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BRAZIL

The National Employment System and automated management of unemployment

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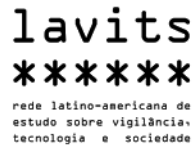
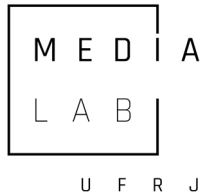
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Since 2019, Derechos Digitales has been part of the IDRC's Cyber Policy Centres, together with leading organizations in technology and public policy issues in the Global South. The report comes under the "Artificial Intelligence and Inclusion" area of work, coordinated by Jamila Venturini, Juan Carlos Lara and Patricio Velasco. For more information on this project, please visit <https://ia.derechosdigitales.org/en/>



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1. EXECUTIVE SUMMARY

This report presents results from an analysis of the design and implementation process for artificial intelligence (AI) tools on the job listings portal of Brazil’s National Employment System (Sistema Nacional de Emprego, SINE), a process made possible through a technical cooperation agreement between the Brazilian government and Microsoft in 2020.

In SINE’s workforce intermediation process, AI tools play two roles: matching workers to job vacancies and worker profiling. The first consists of using AI to produce a crossmatch between job openings listed on the portal and the workers considered most suitable to fill them. The profiles aim to segment workers registered in the database according to criteria on their ability to be reintegrated into the job market, supporting both the internal process of recommending job listings on the site and the orientation of public employment policy, above all on professional training.

In ‘Context’ we will present SINE’s history and the process of rebuilding the agency within the surrounding framework, the country’s demographic context, the regulatory and legal context for implementing the system in SINE and the use of AI in Brazil. In ‘Data Ecosystem’ we describe the data feeding the system, along with the legal basis for their use. In ‘Anatomy of Implementation’ we provide a detailed description of the implementation and design process for the automated decision-making system.

Given that the automated intermediation and profiling tools found in SINE are still in implementation phase, their impact cannot yet be evaluated. The report thus presents some ‘Potential Risks and Impact,’ highlighted based on the investigation. These refer primarily to three points:

- 1) the way in which the operation of these tools influences and conditions the field of opportunities for unemployed workers, with the risk that system’s own performance may negatively affect the segment of workers who do not achieve job placement and are precisely the stated audience for public employment policies;
- 2) the intense power imbalance and lack of transparency involved in this kind of model and the difficulty for workers of grasping and becoming minimally familiar with the system’s rules of operation, as well as of intervening in or even questioning the results of the intermediation and profiling to which they are subject;
- 3) the risks associated with Microsoft’s potential influence on the criteria for and design of public employment policy, as well as risks related to the transfer of information and strategic data on the economy and labor market. In addition to these, the fragility of the accountability mechanisms foreseen in the implementation project is noteworthy.

2. INTRODUÇÃO

This report publishes the results of an analysis of the design and implementation process for artificial intelligence (AI) tools used in workforce intermediation and profiling in the context of Brazil’s National Employment System (Sistema Nacional de Emprego, SINE), one of the world’s largest public employment services. The product of a collaboration between MediaLab.UFRJ, the LAVITS network and Derechos Digitales, the research took place under the scope of the comparative study *Artificial Intelligence and Inclusion in Latin America: case studies and comparative analyses*, which analyzes four cases in four Latin American countries where Automated Decision-Making (ADM) systems were adopted by the public sector, focusing on their impact on human rights.

The implementation of an automated decision-making system at SINE is occurring against the backdrop of the agency’s restructuring by the Jair Bolsonaro administration; it includes, among other measures, the adoption of AI tools on the Employing Brazil (*Emprega Brasil*) portal and opening up the SINE database to private parties. The implementation of AI tools for automated workforce intermediation and profiling is possible thanks to a technical cooperation agreement between the Brazilian government—via its Special Secretary for Productivity, Employment and Competitiveness (Secretaria Especial de Produtividade, Emprego e Competitividade, SEPEC)—and Microsoft. The agreement was signed in November 2020 and is the result of that company’s application to a public request for proposals to address the negative impact generated by the COVID-19 pandemic on the Brazilian productive sector. However, the relationship between the parties for AI use in the context of SINE began in 2019.

In the course of this report, we first present the context for the studied case, focusing on the history of SINE’s restructuring, Brazil’s demographic context and the regulatory and legislative context for implementing AI within SINE and in Brazil. Next we describe the data ecosystem involved in the case study, including its legal basis, followed by the design and implementation track for automated intermediation and profiling tools in SINE. Although the effects of these tools cannot yet be evaluated since they are still in implementation phase, our research allows us to point out the potential risks and impact, which are explored in the final topics of this report.

The investigation was conducted from August to December 2020 and was based on: investigation and analysis of regulatory materials and official documentation directly and indirectly related to the project; literature review; navigation on the Employing Brazil portal to simulate a user’s experience; request for public information using the Access to Information Act (Law 12.527); and interviews with 11 actors directly or indirectly involved in the design and implementation of the solution, and/or in topics related to personal data protection, the labor market and the defense of labor rights.

3. CASE STUDY CONTEXTO

3.1 The National Employment System (SINE)

Established by Decree 76.403 of October 8, 1975 and included in constitutional regulations¹ via Law 13.667 of May 17, 2018, the National Employment System (SINE) is responsible for coordinating the application of three central policies of the public employment system, including the following actions and services: *workforce intermediation, counseling for professional qualification and granting of unemployment insurance benefits.*

In the employment policy tripod, the first leg corresponds to workforce intermediation, prioritizing the reduction in employment search time with the aim of quickly reintegrating the worker into the job market, decreasing both costs and wait time for workers and employers. The second leg addresses actions and programs whose objective is the qualification, certification and orientation of workers, prioritizing those in situations of greatest social vulnerability.² Lastly, the third leg refers to the provision of temporary financial assistance to unemployed workers who have been fired without cause. Thus the three axes of SINE cover a set of public policies that seek greater effectiveness in placing workers in productive activity, aspiring to social inclusion via employment, work and income, as well as the promotion of independent activities and small individual or collective enterprises (Lobo and Anze, 2016).

The system’s creation was based on International Labor Organization (ILO) Convention No. 88 adopted in 1948. Ratified by Brazil in 1957, the convention directs signatories to create and maintain a free public employment service made up of a network of local and regional offices, with the goal of promoting “the best possible organization of the employment market as an integral part of a national program for the achievement and maintenance of full employment and the development and use of productive resources” (ILO, 1948).

Currently SINE is one of the best public employment services in the world (Marra; Oliveira; Martins, 2019) and is coordinated by the Ministry of Economy, through the Special Secretary for Productivity. The system’s service network is decentralized under agreements signed between the Federal Government and the States, the Federal District and municipalities with populations greater than 200,000 inhabitants. The system serves approximately 15 million workers and 1.5 million employers per year, at 1,600 physical service centers³ and via the Employing Brazil portal. With a single database for the entire service network, comprising approximately 65 million employee records, the portal provides diverse services to workers and employers, with no need to personally visit a service center.

1 With regulation of Article 22 of the Federal Constitution.

2 According to the first point under Article 2 of Resolution 560 of CODEFAT of November 28, 2007, workforce intermediation and professional skills services “are preferentially targeted to the following groups: I - workers entitled to unemployment insurance; II - unemployed individuals; III - trainees; IV - young people; V - young apprentices; VI - inmates and ex-inmates of the penal system; VII - workers in the grassroots solidarity-based economy; VIII - freelancers; IX - rural workers; X - workers rescued from conditions similar to slavery; XI - fishers; XII - people with disabilities; and XIII - participants in the National Program of Guided Productive Microcredit (Programa Nacional de Micro-crédito Produtivo Orientado, PNMPPO).”

3 Note from editorial team: Originally this information was found at: <https://dados.gov.br/dataset/postos-do-sistema-nacional-de-emprego-sine>. However, as of March 31, 2021, it was no longer available online.

With the creation of SINE, the Federal Government began to have direct, active participation in the labor market, marking a milestone in the implementation of public employment services in the country. Accordingly, analysis of the text of the decree creating the entity, as indicated by Matos (2011, p. 11) and Rossetto (2019, p. 34), highlights two main objectives among SINE’s initial responsibilities: workforce intermediation services and the duty to produce information on the employment market.

Offered by the system free of charge, the workforce intermediation service brokers job supply and demand, and its goal is to “provide information and guidance to workers seeking jobs, and to employers seeking human resources, in order to foment the meeting of the two, with the objective that workers occupy available vacancies” (Rossetto, 2019, p. 8). The process consists of performing a match between profiles of workers registered in the system and the categories and requirements of job openings offered by companies in SINE. Based on the compatibility of these variables, the system refers people to job interviews, and, ultimately, records the result of the referral.

In terms of the production of data and information when a person registers, whether at a physical site or on digital platforms, the system collects a large volume of personal data, as well as the professional profile of those who want a new job. In turn, when listing available vacancies, companies provide a set of information on the jobs they are creating and offering in the working world. Lastly, there are data on unemployment insurance, professional training and qualification, and productive microcredit programs (Moretto, 2018).

3.1.1 Expansion and introduction of technology

It is important to highlight that this broad list of SINE’s responsibilities and services has been assigned over time and using different legislative frameworks. In 1975, when the system was created, it operated under the exclusive management of the Ministry of Labor; its network of locations was only found in capitals and main cities, and the services offered were limited to workforce intermediation and preparation of Work Permits.

Since Law 7.998 of January 11, 1990 and Law 8.019 of April 11, 1990, SINE has been funded by the Worker Protection Fund (Fundo de Apoio ao Trabalhador, FAT)⁴ and has become the operational arm of the Unemployment Insurance Program (Programa de Seguro de Desemprego, PSD). The system took on responsibility for executing the tripod of public employment policies, the local network grew, and management became shared based on a new governance structure with the installation of the Worker Protection Fund Deliberative Council (Conselho Deliberativo do Fundo de Amparo ao Trabalhador, CODEFAT). The collective body, of a tripartite and joint nature, is made up government, worker and business representatives; it is responsible for financing, regulating and overseeing the programs covered by the FAT and PSD. CODEFAT is thus presented as a democratic social control mechanism, with deliberative powers in the management of resources and the regulation of the PSD (Rossetto, 2019).⁵

4 Regulated by Law 7.998, the Worker Protection Fund is a special fund, of an accounting-financial nature, to finance the Unemployment Insurance Program, ‘Bonus’ Salary and funding for Economic Development Programs. This information was originally found at: <https://portalfat.mte.gov.br/codefat/resolucoes-2/resolucoes-por-assunto/geracao-de-emprego-e-renda/linhas-de-creditos-especiais/fat-giro-cooperativo-agropecuaria/sobre-o-fat/>. However, on March 31, 2021 it was no longer online.

5 The composition of CODEFAT is as follows: government participation; worker representation by CUT, FS, IUGT, NCST, CTB, CSB; and business representation by CNI, CONSIF, CNC, CNA, CNTur, CNT. This information was originally found at: <https://portalfat.mte.gov.br/codefat/composicao-codefat>. However, on March 31, 2021 it was no longer online.

However, the broad coverage of the services provided by the SINE network and the expansion of its responsibilities have not resulted in correspondingly effective results from the system. For example, SINE’s participation rate for labor market reinsertion was 3.53% of the total number of workers accepted in formal job vacancies in Brazil in 2018 (National Job Market Observatory, 2019). As Rossetto mentions (2019, pp. 84–85), there are four main problems: inadequate national coordination that lacks mechanisms stimulating greater internal cooperation; the lack of appropriate goals for improving the effectiveness of the main objective, the intermediation and assignment of labor; a team operating without national qualification and productivity parameters; and funding difficulties, with unstable transfers and a large decrease in resources in recent years, with no equivalent reduction in SINE’s scope of activities and responsibilities.

Lobo and Anze (2016) indicate that, although the PSD has guaranteed a sustained source of funding and has allowed the development of some planning and management tools, there is still room for improvement:

Due to low effectiveness in providing the set of services, stagnating results, the deep diversity of the customer service network, lack of integration among different policies and services, low participation of active employment policies and recurring difficulties in the decentralization of resources, interfederative coordination, and supervision and monitoring of activities, the need for restructuring SINE is clear.

Accordingly, during Dilma Rousseff’s administration, new national legislation was drafted and filed for SINE with the goal of promoting a structural change in its organization, operations and management. Approved on May 17, 2018 as Law 13.667, the SINE Act—as it was known—provided for introducing the use of technology as a tool to improve the system’s services. Article 2(X), concerning SINE’s guidelines, reads:

X – The continuous improvement of the quality of services offered, in an efficient, effective, efficacious and sustainable manner, particularly through the development of technological applications and solutions that will be offered to workers [...].

However, the use of digital tools and the automation of the system predate the SINE Act. Based on collaboration between the already defunct Ministry of Labor and Dataprev,⁶ the Employing Brazil Portal⁷ was created in 2010 as an integrated system with service data from the PSD (Borges, 2018) and the Easy SINE [SINE Fácil] mobile application in 2017,⁸ bringing together at a national level information on job listings and workers seeking employment, as well as the offering of professional qualification courses.

Data from the Special Secretary for Productivity, Employment and Competitiveness (ME/SEPEC) indicate that there are 100 million monthly accesses on SINE digital platforms.⁹ According to Cacciamali and José Silva (2018, pp. 168–169), “the two products made it possible to facilitate matching the characteristics of interested workers to available job openings, facilitating the conduct of interviews and recording the results of referrals. Thus, the portal and the application make it possible to better map the labor market nationally, identify appropriate professional skills and enable the worker’s placement and re-assignment in the

6 For more information on Dataprev, see Section 4.

7 Initially called the ‘More Employment Portal.’

8 <https://empregabrasil.mte.gov.br/termos-e-privacidade/>

9 Source: “SINE: Workforce Intermediation. Investigation with users” report prepared by the Secretariat for Digital Government and the Ministry of Economy in September 2019.

productive sector at low cost throughout the country. It therefore incorporates the main services of the Public Employment System” (Cacciamali and José Silva, 2018, p. 169).

3.1.2 New SINE

Starting in 2019 with the Bolsonaro administration, the process of restructuring SINE received a name: New SINE.¹⁰ Announced on February 27, 2019, the change is not simply cosmetic. The document titled “The new SINE: Changes to the Brazilian model of workforce intermediation” (Barbosa Filho, Ferreira and Araújo, 2020)¹¹ highlights that the system will undergo “structural changes to incorporate workforce intermediation practices and mechanisms aligned with those adopted in Organization for Cooperation and Economic Development (OECD) countries.” The implementation of technology tools, such as AI, for the match analysis, the use and importance of digital data with information on the employment market and partnership with the private sector are elements that become central to the New SINE.

The goal, as proposed by leaders in the document, is to adopt measures that go beyond establishing a new model for SINE to convert the implementation of digital technology into priority mechanisms for “better categorizing workers in terms of the likelihood of finding a job.” The integration of digital tools is defended in the document because “they will enable service centers to focus on providing workers with tailored solutions and will contribute to reducing information asymmetry in job searches, with the goal of increasing the likelihood that the worker will be re-assigned to a position in the employment market.” Composed of seven stages that will be implemented gradually, we highlight the first three, referring specifically to the use of technology tools and digital data:

- i) Open SINE;
- ii) the adoption of worker profiling to enable better service that includes tailoring workforce intermediation, professional guidance and qualification services;
- iii) review and updating of SINE’s digital platforms, with the incorporation of artificial intelligence and machine learning techniques.

The New SINE project is organized on two main fronts: on the one hand, shared use of the system’s database with private initiatives; on the other, implementation of the AI tool on SINE’s job openings portal in collaboration with Microsoft.

3.1.2.1 Open SINE

As the Bolsonaro administration got started in April 2019, the first stage of New SINE entered into operation. With the stated goal of increasing employability, reducing wait times for workforce reintegration and giving greater independence to employers and workers, the government opened up the database of workers registered with SINE to private companies and other institutions operating in the workforce inter-

10 The announcement of the ‘New SINE’ at a meeting of the Ministry of Economy with representatives of reintegration companies can be seen here: https://www.youtube.com/watch?v=WKsYq_ojMYw

11 Barbosa Filho, Ferreira and Araújo are, respectively, the SPPE Secretary, the SPPE Undersecretary for Employment and the SINE General Coordinator. Translators note (T.N.): Original title in Portuguese: O Novo Sine: mudanças do modelo brasileiro de intermediação de mão de obra.

mediation sector.¹² At CODEFAT’s Ordinary Meeting 152, where the opening up of the data was approved, Undersecretary for Employment Marcelo Leandro Ferreira, arguing in defense of the initiative, emphasized SINE’s low participation rate in formal employment market reintegration. Ferreira then suggested that a possible solution to improve the SINE network’s performance would be to increase its capacity for capturing vacancies and/or its efficacy in referring workers.

