length of Service Guarantee Fund (FGTS) Payment Slip and Social Security Information | Receita Federal | Monthly | Employment link, income |
| CNIS eSocial | Digital Bookkeeping System for Tax, Social Security and Labor Obligations | Secretaria Especial de Previdência e Trabalho, Receita e INSS | Monthly | Employment link, income |
| CNIS GPS | Social Security Payment Slips for Individual Taxpayers | INSS | Monday – Friday ¹ | Individual taxpayer (no employment link) |
| CNIS intermitente | Workers with intermittent employment links | INSS | Monthly | Intermittent employment link |
| CNIS Social Security Benefits & LOAS | Payroll of the National Institute of Social Security (Maciça) | Secretaria Especial de Previdência e INSS | Monthly | Social security or welfare benefit, income |
| CNIS Unemployment insurance | Database with information amounts received by citizens as unemployment insurance –months of payment and amounts | Secretaria de Trabalho | Semanal | Unemployment insurance, Labor benefit |
| SISOBI | Death Control System, with information on deaths from Natural Persons Civil Registry Offices all over Brazil | INSS | Monthly ² | Death notification |

¹ Standard payment continues monthly, there are no guarantees of updates, as a person may do so within up to 5 years of the contribution reference date (payment of fine and interest). For persons receiving up to one minimum wage or less, there is a quarterly settlement option.

² Article 68 of Law N° 8,212/1991 (the Organic Social Security Act) establishes the obligation for the Notary in charge of a Civil Registry Office to notify the National Institute of Social Security of the records of deaths occurring during the month, with a record of deaths that occurred during the month immediately prior thereto, by the 10th day of each month.

* The eSocial system will replace a set of legal obligations to which companies and employers are currently subject, including the GFIP, Caged and RAIS.

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|---|--|---|---------------------|--|
| SIRC | National Civil Registry Information System data, marriage, death and stillbirth records | INSS | Diária ³ | Death notification |
| Instituidores da pensão por morte | Insureds, retired or not, already deceased and with pension for death and the payroll of the National Institute of Social Security (Maciça) | INSS | | Death notification |
| RAIS (2018 e 2019) | Annual Listing of Social Information, Administrative register for census purposes of establishments in the public and private sectors | Secretaria Especial de Previdência e Trabalho | Annual ⁴ | Employment link and income |
| SIAPE | Staff Administration Integrated System – Federal Civil Service | Ministério da Economia | Sporadic | Employment link and income |
| SIAPE - Estagiários e residentes | Staff Administration Integrated System – Federal Civil Service, including temporary contracts, traineeships, internships, medical residencies etc. | Ministério da Economia | Sporadic | Employment link, income |
| MEI | Individual Micro-entrepreneur | Receita federal do Brasil | Sporadic | Individual micro-entrepreneur |
| Politicamente expostos | Government agents holding or having held significant positions, jobs or functions during the past five years | CGU | Sporadic | |
| BEM | Beneficiaries of the Emergency Benefit for Employment and Income Maintenance | Ministério da Economia | | Recipient of Emergency Benefit |
| DIRPF/RFB | Taxable income database | Receita federal do Brasil | Sporadic | Taxable or tax-exempt income, dependents, possession or ownership of assets |
| Elective Terms in Office – Higher Electoral Court | Database of elected candidates and alternatives (municipal, state and federal spheres) | TSE | Sporadic | Employment link |
| DEPEN/MJ (Nacional) | Database of the National Prison Department, with people held in open and closed prison systems | Ministério da Justiça | Sporadic | Notification of persons held in detention Notification of persons in closed prisons |

³ Decree N° 9,929/2019 states that civil registry data must be included in the National Civil Registration Information System (SIRC) preferably each day, with the deadline being the 10th day of the subsequent month.

⁴ Establishments must complete the Annual Listing of Social Information (RAIS) between mid-February and the start of April in each calendar year.

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| DEPEN/MJSP | Database of the National Prison Department and São Paulo, with people held in open and closed prison systems | DPJ/SP | Sporadic | Notification of persons held in detention Notification of persons in closed prisons |
| Presidiários em regime fechado/ SP | Database of prisoners held in closed prison systems in São Paulo State | Ministério da Justiça | Sporadic | Notification of persons in closed prisons |
| Commitment allowances | Payers of commitment allowances in the Social Security and Welfare Benefits database | INSS | | Notification of persons in closed prisons |
| SEEU/CNJ | Unified Electronic System For Execution – centralizes and standardizes the administration of criminal court sentences nationwide | CNJ | Sporadic | Notification of persons held in detention Notification of persons in closed prisons |
| Persons sought by the Courts | List of persons sought by the Courts under felony warrants awaiting service | MJ | Sporadic | Notification of person with unserved warrant of imprisonment |
| BNMP/CNJ | National Prison Monitoring Database | CNJ | Sporadic | Notification of persons held in detention Notification of persons in closed prisons |
| Members of the Armed Forces/ Ministry of Defense | Civil servants still working, retired, or pensioned off, linked to the Armed Forces (Civil servant incomes) | Ministry of Defense | Sporadic | Employment link, income |
| CNPq & Capes Fellows/Grantees | List of Fellows awarded grants by the National Council for Scientific and Technological Development (CNPq) | MCT MEC | Sporadic | beneficiário de bolsa de estudo, income |
| Residents abroad/DPF | Citizens with indications of residence outside Brazil, based on information from the International Transit System (STI) and the National Passport System (SINPA) run by the Federal Police | Ministério da Justiça | Sporadic | Residents abroad |
| Medical residents/Capes | Database of citizens with medical residency links and incomes | MEC | Sporadic | Medical residency with employment link and income |
| Servidores municipais, estaduais e distritais - CGU | Municipal, state and district government agents, cross-referenced by the General Controller's Office | Bases descentralizadas | Sporadic | Employment link, income |

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| Civil servants, trainees and interns – National Council of Justice | List of civil servants and remuneration – Judiciary Branch | CNJ | Sporadic | Employment link, income |
| Civil servants, trainees and interns– Regional Electoral Courts | List of civil servants and remuneration – Judiciary Branch | Bases descentralizadas | Sporadic | Employment link, income |
| Civil servants, trainees and interns – Regional Labor Courts | List of civil servants and remuneration – Judiciary Branch | Bases descentralizadas | Sporadic | Employment link, income |
| Civil servants, trainees and interns – Federal Regional Courts | List of civil servants and remuneration – Judiciary Branch | Bases descentralizadas | Sporadic | Employment link, income |
| Civil servants, trainees and interns – State Courts of Justice | List of civil servants and remuneration – Judiciary Branch | Bases descentralizadas | Sporadic | Employment link, income |
| Civil servants, trainees and interns – State Military Courts | List of civil servants and remuneration – Judiciary Branch | Bases descentralizadas | Sporadic | Employment link, income |
| Civil servants, trainees and interns – Higher Military Court | List of civil servants and remuneration – Judiciary Branch | STM | Sporadic | Employment link, income |
| Civil servants, trainees and interns – Higher Electoral Court | List of civil servants and remuneration – Judiciary Branch | TSE | Sporadic | Employment link, income |