It is important to note, as documented in public minutes¹³ from the meeting, that although the measure was approved by the majority, the worker sector representatives, comprising the main unions, either abstained or voted against it. In an interview, one of the representatives from the labor sector said that the reason he voted no was the lack of clarity and guarantees surrounding the potential consequences the measure as presented could have in terms of workers’ data privacy, as well as regarding fairness and equal access and opportunities:

We are very much in favor of using technology to improve the system, such as the Employing Brazil Portal, or the Easy SINE application, for example. The workers group’s concerns had to do with the potential privatization of the system, the lack of clarity on protection for people’s data confidentiality and the possible use of this information, as well as the lack of guarantees on mechanisms for fairness and equal opportunity. Look, I have my doubts about these companies’ interest in having access to this database. I say this because the profile they serve is, on average, better educated and more skilled—people who can even pay for the service—than the people who search using SINE. I am speculating about their interest and whether this measure will have any degree of effectiveness. Another reason (for the negative vote) was that this opening of data leads to the establishment of a system limiting access to some people, particularly those who most need it, and that it only contributes to a small segment of society. We are talking, for example, about people’s access to broadband. Will the poorest worker’s job search receive the same treatment, the same conditions, as the search of someone who can pay for the system? The nay votes and abstentions occurred because we are not clear about protection of the public employment system, data use and, in particular, equal conditions.

Based on Resolution 826, the Open SINE portal was created.¹⁴ The portal offers two ways to access workers’ data and vacancies: one database accessible to any user and another with restricted access, linked to the qualification of legal persons who operate in workforce intermediation (known as HRTechs) interested in being affiliated with the scope of Open SINE. In response to a request for information using the Access to Information Act,¹⁵ the General Coordination for Special Projects at SPPE reported that the workers’ sharable data are: nationality, disability, address, academic preparation, general information, professional goals, municipalities of interest, and contact name and information, in case a worker–vacancy match is found.

12 Resolution 826 of March 26, 2019.

13 “The President asked if there were any additional statements; if not, it would submit the issue to a vote. Having been approved by the majority, and recording the abstention of the CUT Advisors, Mr. Quintino Marques Severo; from CTB, Mr. Antonio Renan Arrais; and CSB, Mr. José Avelino Pereira; and the nay votes from advisors from Força Sindical, Mr. Sérgio Luiz Leite; and from NCST, Mr. Geraldo Ramthun.” Source: http://portalfat.mte.gov.br/wp-content/uploads/2019/05/Ata-152%C2%AA-RO-CODEFAT_26.03.2019.pdf

14 <http://sineaberto.economia.gov.br/>

15 Protocol 03005.184809/2020-85

The process of accrediting affiliated companies began with Request for Proposals No. 2/2019 and is regulated by Ordinance 21.130 of September 22, 2020. Analysis of the request for accreditation involves verifying whether the applicant conducts workforce intermediation activities and ensuring it does not appear in public registries of labor exploitation in conditions similar to slavery, child labor or other similar prior activities. Via Ordinance 21.130, 16 companies were approved as affiliates, according to a survey conducted by the *Diário Oficial da União* (DOU) on November 30, 2020.

The set of standards instituted by Open SINE includes the prohibition on charging workers for the use of third-party tools that use SINE data. It also stipulates that the possibility of sharing data must be formalized via a Statement of Responsibility containing clauses prohibiting the use of data for purposes other than workforce intermediation, in addition to documenting the interested company’s commitment to not using means or practices classified as discriminatory in the use of this information. It further plans for the periodic provision of information and monitoring by the government on the results obtained using the SINE database for matching job openings (which workers were hired, which not, reasons for not hiring, etc.) and has the goal of both comparing the effectiveness of SINE’s intermediation to that of private companies and, in the future, feeding worker profiling tools for those registered in the SINE database.

According to Barbosa Filho, Ferreira and Araújo (2020), the objectives of the initiative to open the database are a step toward diversifying the use of technological instruments geared to workforce intermediation:

In this case, technology is used to incorporate private agents with the goal of structuring a more efficient intermediation system. [...] The expected result of this change is for the best trained and qualified workers in SINE’s sampling to obtain employment and, over time, the reduction of frictional unemployment. [...] The initiative seeks to accelerate the occupation of available jobs in the economy and, furthermore, to include, through private companies, the millions of workers registered in SINE in the various employment applications available on the market, presenting an accelerated dynamic of different business mechanisms and models that offer workers new employment possibilities.

Access by private companies to worker data registered in SINE is possible thanks to Dataprev. Initially, the data files were available for download, but to satisfy demand for automated access from some companies, the data were also made available through an Application Programming Interface (API).¹⁶

SEI Informational Note 5566/2020/ME of March 16, 2020, which addresses monitoring the actions resulting from data sharing under the Open SINE project,¹⁷ describes how once accredited, a private company has access to the non-identifiable data of a randomly selected sample of millions of active (i.e., recently created or modified) records, and may use this information in their services and platforms (e.g., a website or mobile application). When a worker’s record is identified as suitable for a vacancy, the private company has access to his or her contact information: name, phone number and e-mail address. Initially, accredited companies may access the contact information for 20,000 workers in the sample. The right of access expands as information is provided on the results of the workforce intermediation efforts undertaken with the workers whose contact information was previously accessed.

16 According to SEI Informational Note 4686/2019/ME.

17 In compliance with the provisions of Art. 9 of Resolution 826 of CODEFAT, establishing that “the Ministry of Economy, via the Secretariat for Public Employment Policies, shall present to CODEFAT, at the end of each quarter, a monitoring report on actions resulting from the shared use of data subject to this Resolution.”

According to Barbosa Filho, Ferreira and Araújo (2020):

the opening of SINE data will not, at first, change the current system’s mode of operation, which will make it possible to compare the two processes and evaluate the new policy. The measure also includes the availability of non-identifiable information, in the open data model, to facilitate the creation of an innovation ecosystem, as well as improvement in transparency mechanisms related to the quality of information contained in SINE databases.¹⁸

Despite the fact that Art. 1 of the Resolution provides that associates’ actions “shall be supplementary to the actions and services of the National Employment System,” it is evident that the implementation of the new model has the potential to lead to the hollowing out of one of the system’s original responsibilities. The role of CODEFAT in the incorporation of these monitoring and control systems over the use of shared data is noteworthy.

According to a workers’ representative, while the sector may not have managed to repeal the measure, it falls to the Council to monitor the measure using periodic reports:

In this case, we have to take these data that we receive and look at the results: “What did SINE increase?”; “For which worker profile did this collaborative system show results?”; “What kind of opening is offered, what kind of job?”. We are going to verify whether the network’s customer service profile has changed. In other words, it’s not just about looking at the numbers, but digging into their content. Finding out who remains inside and who is left out of Open SINE.

According to information obtained using the Access to Information Act,¹⁹ the indicators used for monitoring the companies associated with Open SINE are:

- Companies whose request for admission to Open SINE was granted;
- Companies whose request for admission to Open SINE is under review;
- Companies whose request for admission to Open SINE was rejected;
- Number of worker résumés to which accredited companies had access;
- Number of workers to whose contact information the accredited companies had access;
- Number of workers who received a response due to their association with Open SINE;
- Number of workers for whom the association with Open SINE led to an interview; and
- Number of workers for whom the association with Open SINE led to being hired.

3.1.2.2 SINE + Microsoft

The implementation of AI tools on SINE’s digital platforms is linked to the Digital Transformation Plan for the National Employment System, begun in 2019 by the Secretariat for Public Employment Policies (SPPE) due to the New SINE and, above all, to the more extensive relationship between the Brazilian Federal Government and Microsoft. This would be publicly announced with the launch of the Microsoft ‘More for Brazil’ (Microsoft Mais Brasil) project on October 20, 2020. The project contemplates the use of artificial intelligence tools provided by Microsoft to the Brazilian government for the employment and sustainability sectors. Microsoft’s offering for the employment sector involves the implementation of AI for workforce intermediation on SINE’s Job Openings Portal (Portal de Vagas), the Employing Brazil portal and worker

18 Emphasis added by the authors.

19 Protocol 03005.184809/2020-85

qualification through Worker School 4.0,²⁰ “an e-learning platform” developed by the Special Secretary for Productivity, Employment and Competitiveness of the Ministry of Economy (SEPEC/ME) with the Brazilian Industrial Development Agency (ABDI), including Microsoft courses through the Microsoft Community Training tool. According to the press release, the goal of Worker School 4.0 is to serve up to 5.5 million job seekers by 2023 and provide 58 instructors to offer customized guidance and orientation for up to 315,000 people. The stated goal for the total solution for the employment sector is to “improve employability for up to 25 million workers.”²¹

The release also mentions the information technology solutions company BizApp, which represents Microsoft Dynamics 365 (CRM platform) and participated in the implementation of the SINE Health Portal²² as a leader in the SINE Portal update. However, the name of the company does not appear in the Technical Cooperation Agreement signed between Microsoft and the government for implementing the solution.

The main documents detailing how the implementation of workforce intermediation tools in the New SINE (to which we refer throughout this report as ADM-SINE) was handled are Technical Cooperation Agreement No. 110/2020²³ (TCA) signed between the Special Secretary for Productivity, Employment and Competitiveness of the Ministry of Economy and Microsoft, and published in the *Diario Oficial da União* (DOU) on November 12, 2020; and the Work Plan that is part of the agreement (SEI/ME - 11558736), both described in detail throughout Section 4.

This Technical Cooperation Agreement was established based on Public Request for Proposals No. 5/2020, published by the Ministry of Economy’s SEPEC in the *Diario Oficial da União* of July 1, 2020. The objective of the Request for Proposals was “to select the legal entities of private law, for profit or not for profit, interested in proposing and undertaking actions in support of the SEPEC to face the negative impact caused in Brazil’s productive sector by the COVID-19 pandemic, without disbursement or transfer of public financial resources or assets.” Mention of the impact of COVID-19 to justify implementation of the tool²⁴ is explicit in the ‘Grounds’ section of the work plan, which reads: “SINE is a key tool for decreasing unemployment, which has increased due to the impact of the COVID-19 pandemic.” Among the grounds underpinning the adoption of the solution, the emphasis placed on SINE’s costs is noteworthy, where public expenditure is reported of approximately 150 million Brazilian reais (BRL) per year (25 million BRL for the federal government and 125 million BRL for the states and municipalities). In addition, mention is made

20 The Worker School is a program created in 2017 by the Ministry of Labor in collaboration with the University of Brasilia (UnB). Since the MTE’s disappearance, responsibility for the platform is held by the Ministry of Economy. Source: <http://www.escoladotrabalhador.gov.br/sobre/>

21 At no time is justification given for the number of workers the program proposes to serve and the discrepancy in relation to the 65 million workers registered in SINE.

22 SINE Saúde—see Section 4.1

23 Process 19654.100257/2020-56

24 In the reviewed document, the “IMPLEMENTATION REPORT—UNDERSECRETARY FOR HUMAN CAPITAL; PERIOD: FEBRUARY 2019 TO SEPTEMBER 2020,” before the TCA, but whose signature has already lapsed, contains the following excerpt that characterizes very well the use of the pandemic context as grounds for the partnership: “The Covid-19 situation has given us the opportunity to raise awareness among people about the importance of qualification in new skills and tools for the employment market. Social distancing also adds a greater availability of time for people interested in training.”

the platform’s outdated technology, the low level of integration with public labor policies and the low rate of labor reintegration achieved through SINE.

3.2 Demographic Context

3.2.1 Demographic profile

The following demographic information refers to the National Continuous Household Sample Survey (Pesquisa Nacional por Amostra de Domicílios Contínua, PNAD Contínua) of the Brazilian Geography and Statistics Institute (Instituto Brasileiro de Geografia e Estatística, IBGE) for 2020 and represents data from approximately 168,000 households that participated in the sample. The PNAD estimates Brazil’s population in 2019 at 209.5 million people. The vast majority (84.72%) live in urban areas, while 15.28% of the population lives in rural areas. Women represented 108.4 million (51.8%) people, and men totaled 101.1 million (48.2%).

In terms of color or race, the IBGE survey of the Brazilian population is based on self-identification. That means that people are asked about their color according to the following options: white, black, mixed race, indigenous and yellow [i.e., of some East Asian descent].²⁵ In 2019, the self-declared mixed-race population represented 46.8% of the total population, while the white population corresponded to 42.7%; 9.4% self-identified as black; and indigenous and Asian people totaled 1.1%.²⁶

Regarding the population distribution of Brazilian residents by age group, the proportion of people under 30 years of age was 42.3%, while groups comprising the population over age 30 came to 57.7%. The age groups with the highest percentages are those from 30 to 39 years old, with 15.8%, and from 40 to 49 years old, with 13.8%.

More details are as follows:

a) Age distribution

0–4 years: 6.2%; 5–9 years: 6.6%; 10–13 years: 5.5%; 14–15 years: 3%; 16–17 years: 2.9%; 18–19 years: 3.2%; 20–24 years: 7.6%; 25–29 years: 7.3%; 30–39 years: 15.8%; 40–49 years: 13.8%; 50–59 years: 12.4%; 60–64 years: 4.9%; 65 or more: 10.8%

b) Distribution by sex

Men: 48.2%

Women: 51.8%

25 Source: <http://www.escoladotrabalhador.gov.br/sobre/>

26 Según Monteiro (2018), el derecho a la explicación de decisiones automatizadas tal como se incorporaron a la LGPD se originó a partir de una decisión paradigmática del Superior Tribunal de Justicia (STJ) de 14 de octubre de 2015, que culminaría en la tesis (súmula) 550 sobre la legalidad del uso de datos personales, sin el consentimiento del titular, a efectos de análisis de riesgo crediticio. En ese momento, el STJ “concluyó que esta práctica es posible, siempre y cuando estén presentes los factores limitantes descritos anteriormente y estén garantizados los derechos del consumidor, incluso el derecho a la explicación” (ib.). Uno de los derechos previstos en la Ley de Registro Positivo, que se aborda a continuación, también influyó para que ese derecho evolucionara de la protección sectorial a la general.

c) Distribution by race

Mixed race: 46.8%
White: 42.7%
Black: 9.4%
Indigenous or Asian: 1.1%

d) Distribution by area of residence

Urban population: 84.72%
Rural population: 15.28%

e) Immigrant population

According to estimates by the Migration Observatory in São Paulo,²⁷ from 2000 to 2020, there were 1,504,736 immigrants officially registered in Brazil, which represents approximately 0.7% of the total population of 209.5 million (data from 2018). This number stems from several different databases and reflects only those immigrants who have solicited their National Migratory Registration (Registro Nacional Migratório, RNM). According to Jannuzzi (2017), the National Migratory Registration System (Sismigra) is unable to estimate the total international immigrant population residing in Brazil, since it only includes people registered in selected years. In addition to failing to incorporate undocumented immigrants, Sismigra information also does not cover requests from refugees, a population that, although it is documented, does not have RNM. These limitations are joined by possible problems with completing information that are recurrent in Brazilian administrative registries.

3.2.2 Internet access

The following data are based on the Household ICT survey conducted by the Brazilian Internet Steering Committee (CGI.br). Conducted since 2005, the survey investigates access to and use of information and communication technology (ICT) in Brazil among people 10 years and older. For the 2019 compilation of figures, interviews were held in 23,490 households around the country (CGI.br; Regional Center for Information Society Development Studies—Cetic.Br, 2020). According to the survey, in 2019, Brazil had around 134 million internet users, or about 74% of the population 10 years and older. In terms of the number of households with Internet access, the figure reached 50.7 million (71% of the total). Regional inequality in access persists in the country, with the largest difference of 10% found between the Southeast (75%) and the Northeast (65%). Access in the South region reached 73%; in the Center-West the number is 70%; and in the North it is 70%.

Regarding inequality of access, research indicates that one of every four people does not use the network in Brazil (approximately 47 million people). A closer look at that number reveals a strict relationship between digital and social inequalities in the country. In terms of schooling, 40 million people studied until primary school, while in terms of income, nearly all belong to Classes C, D and E (45 million).

In terms of Internet access, the cell phone was the principal device used (99%), followed by the computer (42%), which is trending downward each year. Furthermore, 37% used the television to access the network, and 9% used videogames. Among mobile phone users, 58% exclusively used their device for access, a number

27 <https://www.nepo.unicamp.br/observatorio/bancointerativo/numeros-imigracao-internacional/sincresismigra/>

that jumps to 85% among Classes D and E. The exclusive use of a cell phone as a means of connection prevails among the Black (65%) and mixed-race (61%) population, while 51% of the white population uses only a mobile phone to access the Internet. Research also speaks to how the type of access is distributed: 89% of users used Wi-Fi networks, while 77% used a mobile network (3G or 4G).

3.2.3 Unemployment rate

The most recent figures published by the IBGE on November 27, 2020, referring to the quarter from July to September 2020, show that the unemployment rate in Brazil reached 14.6%, the highest in the historic series begun in 2012 (IBGE, 2020). This rate corresponds to approximately 14.1 million unemployed people in the country. The figure is a reflection of both job closures due to the COVID-19 pandemic and the easing of social isolation measures. This is because the IBGE defines the unemployed population to include those people 14 years or older who were without work during the survey’s reference week, but who “took some effective measure to find a job in the 30-day reference period and who are available to accept a job in the reference week.” That is, the ratio of unemployment growth is attributed both to the group of people who lost their job at the beginning of the pandemic and to the fact that more people are actively looking for a job in the context of reopening activities in diverse economic sectors. It is also important to mention that the rate does not cover the “discouraged persons”²⁸ group, a number estimated at approximately 5.9 million people during the period.

The COVID-19 pandemic and the health crisis hit Brazil at a moment of serious economic fragility and profound changes in the public regulation of work. After experiencing low unemployment rates at the beginning of 2010, the country entered a recession in 2014, which had repercussions for the labor market in subsequent years (Figure 1).

28 According to the IBGE, the discouraged population is: “the subgroup of people in the potential workforce who have not conducted an effective job search because they consider that: they cannot obtain a suitable job; they do not have either professional experience or skills; they cannot work because they are considered too young or too old or had not worked in the area. However, they would like to have a job and are available for work during the reference week.” Source: https://biblioteca.ibge.gov.br/visualizacao/periodicos/3086/pnacm_2020_set.pdf

	2012	2013	2014	2015	2016	2017	2018	2019	2020
nov-dec-jan		7,2	6,4	6,8	9,5	12,6	12,2	12	11,2
dec-jan-feb		7,7	6,7	7,4	10,2	13,2	12,6	12,4	11,6
jan-feb-mar	7,9	8	7,2	7,9	10,9	13,7	13,1	12,7	12,2
feb-mar-apr	7,7	7,8	7,1	8	11,2	13,6	12,9	12,5	12,6
mar-apr-may	7,6	7,6	7	8,1	11,2	13,3	12,7	12,3	12,9
apr-may-jun	7,5	7,4	6,8	8,3	11,3	13	12,4	12	13,3
apr-may-jun	7,4	7,3	6,9	8,5	11,6	12,8	12,3	11,8	13,8
apr-may-jun	7,3	7,1	6,9	8,7	11,8	12,6	12,1	11,8	14,4
apr-may-jun	7,1	6,9	6,8	8,9	11,8	12,4	11,9	11,8	14,6
apr-may-jun	6,9	6,7	6,6	8,9	11,8	12,2	11,7	11,6	
apr-may-jun	6,8	6,5	6,5	9	11,8	12	11,6	11,2	
apr-may-jun	6,9	6,2	6,5	8,9	12	11,8	11,6	11	

Figure 1: Unemployment rate in Brazil from 2012 to 2020.

Source: IBGE, Continuous National Household Sample Survey.²⁹

Note: Only greyed-out data can be compared.

Therefore, the economic stagnation and deterioration of the labor market are not effects of only the COVID-19 public health crisis, since low growth rates and the persistence of high unemployment rates were expected for 2020 (Teixeira; Borsari, 2020). As mentioned by Marra, Oliveira and Martins (2019), the unemployment rate presented by the PNAD has indicated that entry into the labor market is especially more difficult for young people, Black people and women. The distribution of unemployed people by age, sex and race in the following figures corroborates this profile (Figures 2, 3 and 4). Among them, race-related disparities are noteworthy: 64.2% of the unemployed are Black or mixed-race people.³⁰ In the context of the pandemic, labor insertion difficulties are exacerbated for the most vulnerable groups, producing even more asymmetries in the employment market (Corseuil; Franca, 2020; Inter-union Department of Statistics and Socioeconomic Studies [Departamento Intersindical de Estatística e Estudos Socioeconômicos, DIEESE], 2020). The public employment system therefore becomes hugely important because “it emerges as an alternative proposing to minimize confirmed social and regional inequalities, especially in the cases of territories and vulnerable groups that had a fragile network of links to the labor market” (Marra, Oliveira and Martins, 2019).

29 Available at: https://biblioteca.ibge.gov.br/visualizacao/periodicos/3086/pnacm_2020_set.pdf

30 Source: IBGE (2018)

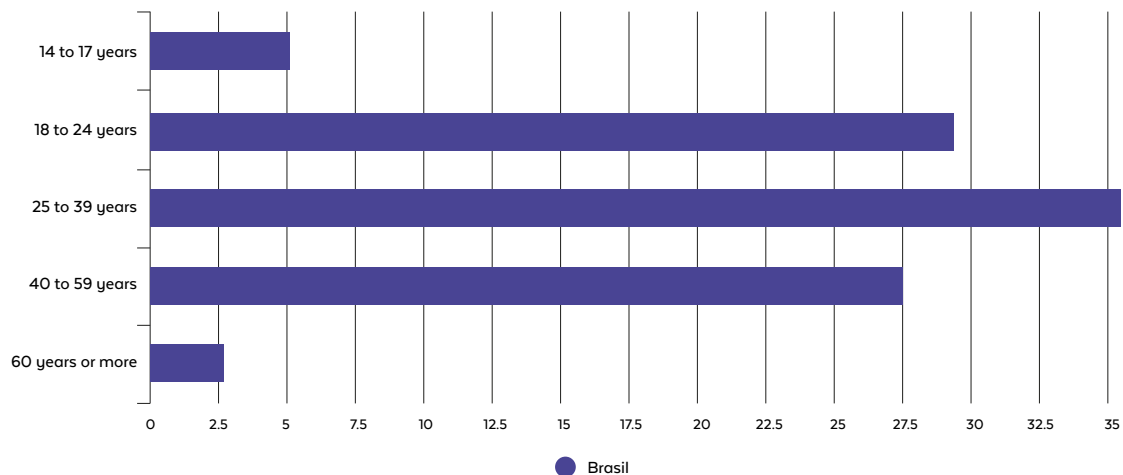


Figure 2: Distribution of unemployed people by age, Q3 2020

Source: IBGE, Continuous National Household Sample Survey.³¹

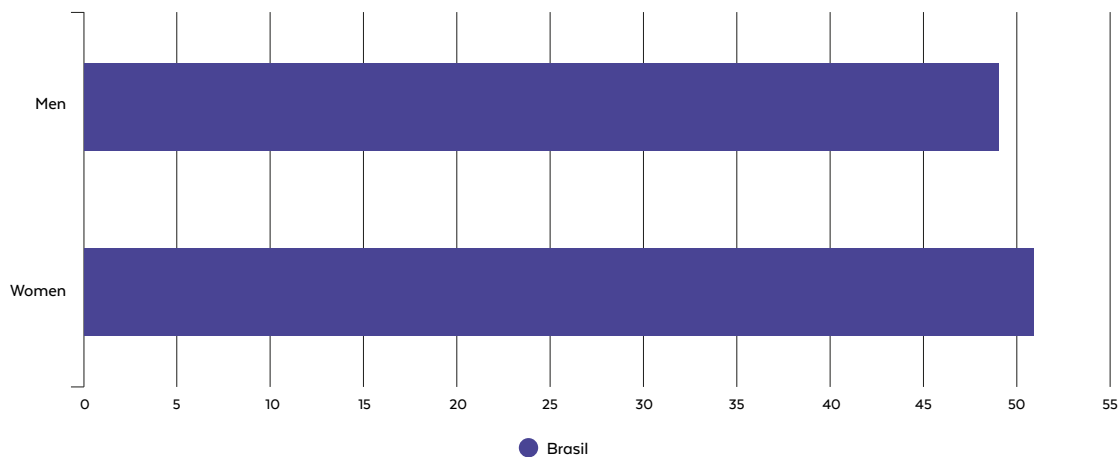


Figure 3: Distribution of unemployed people by sex, Q3 2020

Source: IBGE, Continuous National Household Sample Survey.³²

31 Available at: <https://www.ibge.gov.br/estatisticas/multidominio/condicoes-de-vida-desigualdade-e-pobreza/9173-pesquisa-nacional-por-amostra-de-domicilios-continua-trimestral.html?edicao=29516&t=destaques>

32 Available at: <https://www.ibge.gov.br/estatisticas/multidominio/condicoes-de-vida-desigualdade-e-pobreza/9173-pesquisa-nacional-por-amostra-de-domicilios-continua-trimestral.html?edicao=29516&t=destaques>

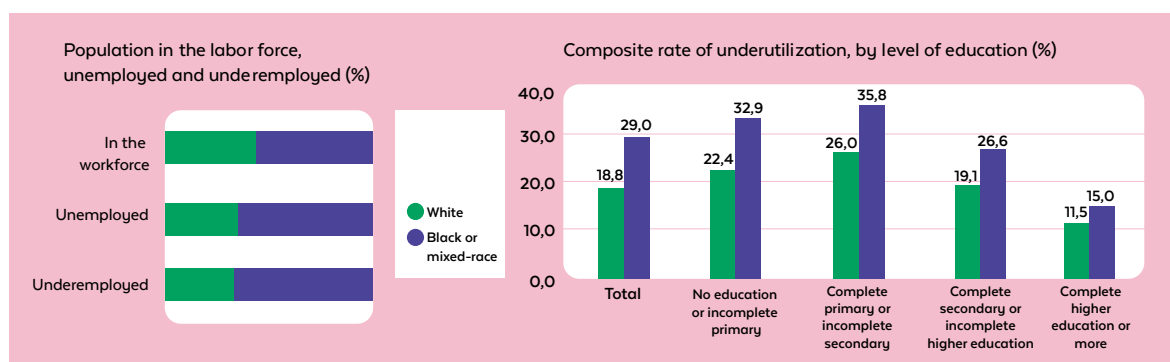


Figure 4: Population in the workforce, unemployed or underemployed (left); Composite rate of underutilization, by level of schooling (right)

Source: IBGE, Continuous National Household Sample Survey 2018.

3.3 Regulatory and Legislative Context

3.3.1 Regulations pertinent to the application of ADM

The use of artificial intelligence tools for automated workforce intermediation and profiling within SINE and the Open SINE project emerge in a broader context in terms of how Brazil, in recent years and under different governments, has been developing guidelines and projects to face digitalization and the use of technology in public services and public policies, loosening the justifications for sharing databases among agencies and entities of Federal public administration. Among the projects and regulations related to such processes that have arisen especially since 2016, we can highlight:

- The Digital Government Strategy (Estratégia de Governo Digital, EGD) and the Brazilian Strategy for Digital Transformation (Estratégia Brasileira para a Transformação Digital, E-DIGITAL). Created in 2015 under Dilma Rousseff’s administration, the first version of the EGD (at that time called the Digital Governance Strategy) covered the period from 2016 to 2019. The initiative’s objective was to guide and integrate the digitalization initiatives of agencies and entities of the Federal Executive Branch. The EGD was regulated by Ordinance 68/2016, linked to Decree 8.638/2016, which instituted the Digital Governance Policy and was subject to revision to bring it in line with the legal framework and the Brazilian Strategy for Digital Transformation (2018). The Digital Government Strategy for 2020–2022 was established by Decree 10.332 of April 28, 2020, which repealed the previous decree and provided for the creation of the Digital Governance Committee to “deliberate on issues related to the application of digital government actions and the use of information and communication technology resources.”
- The creation of the Open Data Policy, instituted by Decree 8.777 of May 11, 2016 under the Rousseff administration. Its principal objectives are listed in Art. 1 and include the following: promoting the publication of data contained in databases of autarchic, foundational federal public administration agencies and entities in the form of open data; improving the culture of public transparency; and providing citizens access, in an open manner, to the data produced or collected by the Federal Executive Branch. The decree also classifies catalogues of corporate data as an integral part of the open data plan that federal agencies must implement.
- The institution of the Citizen Registry and the Central Data Governance Committee via Decree 10.046 of October 9, 2019 of the current administration, which establishes the standards and

guidelines for sharing data among agencies and entities of federal public administration. The decree repealed and updated Decree 8.789/2016 signed by then President Michel Temer, which had already significantly reduced the barriers to shared use and cross-linking data. Among other modifications, the new regulation has broadened the purpose hypotheses under which shared use of data may serve, significantly increasing the possible grounds for sharing data, and creating a tension, according to Frago and Massaro (2019), in the very definitions of the General Data Protection Act (2018) that will be addressed below.

3.3.2 Personal data protection and access to information

The two most relevant regulations for personal data protection in Brazil are Law 12.965 of April 23, 2014, the Civil Rights Framework for the Internet; and Law 13.709 of August 14, 2018, the General Personal Data Protection Act.

The Civil Rights Framework for the Internet, in force as of June 2014, is the law regulating Internet use in Brazil. Its principles include the guarantee of freedom of expression, protection of privacy, protection of personal data and net neutrality.³³ It was the first law in the country to regulate the principles, guarantees, rights and responsibilities of network users, addressing the legal relationships established on the Internet. User rights guaranteed under the Civil Rights Framework, specifically related to personal data protection, include the following:

- protection against providing personal data collected on the Internet to third parties without the prior consent of the data subject³⁴
- the right to clear and accurate information on the collection, use, storage, processing and protection of personal data;³⁵ and
- the need for express, separate consent in data processing.³⁶

The authority related to the Civil Rights Framework for the Internet is the Brazilian Internet Steering Committee (CGI.br),³⁷ a multi-sector structure responsible for coordinating and integrating initiatives related to the use and operation of the Internet in Brazil. The powers attributed to CGI.br include recommending procedures for the growing, appropriate use of the Internet by society, as well as coordinating actions related to the proposal of standards and the regulation of Internet activities.³⁸ The current composition of CGI.br was set forth in Decree 4.829 of September 3, 2003 and comprises nine representatives from the government sector, four from the corporate sector, four from non-governmental organizations, three from the scientific and technological community, and one recognized Internet expert.

33 Art. 3

34 Art. 7(VII)

35 Art. 7(VIII).

36 Art. 7(XI).

37 <https://www.cgi.br/>

38 Created by Interministerial Ordinance 147 of May 31, 1995

The main legal instrument for regulating the processing of personal data available in Brazil is the previously mentioned General Data Protection Act (Lei Geral de Proteção de Dados Pessoais, LGPD), approved in 2018 during Michel Temer’s administration, but in force only since September 18, 2020, after nearly a decade of debate and changes between the first public consultations, multi-sector contributions, legislative processing,³⁹ passage and presidential approval. The LGPD’s articles relating to the application of administrative sanctions, by virtue of Law 14.010/2020 which provides for the Temporary and Emergency Legal Framework for legal relationships under Private Law (Regime Jurídico Emergencial e Transitório das relações jurídicas de Direito Privado, RJET) during the COVID-19 pandemic, will only come into force on August 1, 2021.

Heavily influenced by Regulation (EU) 2016/679 of the European Parliament and of the Council, known as the General Data Protection Regulation (GDPR), the LGPD has been set up as a very satisfactory, robust mechanism for its proposed purpose. However, the presidential veto of Art. 20(3) and the recent appointment of military personnel to the National Data Protection Authority (Autoridade Nacional de Proteção de Dados, ANPD), which we will address below, can open the door to serious implications for the LGPD’s effectiveness in guaranteeing the rights and principles of processing personal data. The LGPD amends certain articles of the Civil Rights Framework for the Internet and establishes new standards for companies and public agencies regarding the collection, processing and availability of user and client information.

The new law stipulates that the discipline of personal data protection in Brazil must follow principles such as respect for privacy, informational self-determination and human rights.⁴⁰ Data processing must obey principles that include finality, need, transparency, security and non-discrimination.⁴¹ Furthermore, a central point of the new law is that personal data processing can only be conducted in the following cases:⁴²

- I - under consent provided by the data subject;
- II - to comply with legal or regulatory requirement by the controller;
- III - for public administration, for the processing and shared use of data necessary for the implementation of public policies provided for in laws and regulations or backed by contracts, agreements or similar instruments, pursuant to the provisions of Chapter IV of this Law;
- IV - for the conduct of studies by research agencies, guaranteeing to the extent possible the anonymity of personal data;
- V - when necessary for the execution of a contract or preliminary procedures related to a contract to which the data subject is party, at the data subject’s request;
- VI - for the regular exercise of rights in legal, administrative or arbitration proceedings, the last pursuant to Law 9.307 of September 23, 1996 (Arbitration Act);
- VII - to protect the life or physical security of the data subject or third parties;
- VIII - to protect health, exclusively, in a procedure performed by health professionals, health services or the public health authority; (wording taken from Law 13.853,2019)

39 PLC 53/2018, PL 5276/2016 and PL 4060/2012.

40 Art. 2

41 Art. 6

42 Art. 7

- IX - when necessary to satisfy the legitimate interests of the responsible party or a third party, except when the data subject’s fundamental rights and freedoms prevail requiring protection of personal data; or
- X - to protect credit, including as regards the provisions of relevant legislation.

It can be seen that the provisions of Art. 7(III), where the use of personal data is facilitated when intended for the implementation of public policies, provide the basis for justifying the use of data without the data subject’s consent both under the scope of Open SINE and on the SINE Job Vacancies Portal.

Another definition offered by the LGPD is the distinction between the data controller and the data processor. The former is “the natural person or legal entity, of public or private law, responsible for decisions regarding the processing of personal data,”⁴³ whereas the latter is “the natural person or legal entity, of public or private law, who conducts the processing of personal data on behalf of the controller.”⁴⁴

That text also provides guarantees to users, who can request that their data be eliminated, revoke their consent and transfer the data to another service provider, among other actions. Two interconnected fundamental rights for protection against possible discriminatory and/or arbitrary impact for people potentially affected by the implementation of automated decision-making systems, are the right to explanation and the right to review provided for in Art. 20 and imported from the GDPR. The right to explanation refers to the right to receive sufficient, comprehensible information allowing the data subject to understand the reasoning and criteria used to process his or her personal data for one or more purposes (§1). The right to review involves the ability to request the reversal of an automated decision that could have an impact on personal interests, especially those related to the definition of a personal, professional, consumer or credit profile, among others.⁴⁵ For Silva and Medeiros (2019), Art. 20 of the LGPD:

seeks to provide mechanisms to minimize the risks that occur with the growing use of algorithms to conduct judgments and assessments of individuals, for which the reasons and decision-making processes are not revealed. The guarantees of these rights would be aligned with the principle of transparency and would have the goal of protecting the subject against instances that place him or her in a situation of vulnerability due to potentially arbitrary decisions with no grounds or possibility for recourse.

A fundamental point for analysis of the rights to explanation and to review in the Brazilian context is the presidential veto, when the law was approved, of LGPD Art. 20(3), which would have provided for the mandatory review, by a natural person, of automated decisions. The justification used by President Jair Bolsonaro to explain his veto is important, because it declares that the human review of automated decisions “goes against public interest,” since “it will render inviable the current business plan models of many companies, known as startups, in addition to impacting the analysis of credit risk and new business

43 Art. 5(VI)

44 Art. 5(VII)

45 According to Monteiro (2018), the right to explanation of the automated decisions as incorporated in the LGPD stems from a paradigmatic decision of the Supreme Court of Justice (SCJ) of October 14, 2015, which would culminate in Precedent 550 on the legality of use of personal data, without the data subject’s consent, to evaluate his or her credit risk. At that time, the SCJ “concluded that this practice is possible, provided that the limiting factors previously described are present and the consumer’s rights are guaranteed, including the right to explanation” (Ibid.) One of the rights provided for in the Good Payers’ Act, which is addressed below, also had influence on this right as it evolved from sector-specific protection to general protection.

models for financial institutions, generating a negative effect on the supply of credit to consumers.”⁴⁶ The explicit mention of credit risk analysis, directly related to the Good Payers’ Registry,⁴⁷ enabled sharing a huge, valuable database of financial information—such as credit history and payments for physical persons and legal entities—with financial market agents in 2019. This offers strong indication of the influence and pressure that guided that decision. The veto has limited the effects of the possibility to repair errors via the exercise of the right to review. As Silva and Medeiros (2019) explain:

In practice, by excluding the term “physical person,” the veto creates the possibility that a request for review of an automated decision may be processed by another, similarly automated system, instead of a person, i.e., the decision will not pass through a human filter, jeopardizing transparency and the materialization of a right to a coherent explanation.

With this change, an automated request for decision review could lead to another, equally automated decision, in a cycle that approaches absurdity. For Bruno Bioni, director and founder of *Data Privacy Brasil*, there is a consensus among the academic and non-government organization actors who accompanied the development of the LGPD that this was a huge defeat in the approval of the law’s final wording. With the veto, an important safeguard was lost for containing potential discrimination in automated processes: “if this last protective barrier were possible it would at least create concern for those implementing these technologies that one day they could be questioned and thus, they would appoint someone to conduct these reviews.” Furthermore, as the lawyer Danilo Doneda mentions, the limits of this veto are evident, since the rights to review and explanation imply that they be necessarily done in a language comprehensible to the interested party, which would require human review. That is, in practice, the elimination of the human actor in this process is not just absurd, it is unworkable.

The agency in charge of guaranteeing, implementing and supervising the LGPD, in addition to preparing guidelines for the National Personal Data and Privacy Protection Policy, is the National Personal Data Protection Authority (Autoridade Nacional de Proteção de Dados Pessoais, ANPD). Reporting to the Office of the President of the Republic, the ANPD was vetoed when the LGPD was published, but it was made possible via Provisional Measure No. 869/2018, which became Law 13.853 of July 8, 2019. The ANPD’s powers include establishing technical standards for compliance with the law; determining the necessary requirements for the preparation of impact reports; oversight and application of warnings, fines and other sanctions; communicating to competent authorities the criminal infractions of which it becomes aware; and receiving and processing each and every one of the complaints from a physical person data subject.⁴⁸

Even with Law 13.853/2019, the process of bringing the agency to fruition was incomplete. Decree 10.474 of August 26, 2020 approved the regulatory structure and organizational chart for commissioned workers and positions of trust at the ANPD. It will be composed of: the Governing Board (maximum authority), the National Council for Protection of Personal Data and Privacy, Review Committee, Ombudsman, in-house legal counsel and the administrative units necessary for implementing the law. The National Council for Protection of Personal Data and Privacy will be composed of 23 representatives, full members and alternates, from public institutions and civil society. The conduct of audits and the request for impact reports

46 The complete justification of the veto is available at: http://www.planalto.gov.br/ccivil_03/_ato2019-2022/2019/Msg/VEP/VEP-288.htm. Accessed: November 2, 2020.

47 Law 12.414/2011 and Supplementary Law 166/2019.

48 Art. 55-J

from data controllers is one of the powers granted the ANPD Administrative Council, according to Art. 4 of Annex I of Decree 10.474:

IV - to determine:

- a) the termination of personal data processing when a violation of the provisions of Law 13.709 of 2018 occurs; and
- b) the conduct of an audit to verify the discriminatory aspects in the automated processing of personal data, in cases of failure to comply with the provisions of Art. 20 (1) of Law 13.709 of 2018; [...]

In addition,

V - to determine for the personal data controller:

- (a) preparation of the impact report on the protection of personal data related to their data processing operations, including sensitive data, observing commercial and industrial secrets [...]

Moreover, according to Art. 55 of Law 13.853, the ANPD is solely responsible for the application of administrative sanctions in cases of failure to comply with the LGPD. The possible sanctions include: suspension of the database's operation; prohibition of activities related to information processing for a period of six months, which may be extended for a similar period in case of repeat offense; and warnings, fines and compensation to users harmed by breaches in the processing of information, among others. The full list of sanctions can be found in Art. 52 of the LGPD. The sanctions shall be applied following an administrative proceeding that provides the opportunity for broad defense (§ 1).

On October 15, 2020, President Jair Bolsonaro appointed the ANPD's first director, who was later approved by the Senate. Of the five directors appointed, three are from the military. A survey conducted by Data Privacy Brasil analyzed the profiles of the members of personal data protection authorities in 20 economically advanced countries, concluding that only China and Russia include military personnel in the composition of those bodies (Zanatta et al., 2020). The militarization of an agency that is fundamental to the LGPD's effectiveness demonstrates that unfortunately, the ANPD “will not have the independence and composition expected of an agency responsible for the defense of the fundamental rights and freedoms of Brazilian citizens” (Network Rights Coalition, 2020). The nature of the appointment also provides signals that, for now, the agency will not become an independent body.⁴⁹

It is worth noting that several of the questions related to the form and effectiveness with which the LGPD and the ANPD could have influence on the operations and impact of ADM-SINE continue to be quite undefined, since only the ANPD's action and future lawsuits on automated decisions based on the LGPD will create new legal understandings on these issues.

In addition to the Civil Rights Framework for the Internet and the LGPD, two sector-specific regulations related to personal data protection can be mentioned. The first is the Consumer Protection Code (Código de

49 The ANPD was approved temporarily and can become an independent body after two years, at the government's discretion.

Defesa do Consumidor, CDC),⁵⁰ which defines that consumers will have access to their information existing in registries, forms, personal data and data on their consumption, as well as their respective sources.⁵¹ Art. 43(6) is also noteworthy: “All information covered by the content of this article shall be made available in accessible formats, including for people with disabilities, on consumer request.”

The second sectoral regulation, related not only to personal data protection but also to the right to explanation of automated decisions described above, is the Good Payers’ Act (*Lei de Cadastro Positivo*, LCP)⁵² in force since July 9, 2019. The LCP sets forth standards oriented to the “discipline and querying of databases with payment information of physical or legal persons, for the creation of credit history.” The rights provided for in Art. 5 include:

- IV - knowing the main elements and criteria considered for risk analysis, protecting corporate secrecy;
- V - being informed ahead of time of the storage, the identity of the database manager, the purpose of the personal data processing and the recipients of the data in cases of data sharing;
- VI - requesting from the consulting party the review of a decision made exclusively by automated means; and
- VII - using personal data solely in accordance with the purpose for which they were collected.

According to Monteiro (2018), the four rights set forth in the LCP have their origin in the right to transparency and non-discrimination and “are the backbone of the right to explanation of automated decisions in consumer-based relations,” since “they require informing the consumer on the sources of data used and the personal information considered for calculating risk of non-compliance in the approval or denial of credit.”

Lastly, with regard to the regulations related to access to public information, it is worth highlighting the importance of the General Access to Information Act.⁵³ The following are subject to that law:

- I - public agencies comprising the direct administration of the Executive, Legislative, including the Courts of Accounts, the Judiciary and public prosecutors’ offices;
- II - independent bodies, public foundations, public corporations, public–private partnerships and other entities controlled directly or indirectly by the Federation, States, Federal District and Municipalities.

The Comptroller General (*Controladoria Geral da União*, CGU) is the agency charged with monitoring the law throughout the Federal Executive Branch. Currently, requests for information using the Access to Information Act (*Lei de Acesso à Informação*, LAI) are centralized using the [Fala.BR](https://www.gov.br/acessoainformacao/pt-br/falabr) portal.⁵⁴ The agency to whom the request is directed has a period of up to 20 days to respond to it, which can be extended for an additional 10 days with justification.

50 Regulated by Law 8.078 of September 11, 1990, in force since March 11, 1991.

51 Art. 43

52 LCP, Law 12.414.

53 Law 12.527 of November 18, 2011, in force since May 2012.

54 <https://www.gov.br/acessoainformacao/pt-br/falabr>

The responses must be easy for laypersons to understand; they must respond to all aspects of the question or offer valid grounds for denying access to the information, citing appropriate legislation. When the response affirms that the information is already available on the Internet, it is necessary for a link to the page to be included.

[...]

When some of the information is confidential, access is guaranteed by redacting only the confidential portions, using black rectangles, for example. Confidentiality must always be justified by the LAI. (Logarezzi, 2016)

3.3.3 AI and regulation

Brazil still has no specific regulations for the use of AI in the country. However, initiatives are underway, as we will describe below. Furthermore, the country has adhered to the principles and recommendations of the Organization for Economic Cooperation and Development (OECD) for the development and application of AI.⁵⁵ The principles contained in the OECD document are: inclusive growth, sustainable development and well-being; values centered on humans and on justice; transparency and disclosure; robustness, security and protection; and accountability.

The Brazilian Artificial Intelligence Strategy is being prepared under the leadership of the Ministry of Science, Technology and Innovation (Ministério de Ciência, Tecnologia e Inovações, MCTI). For this purpose, a public consultation was held from December 12, 2019 to March 2, 2020 on the *Participa.br* website, with the goal of “gathering input for the construction of a National Artificial Intelligence Strategy that would make it possible to leverage the benefits of AI for the country, while mitigating potential negative impact.”⁵⁶ At the time of the consultation, the MCTI reported that structuring the AI strategy in the country would lie in adoption of the OECD guidelines. Private entities, scholars and civil society (individuals and legal entities) participated in the public consultation. The Institute for Technology & Society of Rio (Instituto de Tecnologia e Sociedade do Rio, ITS) participated in the consultation and performed an analysis identifying the degree of participation from each sector of society.⁵⁷ The government’s web page for the strategy reports that the MCTI has partnered with UNESCO to conduct a specialized AI consultancy and that the material produced would lay the groundwork for formulating the policy. However, there are no signs of progress in developing the document following the public consultation.

There is also a bill to regulate the use of Artificial Intelligence in Brazil filed in the Federal Senate, Bill 5051 of 2019, drafted by Senator Styvenson Valentim (of the PODEMOS Party, elected by the State of Rio Grande do Norte).⁵⁸

55 OECD, 2020.

56 Source: <http://participa.br/estrategia-brasileira-de-inteligencia-artificial/blog/apresentacao-e-instrucoes>

57 Available at: <https://itsrio.org/pt/comunicados/estrategia-brasileira-de-inteligencia-artificial/>. However, as February 2022, it was no longer available online.

58 The last update on the bill’s progress is that it is with its sponsor, Senator Rogério Carvalho, since September 27, 2019.

3.3.4 Self-regulation

In an interview for this investigation, sources at Microsoft directly involved in the Technical Cooperation Agreement for the implementation of ADM-SINE reported that, in addition to the LGPD, the project would follow the company’s six criteria for the development of ethical AI solutions:

1. AI should be designed to help humanity.
2. AI should maximize efficiency without affecting the dignity of people.
3. AI should be transparent.
4. AI should be responsible for undoing involuntary harm.
5. AI should have intelligent privacy.
6. AI should protect against biases and prejudices.

Furthermore, all of Microsoft’s AI-based systems are reported to be subject to review by an AI and Ethics in Engineering and Research committee (the Aether Committee) “to identify, study and recommend policies, procedures and best practices on rising questions, challenges and opportunities regarding the influences of AI in people in society.” However, none of this information regarding self-regulation is found in the official project documentation.

4. DATA ECOSYSTEM

The information feeding ADM-SINE comes from the Ministry of Economy’s Workforce Intermediation Management Base (*Base de Gestão da Intermediação de Mão de Obra*, BGIMO), a system that manages the records generated at SINE’s customer service units, on the Employing Brazil portal and on the Easy SINE application. In terms of the production of data and information, when a person registers, whether at a physical site or using a digital solution, the system collects a large volume of personal data and the professional profile of people seeking a new job, such as nationality, academic preparation, professional experience, fluency in foreign languages, and technical and professional qualification courses. Below we list all the categories and types of data that can be collected in the registry for both personal and professional information:

Personal information

- Name
- Mother’s and father’s names
- Physical Person Registry (*Cadastro de Pessoa Física*, CPF)
- Date of birth
- Sex
- Race
- Nationality
- Address
- Bolsa Familia Beneficiary (yes/no)
- Has some kind of disability (yes/no)
- E-mail
- Phone number
- National Identification Document (Registro Geral, RG)
- Employment and Social Security Card (*Carteira de Trabalho e Previdência Social*, CTPS)

Résumé information

- Presentation
- Education
- Training courses
- Languages
- Computer skills
- Experience
- Professional objective
- Supplementary information
 - + Has National Driver’s License Registration (*Carteira Nacional de Habilitação*, CNH) (yes/no)
 - Has a work vehicle? (yes/no)
 - + Can travel? (yes/no)
 - + Is available to spend the night at the work site? (yes/no)
 - + Is available to be away from home for long periods? (yes/no)

MINISTÉRIO DA ECONOMIA
SECRETARIA DE TRABALHO

ÁREA DO TRABALHADOR

ACCESSO RESTRITO

MONTAR CURRÍCULO

- APRESENTAÇÃO
- FORMAÇÃO ACADÊMICA
- CURSOS DE QUALIFICAÇÃO
- IDIOMAS
- INFORMÁTICA
- EXPERIÊNCIAS
- OBJETIVO PROFISSIONAL
- INFORMAÇÕES COMPLEMENTARES

CANCELAR ATUALIZAR E IMPRIMIR ATUALIZAR

AVALIE

Figure 5: Screen capture of the Employing Brazil portal page for entering work-related information.

Source: Authors

In turn, when companies list available job openings, they provide a collection of information on the jobs that are being created and offered in the employment market. The Employing Brazil (Emprega Brasil) platform contains the following information:

- Salary range
- Registration date
- Municipality
- State
- Neighborhood
- Experience required?
- Type of contract
- Job listing only for people with disabilities?
- Advantages

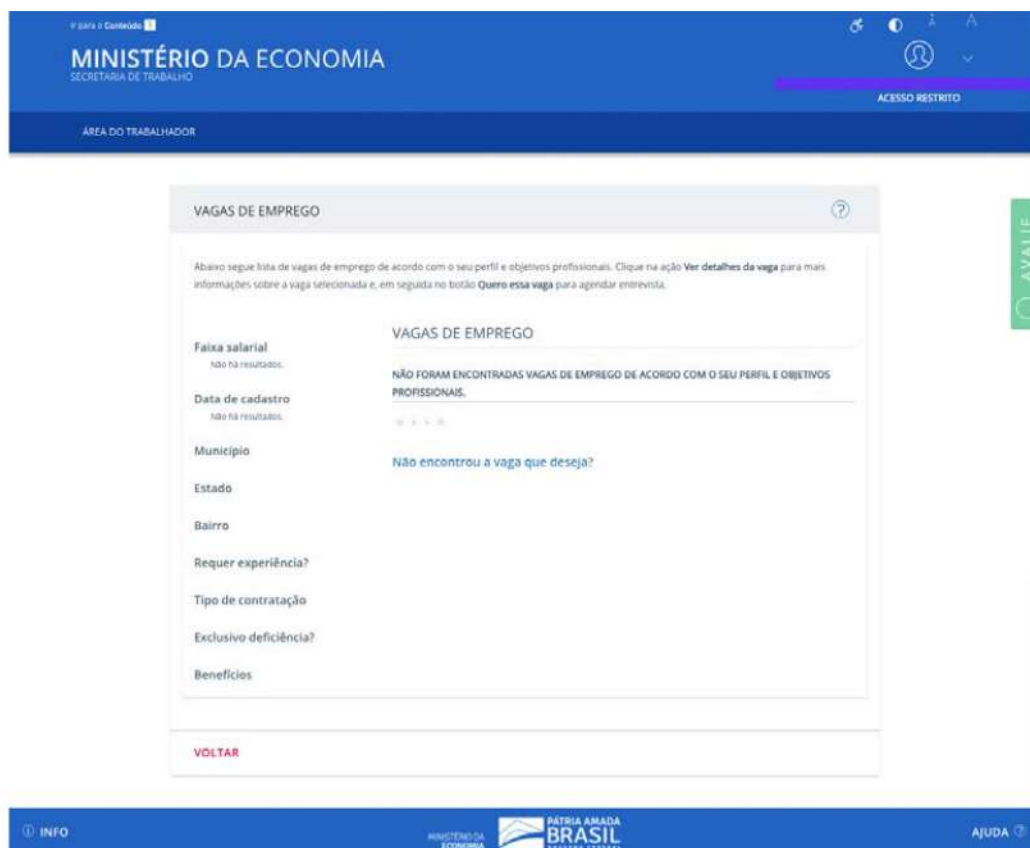


Figure 6: Employing Brazil screen capture for information on job openings available to people looking for work.

Source: Authors

The BGIMO supports the Ministry of Economy (ME) and associated entities such as the SINE network in the states and municipalities, both in carrying out workforce intermediation actions and in providing information for the evaluation and follow-up of actions under the Unemployment Insurance Program.⁵⁹

Access to the database uses a non-transferable personal password given to two representatives under agreement with the ME, via the Secretariat for Public Employment Policies (SPPE). To obtain the password, the contracted agents must sign a statement of responsibility wherein they are required to report the reason for requesting access and they undertake to use the extracted information exclusively for the stated purposes. Furthermore, they agree that any external disclosure of data can only be made with prior authorization from SINE General Coordination (CGSINE)/SPPE/SEPEC/ME.

Currently the database collects information from 64.7 million workers registered in SINE and is managed by Dataprev.⁶⁰ Created by Law 6.125 of November 4, 1974, with legal personality of private law, its own assets and administrative and financial independence, the Social Security Technology and Information Company (Empresa de Tecnologia e Informações da Previdência, Dataprev) is a public company linked to

59 <http://bi.mte.gov.br/bgimo/>

60 SEI/ME - 11558736 - Work plan

the Ministry of Economy. Dataprev is responsible for managing the Brazilian Social Database and provides information and communication technology solutions for implementing the social policies of the Brazilian state.⁶¹ Subsection 5.4.4 gives more detailed information on Dataprev.

Regarding the preparation of the “workers’ profile,” the ADM work plan describes that it will conduct its “data extraction from the databases of SINE, the Annual Social Information Report (Relação Anual de Informações Sociais, RAIS) and the General Registry of Employment and Unemployment (Cadastro Geral de Empregados e Desempregados, CAGED).” However, the use of information on indicators from the two administrative registries mentioned is not explained. RAIS is an administrative registry, drawn up annually, established by Decree 76.900 of December 2, 1975.⁶² Its main objective is to provide control mechanisms, statistics and information to government entities in the social sphere. The main information and indicators from RAIS include:⁶³

Available indicators

- Number of employed workers as of December 31, by age bracket, education and sex by geographic, sectoral and occupational levels.
- Number of employed workers by size of establishment, according to the sector of economic activity.
- Average compensation for jobs as of December 31, by occupation and sector of economic activity and by geographic level.
- Total existing establishments as of December 31, by:
 - Inventory (number of jobs as of December 31)
 - Economic activity
 - Legal nature
 - Establishment size
 - Geographic level

Information on employees

The most relevant information on an employee that companies are required to share covers:

- Age bracket
- Education level
- Sex
- Occupation
- Average compensation
- Type of contract (formal, statutory, temporary and single)
- Nationality
- Length of service
- Type of entry
- Grounds for dismissal

61 Editorial team note: Originally this information was found at <https://portal2.dataprev.gov.br/conheca-data-prev-quem-somos/empresa>. However, on March 31, 2021, it was no longer available online.

62 Translator note: Originally this information was found at <http://pdet.mte.gov.br/o-que-e-rais>. However, as of August 2021, it was no longer available online.

63 MTE Ordinance No. 945/2000

The General Registry of Employment and Unemployment (CAGED) was created by Law 4.923 of 1965, which required employers to report to the Ministry of Labor the log of worker hirings and dismissals covered by legislation of the Consolidation of Labor Laws.⁶⁴ With this record—one of the main sources of statistical information on the state of the labor market—the Federal government has a national perspective on Brazil’s formal employment market and information for planning public policies on employment, work and income, especially workforce intermediation. According to the description found on its web site:⁶⁵

CAGED presents disaggregation identical to that of the RAIS Annual Social Information Report, in geographic, sector and occupational terms, which makes it possible to conduct studies indicating the most current trends. In terms of the current state of affairs, it is the only source of information with such a degree of disaggregation, and it is therefore critical in preparing assessments on the best investment alternatives, estimating quarterly GDP and formulating employment projections in the country.

Some of the available indicators developed based on the registry’s database include:

- Total reporting establishments
- Total hirings
- Total dismissals
- Turnover rate
- Equilibrium or absolute variation in employment
- Relative variation in employment
- Hirings by type of movement (first job, re-employment, reintegration, fixed-term contract, transfer)
- Termination by type of movement (dismissal, spontaneous, retirement, death, transfer)
- Employee information (name, Social Integration Program [PIS] number, sex, age, race/color, education level, occupation, weekly contracted work hours and monthly salary)
- Total hirings or dismissals by age group
- Total hirings or dismissals by sex, according to age bracket
- Total hirings or dismissals by age bracket, according to education level
- Total hirings or dismissals, by occupation and compensation
- Total dismissals, according to length of employment and compensation, etc.
-

64 Consolidação das Leis de Trabalho (CLT), Decree Law 5.452 of May 1, 1943.

65 <https://ces.ibge.gov.br/base-de-dados/metadados/mte/cadastro-geral-de-empregados-e-desempregados-caged.html>

4.1 Profile Of Individuals And Job Openings Registered On Sine

PROFILE OF PERSONS REGISTERED ON SINE (%), Brazil - 2019			
	Non Applicant	Applicant	Total
Sex			
Men	52,38%	46,52%	52,38%
Women	47,62%	53,48%	47,36%
Age bracket			
Up to 17 years old	2,20%	0,11%	3,19%
18 to 24 years	59,13%	28,52%	38,71%
25 to 29 years	10,28%	16,22%	13,73%
30 to 39 years	12,20%	24,17%	19,36%
40 to 49 years	9,01%	18,45%	14,67%
50 to 64 years	6,60%	12,01%	9,81%
65 years years or older	0,59%	0,52%	0,53%
Education level			
No education	0,22%	0,65%	0,49%
Incomplete primary	12,68%	11,24%	11,63%
Completed primary	6,74%	8,98%	8,04%
Incomplete secondary	23,03%	9,45%	14,08%
Completed secondary	48,25%	54,04%	51,10%
Incomplete higher	7,81%	4,68%	5,71%
Completed higher	1,09%	10,96%	8,96%

Figure 7: Data on persons registered in SINE.

Source: BGIMO,

<http://portalfat.mte.gov.br/wp-content/uploads/2020/06/Boletim-PPTER-1%C2%BA-Trimestre-de-2020.pdf>.

The figures were extracted on February 3, 2020.

Figures extracted from the “Bulletin of Public Employment, Work and Income Policies”⁶⁶ offer the public profile for workers registered with SINE in terms of distribution by sex, age group and education level. Furthermore, they describe those who have been registered for a job and those who have requested Unemployment Insurance (UI). The total number of people registered shows a preponderance of men (52.38%),⁶⁷ young people from 18 to 24 years of age (38.71%) and people who have completed secondary education (51.10%). Regarding racial distribution, according to data obtained using the Access to Information Act,⁶⁸ Black and mixed-race people predominate, with a total of 47.08%. We also highlight the high percentage (15.82%) of those who did not provide information on their race/color.

66 PPTER Q1 2020.

67 However, the discrepancy in numbers relative to the total percentage for sex and in the rates of applicants and non-applicants for UI is noteworthy, indicating a possible error in the document.

68 Law 12.527

Table 1: Distribution by race/SINE (access via LAI). Prepared by the authors.

Race/color	Percentage	Total
Indigenous	0.15%	95,686
White	36.35%	23,529,391
Black	7.10%	4,598,294
Asian	0.60%	386,173
Mixed race	39.98%	25,875,381
Not reported	15.82%	10,236,372
	100%	64,721,297

In terms of the companies that used SINE in 2019, the PPTER Bulletin of the National Labor Market Observatory⁶⁹ shows that of the total jobs offered, 44% were from large corporations, 26% from small companies and 11% from medium-sized companies. The profile of jobs offered is concentrated in the service (43%), commercial (21%) and industrial (16%) sectors. The main occupations for the jobs offered were: production line operator, janitor and retail salesperson. When entries to the formal market are compared from sectoral and occupational perspectives, according to Rossetto (2019), the jobs offered on SINE have a similar profile, with a high concentration in occupations requiring low professional skills and offering lower salaries.

Quantity of jobs offered by occupation, Brazil, 2019		
Occupation:	Freq.	%
Production line operator	87.240	7,40%
Janitor	58.053	4,92%
Retail salesperson	57.947	4,91%
Construction assistant	30.893	2,62%
Food service assistant	30.687	2,60%
Truck driver (regional and international routes)	30.011	2,54%
Store and market attendant	29.257	2,48%
Cashier operator	29.118	2,47%
Administrative Assistant, in general	28.184	2,38%
Telemarketing Operator, active and receptive	27.677	2,35%
Total	409.017	34,67%

Figure 8. Main jobs offered on SINE in 2019.

Source: <http://portalfat.mte.gov.br/wp-content/uploads/2020/06/Boletim-PPTER-1%C2%BA-Trimestre-de-2020.pdf>

4.2 Consent For Data Use

The legal basis for data processing in the scope of ADM-SINE is found in Art. 7 of the LGPD, specifically in subsection III, which defines the execution of public policies as a goal that justifies the processing and shared use of data by public authorities.⁷⁰

The General Coordination for Special Projects of the Secretariat for Public Employment Policies points to Art. 11(II)(b) as the legal basis for the processing.⁷¹ The article and subsection provide for waiving the data subject’s consent when the shared data processing is necessary for the execution of public policies provided for in laws and regulations, as in the case of SINE.⁷²

Art. 11. Processing of sensitive personal data can only take place in the following cases:

II - without the data subject’s consent, in cases where it is indispensable for:

b) shared processing of data necessary for the execution, by public administration, of public policies provided for in law or regulations.

Likewise, several articles of Chapter IV of the LGPD, which provide for the processing of personal data by legal entities of private law, are noteworthy. Article 26 reads:

Art. 26. The shared use of personal data by Public Authority should comply with specific purposes for the execution of public policies and legal attribution by public agencies and entities, respecting the principles of protection of personal data listed in Art. 6 of this Law.

§ 1 - The Public Authority is prohibited from sharing with private entities the personal data contained in the databases to which it has access, except:

I - in cases of decentralized execution of public activity requiring sharing, exclusively for this specific defined purpose, pursuant to the provisions of Law 12.527 of November 18, 2011 (Access to Information Act);

III - in cases where the data are of public access, pursuant to the provisions of this Law;

IV - when there is a legal provision or the sharing is supported by contracts, agreements or similar instruments; or (included by Law 13.853, 2019)

V - in cases where the data sharing has the exclusive objective of preventing fraud and irregularities, or to protect and safeguard the security and integrity of the interested party, provided that processing for other purposes is prohibited (Included in Law 13.853, 2019).

§ 2 - The contracts and agreements contemplated in § 1 of this article shall be communicated to the national authority.

In other words, the standard is that the public authority cannot share the personal data in its possession with legal entities of private law, as is the case with Microsoft. However, the subsections list four exceptions, one of which applies when the sharing is supported by contracts, agreements or similar instruments. Therefore, the data sharing arising from the TCA signed between the Ministry of Economy and Microsoft is based on Art. 26(1)(IV) of the LGPD.

70 Detailed in Subsection 3.3.2 of this report

71 LAI request Protocol 03005.184809/2020-85.

72 Decree 76.403 and Law 13.667.

Current access to the Employing Brazil portal is linked to what is known as *Login Único gov.br*,⁷³ a solution from the Digital Secretariat for streamlining access to the federal government’s digital services. To register on *gov.br*, users must enter their Physical Person Registry (*Cadastro de Pessoa Física*, CPF). The terms of use and privacy policies provide exemption from authorization of the data subject; thus, these data can be shared with other digital public services, as can be seen in the following excerpts:

- The Platform may store, record or read, in any digital format, information or data within or outside the limits of the users’ workstations, provided they respect LGPD limits and guidelines.
- The availability of user information in terms of personal data and audit records is limited to the governmental sphere, without the need for express authorization from the data subject, provided that LGPD principles and guidelines are respected.
- The agency may, at any time, provide data or information regarding users of the authentication platform to other digital public services, whose purpose is the effective provision of a public service using exchange of data or information, or to satisfy a court or police order, or via petition from the Public Prosecutor, in accordance with the LGPD.

The terms for accepting registration on *gov.br* indicate that “the user knows and agrees to the collection, storage, handling, processing and use of the information sent and/or shared by *Login Único gov.br* under the terms established in these Terms of Use and Privacy Policy.”

73

https://sso.acesso.gov.br/login?client_id=contas.acesso.gov.br

5. ANATOMY OF IMPLEMENTATION

5.1 Digital Transformation Plan

According to the above description, the project implementing the ADM-SINE system will be executed under Technical Cooperation Agreement 110/2020 signed between Microsoft and the Secretary for Public Employment Policies (SPPE) and set up based on Public Request for Proposals No. 5/2020. However, Microsoft’s role with the SPPE for the use of AI tools in workforce intermediation began in 2019, in the context of preparing SINE’s Digital Transformation Plan under the framework of New SINE. At that time the result was conducting a proof of concept for using AI in workforce intermediation and on the SINE Health [SINE Saúde] portal, a digital platform developed in the context of the pandemic to facilitate hiring public health professionals.⁷⁴

Technical Note SEI 38464/2020/ME of September 18, 2020, developed by the General Coordination for Special Projects (CGPE) of the SPPE, reports that in July 2019, toward the end of launching the first version of the Open SINE project, the Secretary for Public Employment Policies requested that the CGPE develop a modernization plan for the SINE digital platforms made available by the government. It is reported that a design thinking event took place from August 7 to 9, 2019, with participation from representatives of the states of Minas Gerais and the Federal District. The objective presented for the event was the preparation of an assessment of the system’s primary limitations from the perspective of regional managers of workforce intermediation policies.

The report prepared on the event concluded that “the main difficulties observed are related to the system’s high level of complexity and the low level of autonomy for employers and workers.” Another part of the note affirms that “one of the main problems observed in the investigation is the companies’ high level of dependency in relation to the service centers,” giving the example of how companies that use the digital platform need to have their records and job vacancies validated at a physical SINE service center. Additional problems are identified as “the lack of integration among professional qualification and workforce intermediation platforms” and “a low level of capacity for segmenting services according to the user’s needs, which entails offering services without taking into account workers’ degree of difficulty in finding employment on their own.”

In terms of the second point, it is stated that the experiences of countries like Australia, Denmark, Holland and the United States were analyzed, concluding that “there are advances in effectiveness and savings in resources stemming from the use of a statistical profiling strategy for segmenting workers according to their employability.” The mention of examples from countries in the Global North, whose contexts and unemployment and professional qualification-related problems are barely comparable to the Brazilian case, is a permanent feature of the rhetoric of ADM-SINE boosters, above all among the government actors interviewed. The report also includes a survey of platforms composing the ecosystem of SINE’s

74 SINE Saúde proposed “to create a digital platform for workforce intermediation, within the scope of the National Employment System (SINE), dedicated to promoting and facilitating the hiring of professionals to act in the public health emergency arising from the novel coronavirus.” (Source: <https://www.in.gov.br/en/web/dou/-/resolucao-n-860-de-29-de-abril-de-2020-254676501>) However, as officials from the General Coordination of Special Projects for the Secretary for Public Employment Policies reported in interviews, the project did not continue due to administrative instability at the Ministry of Health during the first few months of the pandemic, when Brazil had three different ministers in a period of 100 days.

digital workforce intermediation platforms, indicating that the variety of platforms leads to governance difficulties and cost increases.⁷⁵

As part of the assessment phase for SINE’s Digital Transformation Plan, an analysis was requested of the team responsible for evaluating user experiences at the Secretariat for Digital Government. The survey, conducted during July and August 2019 in Brasilia, resulted in the document titled “SINE Workforce Intermediation—User Survey,” published in September 2019.

For this, 80 people were contacted: 41 workers, 31 business representatives and 8 SINE professionals. The participation of workers in this diagnostic research is the only record found of direct citizen participation in the decision-making process related to the new SINE job listings portal. Among other diagnoses, the report points to the low use of SINE’s digital tools:

Although the Easy *SINE* application came on line in 2017, service managers from ME/SEPEC estimated that its use continues to be low relative to the volume of in-person service, since only 0.3% of the jobs offered on SINE come from digital services and 35% of workers consult job openings on digital channels, compared to the total number of consultations at service centers.

The document also provides a summary of the main problems encountered during the search. Based on the analysis of SINE’s digital platforms and evaluations from service center managers and workers who are SINE users, 23 problems were identified, grouped into five main issues: search, registration, matching, selection process and response. Based on these, the objective of adopting ADM is to resolve or minimize the current difficulties related to matching, above all. The problems mapped were:

INITIAL SEARCH

1. Companies are not familiar with SINE or think that it is not worth trying to use it.
2. Companies are not familiar with SINE’s digital platforms.
3. Workers are not familiar with the application or the site.
4. Workers think there are more job openings listed with agencies than on the app.

REGISTRATION

5. Entering the employer registration and the job profile depend on the intermediation of a SINE professional.
6. SINE’s standards discourage the creation of backup registrations.
7. It is difficult to access the Easy SINE application.
8. Workers have difficulty navigating on the app.
9. Workers have difficulty choosing professional objectives.

MATCHING

10. The employer cannot analyze candidate profiles before the interview.
11. The cross-check with the Brazilian Occupational Registry (*Cadastro Brasileiro de Ocupações*, CBO) is complex and often less than effective.
12. Workers can only see available job openings if the CBO approves the match, including in the case of jobs that do not require experience.
13. Difficulties in filtering job listings and candidates by territorial criteria.

75 This ecosystem is made up of four different platforms: IMO Transaccional, responsible for service at the centers; Employing Brazil Portal, with functionalities for workers; Employer Web Portal, with functionalities for employers; and the Easy SINE application.

14. There was a difference in the match analysis in the job and in the application in one case.
15. Companies have difficulty finding candidates with disabilities.

SELECTION PROCESS

16. Companies cannot directly contact candidates before interviews.
17. Companies have no idea how many candidates will show up for the interview.
18. Many candidates do not attend the interviews.
19. Many candidates appear who do not match the profile.

RESULTS

20. Monitoring of feedback on the interviews is time-consuming and of little use.
21. Workers are not oriented to go to the agencies to pick up the referral letter.
22. Workers can collect a maximum of 3 to 7 referral letters for interviews.
23. Unemployment insurance is suspended when the worker is referred to an interview.⁷⁶

Lastly, Technical Note SEI 38464/2020/MEC describes the following action plan, divided into three phases, of which only the first has defined deadlines. Phases 2 and 3, in addition to not including deadlines, list actions described very generically. The execution of an automated decision-making tool is the last element in Phase 3.

Phase 1

- New intermediation process with greater autonomy for employers and workers. Projected for October 2020.
- New job openings portal. Projected for January 2021.

Phase 2. No dates determined.

- Consolidation of platforms.
- Integration with qualification policies.

Phase 3. No dates determined.

- Open innovation platform in SINE to facilitate decentralized evolution by private corporations and regional managers of the intermediation policy.
- Implementation of the worker profiling algorithm.

In terms of the deadlines defined, as we will see, the Technical Cooperation Agreement provides specific dates for the implementation of AI in ADM-SINE for intermediation and profiling.

5.2 Proof Of Concept

During the second half of 2019 a proof of concept on using AI for workforce intermediation in SINE was conducted by Microsoft and EloGroup.⁷⁷

76 The problem is described as having been resolved following negotiations among SPPE and Secretariat for Work managers, who are responsible for processing unemployment insurance.

77 Brazilian private corporation headquartered in Rio de Janeiro. With offices in four cities around the country, it operates in 12 countries in software development and licensing, as well as IT management and consulting for public, private and non-governmental organizations. See more at: <https://elogroup.com.br/>.

According to Microsoft, the test’s main objective was “to validate improvement in the system’s job matching accuracy.” The study used data from the metropolitan regions of Belo Horizonte and Curitiba; and from the cities of Tubarão, Santa Catarina state, and Guarulhos, São Paulo state. The salesperson role was selected for the basis because it has a higher incidence in the SINE database (Microsoft News Center, 2020).⁷⁸ The press release published by Microsoft details that the historic data used come from three databases: SINE’s own, that of the General Registry of Employment and Unemployment⁷⁹ and from the Annual Report on Social Information (RAIS).⁸⁰

According to the press release, AI showed an effectiveness rate above 70% in the recommendation of job offerings most suitable to the worker’s profile, although it does not describe the variables used in testing the match of candidates and job openings, or all the algorithmic definitions used for calculating the match. The text of the news brief describes that:

With the cross-referencing of historic information from these databases and analysis using AI algorithms, the rate showed greater than 70% effectiveness. In practical terms, this means that for every 10 cases of workers who had obtained an opportunity in the past, when the AI algorithm was used, in seven cases the algorithm was able to recommend the job opening most suited to the professional profile, as well as the best recommendation of the worker for the job. The other 30% correspond to professionals who, according to the history, found a job, but under this AI model, would have lower probability of getting the job. The algorithm recommends workers who have a greater than 60% possibility of matching the job (*Microsoft News Center, 2020*).

Sources interviewed at the Secretariat for Public Employment Policies affirmed that, although the Proof of Concept showed good results for the matching tool, “the profiling results were not as good,” referring to the tool for segmenting worker profiles in SINE according to degrees of employability. However, they did not provide details on more specific numbers or specific evaluation criteria.

The press release on the test describes how, to suggest which job openings have a greater chance of meeting a given worker’s profile, the AI algorithm considers both the situations that resulted in hiring as well as those that were unsuccessful. One of the differences of the proposed model, they say, is that “it makes it possible to recommend job openings to individuals whose professional profile is similar to that of workers who have been hired in prior selection processes” and it does not operate under the Brazilian Occupational Registry (*Classificação Brasileira de Ocupações, CBO*). The CBO is today the basis for matching résumés to job openings in SINE and has been described as a problem by several actors involved in defending the implementation of ADM-SINE. Some of the consequences related to the emphasis the new intermediation model will place on the history of prior hirings (as indicated in available information), above all in conditioning a worker’s opportunities, will be addressed in Section 6.1.

In an interview, when asked which variables were used in the proof of concept for matching a worker’s résumé to a job opening, and if only explicit (or also implicit) data were considered, Microsoft stated that “the project guidelines were determined by the SPPE” and recommended that this information be sought

78 The only report on the test results available to the public is a one published in Microsoft News Center Brazil on April 13, 2020: <https://news.microsoft.com/pt-br/sistema-nacional-de-emprego-sine-testa-uso-de-inteligencia-artificial-para-aumentar-eficiencia-na-oferta-de-oportunidades-de-trabalho/>

79 Cadastro Geral de Empregados e Desempregados.

80 Relação Anual de Informações Sociais (RAIS).

from the federal agency. The same response was given when we asked which rules were considered in determining whether or not a profile or job opening would be shown, and for calculation of the match probability. At that time, the company had also stated that “in the afore-mentioned proof of concept [...] we were able to increase the effectiveness of matching available jobs and people seeking employment to 70%, a highly significant number compared to SINE’s efficiency.”⁸¹ However, as is also described in the interview, “the study was not used in production, therefore it did not result in hirings,” making it methodologically impossible to compare the matching algorithm’s effectiveness as stated in the proof of concept and SINE’s current model of intermediation.

The proof of concept’s results would later be incorporated into the grounds for formalizing the partnership with Microsoft around SINE. In this regard, we highlight Technical Note SEI 1736/2020/ME of January 17, 2020, prepared by the CGPE of the SPPE on the “Technical application of data analysis in the SINE database using the proof of concept financed by Microsoft.” This is the first public document on the partnership between SEPEC and Microsoft for using AI in SINE. The document puts emphasis on the potential uses of these tools for intermediation and worker profiling in the context of SINE and recounts difficulties in the public sector related to available technical knowledge and infrastructure. The recommendation for signing the partnership with Microsoft is thus justified, as can be seen in the following excerpt:

Since there is no technical expertise or adequate infrastructure available at the Secretary for Public Employment Policies, it is understood that development of the project in partnership with Microsoft, as previously described, will make it possible to produce high-impact, analytical management information.

[...]

Accordingly, Microsoft, recognizing the potential socially transformative impact of this project, is willing to finance the initiative with the contribution of credits on the Azure tool, which has an active contract with this Ministry, and the hiring of data specialists.

On this point, the active contract with the Ministry for the Azure tool is noteworthy, as it provides evidence of how the partnership between Microsoft and the Federal government has several fronts. The last point we will highlight in relation to the Technical Note is the vague reference in the conclusions to what is noted as “effective knowledge transfer” under the scope of this partnership:

Furthermore, given that effective knowledge transfer is projected, a significant reduction in learning time is expected for the autonomous use of data analysis techniques in the work to be conducted under the project by Ministry of Economy servers, together with technicians with broad experience in handling large databases.

The question of knowledge transfer from Microsoft to the country, as we shall examine in more detail below, is explicitly found in Clause 9.7 of the TCA, with restrictions and conditions related to Microsoft’s intellectual property, knowledge and pre-existing information.

81 The information is also found among the justifications presented in the Technical Cooperation Agreement’s work plan, as described in Point 4.3: “Microsoft will develop in 2019 a proof of concept using artificial intelligence with the Secretary for Public Employment Policies (SPPE), demonstrating the ability to increase the system’s work-force intermediation potential to 70% as compared to the significantly lower rate of the system currently in use.”

5.3 Technical Cooperation Agreement

The first clause of the TCA signed between the Brazilian federal government via the Special Secretary for Productivity, Employment and Competitiveness (SEPEC) of the Ministry of Economy and Microsoft defines that the agreement’s “subject is the provision by Microsoft, at no cost to Public Administration, of a solution supporting workforce intermediation to be integrated into the National Employment System (SINE) (‘Solution’).” The clause also defines that the solution will not impact SINE’s operations and can be deactivated with no harm to its functions currently being executed by Dataprev.

According to Ruling 15/2013 of the Federal Public Prosecutor’s Office (*Procuradoria Geral Federal*, PGF) and the State Attorney General’s Office (*Advocacia Geral da União*, AGU),⁸² the TCA is a legal instrument that differs from tenders, contracts and terms of execution because there is no possibility of resource sharing between the parties. According to the ruling:

The cooperation agreement can be thought of as a formalized legal instrument between agencies and entities of Public Administration or between these and private, non-profit entities, with the objective of establishing an interest in mutual technical cooperation, executing work, project/ activity or event programs of mutual interest, in which there is no requirement to share resources among participants.

It is also important to emphasize that where provisions regulating the legal instrument are missing, Ruling 15/2013 stipulates that the provisions of Ordinary Law 8.666/1993 (regulating tenders and public contracts, among other regulations) must be applied. According to the Ruling, pursuant to Art. 116(1) of that law, cooperation agreements must have a work plan that includes “identification of the object to be undertaken, the goals to be achieved, the stages or phases of execution, and projection of the start and finish of the object, as well as the conclusion of programmed stages or phases.”

The TCA defines its purpose as “Microsoft’s internal processing and controls, both related to these tools/licenses and quantitative ones, needed for the Solution.” For this internal processing to be feasible, the possibility is given of “signing a supplementary document between the parties or even the use, by Microsoft, of any of its licensing partners who have an active contract in Microsoft’s control systems, in relation to the Ministry of Economy.”⁸³ That is, even if it uses a partner company, such as BizApp, Microsoft will continue to be the sole party responsible for the object and the terms and conditions.⁸⁴

Regarding the solution’s costs, Clause 6 of the TCA, which addresses resources, makes it clear that the agreement “is carried out free of charge, without entailing financial commitments or transfer of resources between the PARTICIPANTS, each being responsible for the costs incurred in the conduct of activities.” The document also details that the solution will comprise three modules: one for profiling, another for intelligent intermediation and a third for controlling the system’s performance indicators, as described below:

82 https://sites.unipampa.edu.br/proplan/files/2019/05/parecer_n_-_15-2013-camarapermanenteconvenios-depconsu-pgf-agu_compressed-1.pdf

83 Section 2.3

84 Ibidem

- Worker profiles: this will use extraction of data from SINE databases, using export or access via API, intelligently consolidating these data and enabling the use of analytical and aggregation functions.
- Intelligent intermediation: the use of artificial intelligence to make a match between available jobs and the most suitable workers for filling those jobs, as well as indication of the skills needed to fill them. The lists of job openings that match the worker’s profile, skills and ‘School 4.0’ courses offered by Microsoft and completed by the workers, must be sent to SINE’s platforms. The list of digital skills indicated for the workers will be shared with the ‘Worker School 4.0’ qualification system.
- Performance indicators: display panel of performance metrics for the SINE system.

In addition to the description of each module of the solution, the information sharing projected between ADM-SINE and School 4.0—managed by Microsoft—is noteworthy, and its consequences will be better addressed in Section 6.3. We stress that the mention of School 4.0 above is its only appearance in both the TCA and the Work Plan, in contrast to the emphasis placed on the initiative in announcements of the Microsoft ‘*More for Brazil*’ project.

The solution’s stated purpose, according to the TCA, is to:

Support the SINE System in workforce intermediation promoting coordination between the demand for professional labor and its supply, improving the effectiveness of SINE’s digital platforms using the creation of worker profiles (limited to 25 million workers),⁸⁵ the use of artificial intelligence and presentation of general performance indicators for the system.

The work plan included in the TCA⁸⁶ describes that the main problems identified by the SPPE in the digital platform that operationalizes workforce intermediation in SINE are:

- Low usability, which does not allow the end user, the worker, to interact directly with the system, imposing the need to use service centers.
- Difficulties for workers when it comes to choosing professional objectives.
- Impossibility for the employer to interact directly with the candidate or analyze candidate profiles before an interview, reducing the efficiency of workforce intermediation and requiring more time and potentially unnecessary interviews.
- Lack of filters to facilitate searches in the system.
- Lack of integration with public qualification policies.
- Lack of integration with public policies for income generation using productive guided microcredit.

It is highly significant to observe the justifications announced in the TCA, the work plan and other documents that lay the groundwork for the cooperation. In addition to the explicit reference to the impact of

85 As in the project’s public launch, there are no grounds given in the documents comprising the agreement for limiting the profiling tool to be implemented to 25 million.

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COVID-19,⁸⁷ described in the contextualization of this study, the justifications are divided between pointing to the public sector’s technical and infrastructure gap and low level of effectiveness, and an extremely flattering presentation of Microsoft. The work plan even presents passages identical to institutional press releases and corporate communication pieces from the company. We can highlight, as an example, the following passage, found in various announcements:⁸⁸

Microsoft has been present in Brazil for 31 years and has continuously invested in bringing technology at no or low cost to 2,038 NGOs, benefiting various social projects. Between 2011 and 2019, the company supported more than 7,100 startups in Brazil, with an investment of over US\$ 205 million in cloud credits.

Mentioned as grounds for formalizing the cooperation are the similar actions developed in 2019 between SEPEC, in the scope of the Secretariat for Public Employment Policies (SPPE) and Microsoft, mentioning the proof of concept and SINE Health [SINE *Saúde*],⁸⁹ described in Section 5.2.

In terms of the conditions imposed on the public authority for implementing the solution, Clause 2 explicitly and directly addresses the participants’ obligations, describing SEPEC’s obligations under the TCA as follows:

- 2.1.1. Provide political–institutional support, technical data, human resources, equipment and facilities necessary for execution of the PROJECT;
- 2.1.2. undertake regulatory actions;
- 2.1.3. exercise monitoring and supervision of execution of the PROJECT;
- 2.1.4. execute the work plan together with Microsoft;
- 2.1.5. maintain a team dedicated to management and monitoring of project execution;
- 2.1.6. prepare periodic reports on the program;
- 2.1.7. dissemination of the solution and communication with its users; and
- 2.1.8. respect the quantitative elements defined in the Cooperation Agreement, its period, as well as elements concerning Microsoft’s performance limits, including consulting schedule, access to the Solution, storage and phone calls.

The work plan, in turn, presents several considerations conditioning SEPEC’s responsibility, including:

- Maintain a team dedicated to management and monitoring of project execution.
- Prepare periodic reports on the initiative’s impact on public workforce intermediation policies.
- Widespread dissemination of the program and communication with beneficiaries.

87 The “MANAGEMENT REPORT–UNDERSECRETARY FOR HUMAN CAPITAL: FEBRUARY 2019–SEPTEMBER 2020” document, which predates the TCA, but which prescribes its signing, has the following section that perfectly captures the use of the pandemic context to justify the partnership: “The COVID-19 situation gives us the opportunity to raise awareness of the importance of training in new skills and tools for the labor market. Social isolation also adds a greater availability of time for people interested in training.”

88 The passage can be read here: <https://news.microsoft.com/pt-br/features/startup-de-logistica-utiliza-inteligencia-artificial-da-microsoft-para-seguranca-no-transporte-de-cargas/>; and here: <https://news.microsoft.com/pt-br/features/empresa-brasileira-utiliza-nuvem-para-evitar-lesoes-cerebrais-em-recem-nascidos/>

89 In describing SINE Saúde, implemented in the context of the COVID-19 pandemic, it is noteworthy that the date used is 2019.

As we shall examine in greater detail below, the ADM-SINE implementation project does not describe more specific characteristics of the impact reports included among SEPEC’s powers. In terms of the conditions and responsibilities established in the TCA for public authorities, Point 6 of Clause 9 is also emphasized, referring to Final Dispositions:

SEPEC is the sole party responsible for making any decision grounded in the recommendations made by MICROSOFT, for the use of materials and for compliance with applicable laws, standards and regulations.

It is of particular interest how this passage seems to imply a potential refusal by Microsoft to take responsibility in regard to the consequences of decisions made based on the solution it offers. This aspect appears to be reinforced in Point 9.5 of the same Clause 9, which defines that: “MICROSOFT does not guarantee, via the activities undertaken, any type of result.”

Lastly, we underscore a few points that highlight how signing the TCA **does not** entail certain responsibilities and conditions for the public sector, found in Clause 1. These are:

1.4. The provision of the Solution via a Cooperation Agreement establishes no type of compensation or obligation by the Federation, the Ministry of Economy or any entity of Public Administration, nor any type of commitment, promise or advantage in the acquisition of products, solutions, services or licenses from Microsoft related or unrelated to the Solution and the potential Cooperation Agreement.

1.6. [...] Once the Cooperation Agreement’s term has ended, there will be neither exclusivity nor the need to maintain the same underlying technology should SEPEC/Ministry of Economy be interested in continuing the use of technological solutions for any of the functionalities included in the Solution.

1.7. None of the activities projected in this TCA shall be used by SEPEC to support any kind of future procurement of products, solutions, devices or services, and it may not be used as proof of concept or for the preparation of base projects or terms of reference for future procurement, related or unrelated to the Solution.

1.8. It does not require the acquisition of products, solutions, devices or services that are owned or marketed by Microsoft for the performance of the activities provided for in this TCA. The execution of this TCA shall not generate any additional need for purchase of any product, solution, device or services owned or marketed by Microsoft.

As in the public sector obligations, we find conditions explicitly and directly imposed on Microsoft for the formalization of the agreement in Clause 2, which concerns the participants’ obligations. These are:

2.2.1. Execute the object of the TCA as described in Clause 1, in accordance with the Work Plan annexed to this TCA;

2.2.2. deliver to SEPEC any reports related to this TCA and to the Work Plan;

2.2.3. dissemination of the program solution to the press and on the company’s social networks;

2.2.4. the PARTICIPANTS answer, proportional to their individual liability, for the consequences of non-execution of the PROJECT, in full or in part, in accordance with the provisions of Clause 9 below.

The work plan, in turn, presents certain conditions and responsibilities for Microsoft, including:

- Creation, set up and configuration of the Azure platform, *Dynamics 365* and *Power BI* in accordance with the standards set by the Directorate for Information Technology of the Ministry of Economy;
- development of the solution;
- dissemination of the program to the press and on the company’s social networks;
- maintaining the use of the solution for the duration of the Cooperation Agreement.

Regarding the knowledge transfer that was produced by virtue of the TCA, Point 7 of Clause 9, establishing conditions, provides that “the knowledge and information obtained by SEPEC [...] as a result of the cooperation and/or development in support of this TCA, which may be protected by any legal system for protecting intellectual property, shall be the property of and owned by the Federation.” Meanwhile, the point is also emphatic in excluding the applicability of Microsoft’s pre-existing intellectual property clause: Under no circumstances does this clause apply to MICROSOFT’s pre-existing intellectual property, knowledge and information, or to the technological products and solutions in any stage of development, developed exclusively by MICROSOFT for providing the Solution and/or its improvement to fulfill the obligations which MICROSOFT undertakes with this TCA.

Regarding the information transfer that was produced under the TCA, Points 9.8 and 9.9 mention that it is strictly prohibited for the SEPEC to provide to Microsoft “information protected by fiscal, corporate and commercial confidentiality,” as well as prohibiting Microsoft from any access to said information without control of access by SEPEC. Point 9.8 also details that “personalized information of a scientific and research nature must only be forwarded after signing a confidentiality agreement by the technical team that will make use of these data.” To that end, in addition to signing a confidentiality agreement, “the technical team made available by MICROSOFT [...] must use scientific methodology and be guided by the General Data Protection Law.”⁹⁰ Point 9.11 mentions that, in following the LGPD:

THE PARTICIPANTS undertake to respect the confidentiality of any information exchanged and generated during the execution of the activities under this TCA for an indefinite time period and to neither disclose to nor share, directly or indirectly, with third parties the information exchanged.

However, it is important to note that the clauses related to the information transfer described above do not seem to define safeguards regarding information not protected by fiscal, corporate and commercial confidentiality, as is the case of information processed on the SINE portal. Confidentiality, stipulated in Point 9.11, does not apply either, although in compliance with the LGPD, some limits are provided in that sense.

The term of the TCA will be for 27 months from its publication in the *Diário Oficial da União* (DOU) on November 12, 2020. The deadlines for the stages and phases of implementation of the ADM-SINE system are laid out in the work plan, as shown below. According to the implementation timeline, ADM-SINE will be in operation in the first quarter of 2021.

90 Point 9.9

Task name	Duration
Planning	10 days
Strategic objectives	1 day
Data source mapping	5 days
Identification of KPIs	2 days
Data security	1 day
Environment setup	15 days
Online service provision	5 days
Configuration of tiers	5 days
Pilot with input of preliminary data	5 days
Execution	103 days
Feeding	45 days
Data/agency mapping	15days
Data match	10 days
Data mixing	10 days
Search and indexing configuration	5 days
Definition of activities	5 days
Insights	37 days
Enrichment	2 days
Segmentation	10 days
Measurements	10 days
Advanced insights (ML)	15 days
Export/action	11 days
PowerBI	3 days
External system for action (e.g., Marketing)	5 days
PowerApps	3 days
Close	3 days
Documentation	5 days
Accompaniment	5 days
Support	540 days
Platform maintenance and support	540 days
Availability of data for internalization by the Ministry of Economy	40 days

Figure 9: Steps and deadlines for implementing ADM-SINE.

Source: Work Plan (SEI 11558736)

5.4 Automated Decision-Making System Design

5.4.1 Technological tools

In terms of the technology used in implementing ADM-SINE, according to the TCA, the solution would be based on “the use of data, digital technology and artificial intelligence, supported by *Microsoft Dynamics* tools and licenses, *Power BI Premium* and artificial intelligence tools of the Azure cloud, respecting their respective terms of use and online services.” The work plan indicates that the “technological solution will

use the *Microsoft Dynamics 365 Customer Insights* module” for data unification and processing, with the expected result being “better understanding of the workers and job openings based on intelligent insights and actions.”

The product’s web site describes *Dynamics 365* as “a set of intelligent business applications that help you manage your whole company and achieve better results using AI-powered predictive insights.”⁹¹ For its part, *Power BI* is an analytics and data visualization tool applied to Business Intelligence (BI).⁹² Lastly, the Azure platform is a cloud-based environment that can be used to train, implement, automate, administer and follow-up on machine learning models.⁹³

A passage of the Work Plan which seems to be an adaptation of prior *Customer Insights* commercial material, explains that the tool will enable:

- Grouping transactional and behavioral data in real time to create updated worker profiles.
- Using data to pool workers with the same interests and characteristics to improve participation in strategic actions.
- The prediction tool uses automated means to evaluate data and make predictions based on those data. The predictions improve understanding of a given worker.
- *Customer Insights* is integrated into *Azure Machine Learning*, facilitating use of tailored models, e.g., a worker’s potential for a certain available job.

Although this passage does not seem to have been written exclusively for the TCA, the characteristics highlighted above give important clues as to the kind of information on workers and the employment market that will be generated and managed on the new SINE jobs portal.

Despite all the details on the use of Microsoft AI tools included in the TCA and the Work Plan, when asked if the AI system for workforce intermediation and profiling that will be implemented in SINE is an original concept for the Brazilian context or an adaptation of an already existing solution, Microsoft responded that “the solution included in the Microsoft ‘*More for Brazil*’ Program is completely unprecedented.” The company also stated that the solution “will be developed following SPPE guidelines, based on the experience gained in the proof of concept.”

The present investigation also identified the existence of a job matching patent registered by *Bright Media Corporation*, a company specialized in workforce intermediation acquired by LinkedIn,⁹⁴ which has been owned by Microsoft since 2016. It is worth noting that at no time did the SPPE or Microsoft sources consulted make any mention of that patent being the basis for the AI used in the proof of concept or in the ultimate solution currently being implemented. The patent, registered in the United States under code US 2014/0122355 A1 as of January 5, 2014, is described as follows:

A method and a computer system to match candidates with job openings. The technology is more specifically related to the methods of assigning a candidate a score for a specific job opening, where

91 <https://dynamics.microsoft.com/en-us/what-is-dynamics365/>

92 <https://powerbi.microsoft.com/en-us/>

93 <https://docs.microsoft.com/pt-br/azure/machine-learning/overview-what-is-azure-ml>

94 <https://blog.linkedin.com/2014/02/06/welcome-bright-to-the-linkedin-family>

the score is derived from a comparison of characteristics in the candidate’s résumé to the job characteristics in a job description, as well as the use of external data collected from other sources, based on the information contained in the applicant’s résumé and/or the job description for the listing.

Although it is not possible to establish a direct relationship between the technological solution proposed by Microsoft for SINE and the patent described above, in the context of this investigation it is not just by coincidence that in the last few years Microsoft has acquired companies related to job search and workforce intermediation, such as *Bright Media Corporation* and LinkedIn.

Regarding this connection, we can highlight a mention made on September 25, 2020 by the Undersecretary for Human Capital in the Management Report for February 2019 to September 2020,⁹⁵ on a LinkedIn tool that would integrate, on behalf of Microsoft, the offerings for the partnership with SEPEC, which was in the process of being formalized. In describing Microsoft’s offering, it is explained that “[Microsoft] also undertakes to provide data on the job opportunities and skills most solicited on the LinkedIn social network using the *LinkedIn Economic Graph* report, with the goal of enabling a better assessment of local economic needs and professional skills required by the market.” However, mention of the tool is not found in the text of the Technical Cooperation Agreement.

5.4.2 Automation and its relationship to human decision-making

ADM-SINE is directly related to two human decision-making processes. The first is linked to the workforce hiring process, since it acts directly on the “filtering” of which workers will be selected and potentially hired. The second encompasses decisions related to public employment policies, referring people to qualification programs or even social assistance. The implementation of ADM leads to direct effects on workforce intermediation since there will be no human review of the match between workers and job openings.

As we have described, the system will specifically act in two stages of workforce intermediation: worker profiling and matching workers to jobs. The latter refers to “the use of artificial intelligence to find matches between available jobs and those workers best suited for filling those jobs.”⁹⁶ This is what is known as matching workers and job openings. Profiling refers to the extraction of data from SINE’s databases and the use of AI to segment workers by “risk profiles,” anticipating profiles of highest risk (those that have been out of the employment market for a long time, for example). According to the CGPE of SPPE, this tool’s goal is to categorize workers registered with SINE using criteria on their ability to be re-integrated into the employment market, aiding in both the internal job recommendation process and the orientation of public employment policies, especially for qualification.

Up to now, interest in filling a job was directly shown by the worker for a job opening and by a company for a résumé, or it was managed via SINE service centers, which invited workers registered in its database. With the introduction of so-called “intelligent intermediation,” the connection between workers and jobs will be done automatically. The potential impact and risks associated with these changes will be address in greater depth in Section 6.

On the other hand, although profiling does not operate directly as an automated decision, once it becomes a tool for categorizing the workers that participate in SINE, it will have direct impact on the public policy decisions made based on its indicators, above all those related to professional qualification. This module of

95 SEI/ME - 10752672

96 SEI/ME - 11558736 - Work plan

the system did not exist in the prior intermediation process flow and is related less to intermediation than to the production of new knowledge and ways of categorizing the workers that make up SINE’s database.

5.4.3 Algorithmic processing

As mentioned above, Microsoft stated in an interview that the criteria used in the ADM-SINE system’s internal processing would be oriented by the SPPE. A consultation was made using an access to information request,⁹⁷ regarding which criteria would be used for intelligent intermediation on SINE’s digital platforms, and the General Coordination for Special Projects of the SPPE replied as follows:

Techniques will be used to identify the most suitable vacancies for workers based on prior work experience, successful and unsuccessful referrals, query profile for openings, professional profile and data on the use of SINE’s digital platforms. In terms of the indication of skills, an occupational competency mapping [SIC] will be used with the goal of recommending qualification courses that will develop the skills required for the exercise of certain activities of interest to the workers.

Despite the criteria it details, the response is ambiguous in regard to whether by “prior work experience” they are referring to the worker’s personal experiences or the history of prior selection processes in the database, as—according to the stories we had access to—would have been done under the proof of concept, where it was used as a recommendation criterion for the jobs.⁹⁸ In any case, the emphasis to be placed on the history is explicit, regardless of whether it is in the selection process or in navigating the portal.

In terms of the criteria that will be used for profiling workers in the new system, the agency responded that:

Techniques used in other countries to identify characteristics of the worker’s place of residence, prior work experiences, successful and unsuccessful referrals, the job vacancy profiles, the professional profile and data on the use of SINE’s digital platforms will be adapted to identify the characteristics in each region that have the most impact on length of time for reintegration into the employment market. With this, a ranking is expected to be created of which workers need more attention from local public agents to provide more tailored follow-up, i.e., those who are at the greatest risk of remaining unemployed for longer.

Even with the explanation of the algorithmic processing criteria for both modules, the weight that each variable will have in the system’s different tasks (job recommendations, worker profile recommendations, segmentation by profile, etc.) remains opaque, along with which algorithmic norms will organize those tasks (e.g., how the match probability will be calculated and based on which probability, according to established criteria, a job opening is shown to a worker or not). In this sense, the most explicit algorithmic norms to which this investigation had access are those disclosed at the time of the proof of concept and, therefore, those are the ones we take into account for impact considerations.

5.4.4 Accountability mechanisms

In the documentation on implementation of ADM-SINE to which we had access, the only mention of active transparency mechanisms is found in the Work Plan.⁹⁹ The SPPE’s obligations are described as including: “Preparing periodic reports on the initiative’s impact on public policy for workforce intermediation.”

97 Protocol 03005.184809/2020-85 answered December 1, 2012.

98 See Section 4.2.

99 SEI/ME - 11558736

However, no detail is provided on those for whom the reports are intended, their criteria or their frequency. In contrast to the laws providing for the operation of Open SINE,¹⁰⁰ the implementation of ADM on the SINE jobs portal has not up to now been accompanied by the publication of any specific regulations.

In the adaptation process on the LGPD’s entry into force, Dataprev, the public technology company responsible for managing the SINE database, made available on its portal¹⁰¹ an active transparency page, with information on its Information Security Policy, processing and type of personal data held by the company, as well as international data sharing agreements. The company’s page also informs that the Dataprev ombudsman, incorporated in *Fala.BR*,¹⁰² a Federal government channel, is prepared to receive and address any questions and requests from interested parties, especially those who are not part of the company’s internal audience.

In terms of passive transparency mechanisms related to the design of decisions made by the system, the most suitable mechanism for that purpose is the application of the obligations detailed in Article 20(1) of the LGPD, related to the right to explanation, addressed in Subsection 2.3.2:

§ 1 The controller must provide, whenever asked, clear and appropriate information on the criteria and procedures used for automated decision-making, respecting commercial and industrial secrets.

Furthermore, we highlight the importance of the principle of transparency, set forth in the LGPD as one of the precepts that must guide data processing¹⁰³ for the design of automated decision-making processes. This is defined as:

VI - transparency: guarantee to data subjects of clear, accurate and easily accessible information on the conduct of processing and the respective processing agents, observing commercial and industrial secrets [...]

In response to the request for information using the Access to Information Act,¹⁰⁴ regarding which error review mechanisms are being considered in the system’s design, the Coordination for Special Projects of the SPPE answered that:

The review of errors in the artificial intelligence algorithms can be assessed from the perspective of unwanted biases or on the risk of erroneous matching.

With respect to unwanted biases, care will be taken in the assessment of the algorithms so that only positive discriminations will be permitted.

Furthermore, in contrast to the current system, in which matching of jobs to the professional profile is deterministic, the new model will only recommend jobs and courses to workers, and the worker’s

100 CODEFAT Resolution 826/2019 and Ordinance 21.130/2020.

101 Note from the editorial team: This information was originally found at: <https://portal2.dataprev.gov.br/tratamento-de-dados-pessoais>. However, on March 31, 2021, it was no longer available online.

102 <https://falabr.cgu.gov.br/publico/Manifestacao/RegistrarManifestacao.aspx?idFormulario=4&tipo=1&origem=idp&modo=>

103 Art. 6

104 Protocol 03005.184809/2020-85 answered December 1, 2020.

risk profile to SINE managers. That is, the recommendations can be ignored, which will be fed back into the algorithm, improving its accuracy.

With regard to reviewing errors, it is worth mentioning the right to review provided for in Art. 20 of the LGPD, which defines that data subjects have the right to request the review of decisions made solely on the basis of automated personal data processing which affect their interests. However, as discussed in Subsection 2.3.2, the presidential veto of the possibility of human review of automated decisions has limited, or at least made more difficult, the possibility of reviewing errors using the exercise of the right to review provided for in this article.

In the same request for information, when asked if the implementation of the new SINE jobs portal foresaw audits and, if so, with what frequency, using which institution and procedure, and considering which indicators, the Coordination for Special Projects of the SPPE answered that “given that the platform is maintained by Dataprev, the auditing procedures of that public company will also be used for the SINE jobs portal.”

We also recall that the ANPD has the right to require an audit to verify discriminatory aspects in the automated processing of personal data and the preparation of the impact report on personal data protection. In terms of compensating victims of errors in the implementation of ADM-SINE, the most suitable mechanism available in Brazilian legislation is, again, the LGPD, specifically in Section III, which addresses Liability and Compensation for Damages. Art. 42 defines that:

Any controller or operator who, by reason of the activity of processing personal data, causes property, non-material, individual or collective damage, violating legislation on the protection of personal data, is required to provide compensation for it.

The article also establishes that actions compensating collective damages whose goal is to hold data operators and controllers liable, may be exercised collectively.¹⁰⁵ In such cases, agencies such as the Public Prosecutor’s Office, the Ombudsman or even non-governmental organizations may represent an entire community before the Judicial Branch to defend these rights, as made clear by Bruno Bioni.

Art. 43 details that processing agents will only be held exempt from liability when they can show they have not conducted the processing attributed to them, that there was no violation of the data protection laws or in cases where the harm is exclusively the fault of the data subject or a third party. Finally, we highlight two principles of the LGPD which, associated with the mechanisms described in the above-mentioned articles, may help support the processes for compensating victims of errors, especially those that have some discriminatory nature.

IX - non-discrimination: impossibility of undertaking the processing for discriminatory, illicit or abusive purposes;

X - liability and accountability: demonstration, by the agent, of the adoption of effective measures capable of proving respect for and compliance with fulfillment of personal data protection regulations, including the effectiveness of these measures.

In accordance with Law 13.709, security is the other principle that governs the processing of personal data, defined as “the use of technical and administrative measures capable of protecting personal data from

unauthorized access and accidental or illicit situations of destruction, loss, alteration, sharing or dissemination.” The procedures and complaints related to security breaches that involve requests for monetary damages and compensation for harm to the data subject can be undertaken based on the principles and provisions of the LGPD, principally Art. 42. Furthermore, Article 18 of the law stipulates that:

§ 1 Personal data subjects have the right to file a request against the controller in regard to their data before the national authority.

§ 2 Data subjects may oppose the processing conducted based on one of the hypotheses for withdrawal of consent, in case of breach of the provisions of this Law.

§ 3 The rights provided for in this article will be exercised via express petition by the data subject or a legally appointed representative, to a processing agent.

These rights can be exercised using the National Data Protection Authority (ANPD), whose duties include responsibility for the application of administrative sanctions on data processing agents or before consumer protection agencies.¹⁰⁶

6. POTENTIAL RISKS AND IMPACT OF AI USE IN THE CONTEXT OF SINE

Given that the use of ADM within SINE is still in implementation phase, its impact cannot yet be assessed. The following considerations refer to potential risks and impact, identified based on the investigation presented throughout this report.

6.1 Regulating The Field Of Opportunities

One of the major potential risks of using artificial intelligence tools for workforce intermediation and automated profiling in the context of SINE is related to the way in which the operation of these tools affects and regulates the field of opportunity for unemployed workers. Given that one of the main functions for using AI in SINE’s intermediation is the selection of which jobs will be offered to a worker by applying unexplained rules and criteria, as is common in algorithmic mediation (Cf. Pasquale, 2016), the operation of ADM directly impacts the possibilities for workers to access job opportunities. Since only those jobs supposedly more compatible with their skills are recommended¹⁰⁷—and they can show interest only for the ones recommended—workers are not even aware of the discrepancy between total opportunities and those to which they have access. The discourse surrounding the advantages of tailoring recommendations, whether in the realm of public policies or in the media-driven panorama of large digital platforms, often overshadows problems related to the criteria used in filtering content in algorithmically regulated and segmented contexts.

As noted by Taina Bucher (2020), the most powerful dimensions of algorithms are not necessarily found in the algorithms themselves, but rather in the “way in which these systems govern the potential field of action for others, and how such possibilities become more or less available or unavailable for certain actors in specific contexts.” Far from being a mere tailoring of the offer to ensure a stronger match between worker and job, the use of algorithms in contexts such as that under investigation here may have direct material, political, social and economic consequences in the life of people affected by these mediations and decisions.

However, it is important to emphasize that the current version of the Employing Brazil portal already filters which jobs are visible to workers registered on the site. This filtering is done by cross-matching the Brazilian Occupational Registry (*Cadastro Brasileiro de Ocupações*, CBO) appearing on the worker’s résumé with that recorded on the job opening, which was mentioned as one of the problems stemming from the lack of flexibility in the current version of the system.¹⁰⁸ Although limited, the filtering criteria used in the system’s current version are transparent to users: the jobs offered are those that are more suited to their profile and stated objectives, and users may choose which ones to apply to, according to a self-defined category. In the new version of the system to be implemented, the job filtering will be automated.

According to the descriptions of the proof of concept conducted by Microsoft (*Microsoft News Center Brasil*, 2020) and accounts from the SPPE actors interviewed, the AI tool will analyze the database of job openings and workers in the system to identify the profile of workers who were accepted in prior selection processes.

107 According to SPPE sources interviewed, with the changes underway on the portal, employers will have the possibility of inviting even those workers who have not shown interest in the job. The latter could accept or reject the invitation. However, the contrary is not openly projected, i.e., that the worker may show interest in a job that the system has not considered compatible with his or her skills.

108 Technical Note 38464/2020/ME

Based on this, the job matching tool recommends jobs to workers with profiles similar to those previously hired, provided that the probability of a match between worker and job is higher than 60%.¹⁰⁹

The new solution’s operational logic initially aims to improve the prior version in terms of the rules for displaying jobs, since under the new criteria these may be suggested even if there are differences between the CBO found in the job descriptions and on the workers’ résumés. That is, the new solution would in some cases expand the job offerings suggested to workers. However, in using the database’s prior content as one of the selection process’s main filtering criteria and in projecting hiring probability based on this filter, the system may have a tendency to repeat and reinforce its own history. According to this principle, this means that the system would be likely to recommend jobs to—and consequently hire—workers whose profile is similar to those already hired (probably more qualified), decreasing the likelihood of hiring people who differ from that profile (probably less qualified) and who would tend to be less visible to employers in the system.

Authors have repeatedly emphasized that, within the population served by SINE, those who have greater difficulty accessing employment are young people, women and Black people, generally with lower education levels, limited skills and lacking experience (Rossetto, 2019; Moretto, 2018). Therefore, those potentially harmed by the logic described above would be the most vulnerable groups of workers. It is worth remembering that the length of time a worker spends out of the employment market is a critical factor in increasing what is known as “social risk,” understood as the possibility that a person will take on precarious or degrading work due to not seeing the possibility of getting a job because of the length of time spent unemployed (Lobo and Anze, 2004, p. 57).

As a result, while the intention of using profiling tools to identify those workers facing greater difficulties for entering the job market (so-called “risk profiles”) and recommending qualification courses is good and relevant, it is important to emphasize how the trends that seem baked into the intermediation algorithm’s operational logic can reinforce and deepen preexisting stigmas, and even be in conflict with the purpose of the public policies involved. This could make it even more difficult to reintegrate groups who are already in a situation of social vulnerability and who, according to SINE’s own guidelines, must be prioritized in the implementation of public policies.¹¹⁰

Another issue to watch is how the actors involved in the design and implementation of the automated decision-making tool are exempt from liability for the system’s material effects, since what is automated is not the decision of which workers will be hired, but rather “only” those who will be recommended for a specific job opening. In other words, the final decision will always depend on the employer. *The Automating Society 2020* report, which summarizes the results of research conducted in 11 European countries on the use of automated decision-making systems in various realms, including workforce intermediation, describes a similar posture (*Algorithm Watch*, 2020). According to the report, a common argument is to affirm that the hiring is not done by ADM and only the assessment process is automated, providing a basis for employers to make their decision.

109 Neither the interview given by Microsoft, nor the response to the request for information via LAI from the General Coordination for Special Projects provided new information on the algorithmic standards that will regulate the display of job offerings. The criteria that will be considered for the intelligent intermediation were reported via the access to information request (see Subsection 5.4.3). For this reason some of the problems mentioned in this area are focused on the standards described in the proof of concept.

110 Law 13.667/18, Article 2(XI).

In the case of SINE, this posture was mainly identified in relation to the change that is being implemented on the job openings portal, which will allow employers to consult a candidate’s full résumé before the interview. In the words of the SPPE actors interviewed, the goal of this change is to “give the parties more autonomy” and avoid the worker going to an interview that may be unnecessary.¹¹¹ Mentioned as a problem in the current system, both in the assessment documented in the SINE Digital Transformation Plan¹¹² and in the Work Plan for the TCA signed with Microsoft,¹¹³ the impossibility of accessing the worker’s full profile prior to the interview is part of SINE’s traditional mediation protocols to avoid discrimination—especially based on sex, race and age bracket—during the selection process.^{114, 115} While some data from the worker profile (such as race and sex) remain hidden in the new version, the possibility of accessing résumés before the interview may lead to the premature elimination of candidates who could have had the possibility of being hired through an in-person meeting.

In this way, the desired improvement in the efficiency and optimization of workforce intermediation runs the risk of being harmed by the very rationale guiding the system: whether in its emphasis on hiring history in the smart intermediation algorithm or in the freedom for prior review of the worker’s full résumé, there is a tendency to select, as soon as possible, the most qualified profiles in the database. Accordingly, the risk exists that the system’s own performance can have a negative impact on a segment of workers who cannot get a job and who are precisely the declared target audience of public employment policies.

6.2 Structural Asymmetry And Lack Of Transparency

A critical point in terms of the consequences of using AI for workforce intermediation in the context of SINE is the intense power asymmetry involved in this type of model and the difficulty, for workers, of grasping and becoming minimally familiar with the system’s rules of operation, as well as of intervening in or questioning the results of the intermediation and the profiling to which they are subject. Therefore, the potential risks of limiting opportunities stemming from the automated intermediation and profiling described in the previous section can be amplified in a context of endemic power asymmetry and lack of transparency, which tend to be systemic hallmarks of automated profiling processes and automated decision-making (Cf. *Algorithm Watch*, 2020; Niklas et al., 2015).

To date, there have been no signs that users will be clearly informed of issues such as the criteria used to display the job listings (or not), the way in which the likelihood of hiring a worker is calculated, the existence of a profiling system “behind” the jobs portal, the kind of profile into which the worker is categorized or the criteria used to segment workers into certain profiles, to name just a few aspects that will remain opaque to the worker.

111 Work plan SEI/ME - 11558736

112 See Section 4.1

113 SEI/ME - 11558736

114 This information was provided to us both by actors interviewed from the SPPE and by an ex-Superintendent of SINE from Alagoas state.

115 Despite this, it is undeniable that the possibilities for the mediation agency to intervene in the employer’s final decision are limited.

Some of this information can be obtained using the General Access to Information Act¹¹⁶ or the provisions related to the right to explanation set forth in the General Data Protection Law.¹¹⁷ However, the exercise of such rights by civil society is known to require, at a minimum, knowledge of codes and processes that are still distant from the average Brazilian citizen’s reality.

The asymmetries described are heightened in a context of inequality in both access to digital technology and connectivity, and digital and algorithmic literacy. On the one hand, investment in the modernization of SINE’s digital platforms helps to alleviate the problem of access to physical service centers (which are concentrated in medium and large cities¹¹⁸), including in relation to the costs such movements generate for unemployed workers. On the other hand, these tools are less accessible for populations who traditionally already face difficulties in the use of digital technologies, with emphasis in the older and illiterate population, as mentioned by Marra et al. (2019).

However, despite the unequal impact that the ADM-SINE system may have on different segments of the population—due to sex, class, age bracket or education and skills—our investigation found no discriminatory potential *directly* related to the way in which the ADM system will process data on race, sex and age bracket. That is, there is no evidence that the algorithm has biases related to these variables. It would also be unfounded to state that the risk of discrimination is inherent to algorithmic decision-making processes (Niklas et al., op. cit.), since this depends on a series of factors related to the way in which the AI model is built and trained, such as the definition of the problem the model is intended to solve, the data used for training it and the definition of variables that the algorithm must take into account (Hao, 2019).

Nonetheless, it is worth highlighting the lack of clarity regarding the technical specifications of the AI model that will be used in intermediation and worker profiling, as well as in relation to the standards guiding the processing of variables. Neither was it possible to access information on training the AI model, an important dimension for assessing the potentially discriminatory effects built into the algorithmic mediation. Thus, given that the rules governing intermediation and the creation of profiles are still not entirely explicit—in part because they are not fully defined—the system’s discriminatory potential deriving specifically from the way in which the automated processing will be handled cannot be adequately assessed.

For a more accurate estimate of the implemented system’s discriminatory potential, which could surface in the development of future investigations, it would be necessary to have access to information such as the definition of success used by the system for matching, the likelihood of a match between a candidate and a job opening, the weight each variable bears in the final calculation, whether only explicit data are considered or also implicit data, and how segmentation by profiles is performed, to mention just a few examples.

The information described in Microsoft’s note on the results of the proof of concept¹¹⁹ emphasizes the tool’s 70% effectiveness, without clarifying the task to which it refers. Microsoft again quotes the result in the interview given for this investigation. The emphasis on the tool’s supposed efficiency at the expense of transparency of the criteria used in the tests and surveys has been mentioned as standard behavior of Big Tech firms when promoting the advantages of their solutions (Heaven, 2020). As a worker representative

116 Law 12.527/2811

117 Law 13.709/2018

118 SINE service centers are only present in cities with over 200,000 inhabitants.

119 See Section 4.2

to CODEFAT comments, the system for evaluating intermediation tools in the context of changes in SINE must not only prioritize the “individual numbers,” but also report on which profiles these numbers refer to and who is benefiting from the changes underway.

Manifestations of the power asymmetries described here are also seen in the decision-making process for the new system, notable for the scant participation of citizens in the definition of the technological design and in implementation of the solution, especially by those who will be directly affected by the ADM system’s decisions: unemployed workers. Only a few workers who are SINE users participated in the problem assessment phase, as was reported in Section 5.1 on the preparation of SINE’s Digital Transformation Plan. Furthermore, in contrast to the approval and regulation process for Open SINE [SINE Aberto] and SINE Health [SINE Saúde], in the case of implementing automated intermediation and profiling on the SINE jobs portal, there was no participation from worker representatives in the decision-making process for defining the new system, above all in the form of the Worker Protection Fund Deliberative Council, an agency that could intervene in the design and monitoring of the solution based on workers’ interests.

The reported aspects are even more problematic since the accountability mechanisms anticipated in the project seem inconsistent, above all for evaluating the potentially discriminatory impact of ADM. Alongside this is the legal context of the veto of possible human review of a decision, in the main legal instrument for review and correction of errors based on automated decisions. The possibility of human review in the LGPD, had it remained in the law’s final text, could have reduced some of the harm caused by the systematic characteristics related to the lack of transparency and the asymmetry of power in algorithmic decision-making processes. This veto makes the potential consequences of using artificial intelligence tools to automate decisions in Brazil all the more serious.

6.3 Big Tech In The Public Sector

The fact that ADM processing will use a large-scale personal database for a socially vulnerable population requires close monitoring of any impact the system may have, particularly by the government and organized civil society working on issues related to the protection of human rights and their relationship to new digital technologies.

It is important to mention that the creation of SINE in the 1970s followed the model and guidelines for the public employment services of industrialized economies, whose goal was to minimize temporary mismatches between labor supply and demand. With the aim of inserting people into the formal salaried labor market, this public employment system followed parameters for countries with near full employment rates (Marra, Oliveira, Martins, 2018; Moretto, 2018). In the Brazilian context of a precarious labor market and high levels of informality (DIEESE, 2020), with structural causes of unemployment, the specialized literature on the topic indicates the need for public policies that go beyond merely compensatory measures to actively promote improvement in labor conditions and workers’ skills profile.

In this regard, the Work Plan’s focus on qualification is relevant. However, if in the partnership with Microsoft public authorities emphasize interest in knowing which occupations, skills and qualifications are most in demand in the Brazilian job market,¹²⁰ it must be pointed out that the supply of qualification courses offered by Microsoft itself is neither supported by nor explicitly grounded in any assessment or research on the Brazilian labor market, according to documents analyzed during this investigation.

120 The MANAGEMENT REPORT—UNDERSECRETARY FOR HUMAN CAPITAL: FEBRUARY 2019–SEPTEMBER 2020 (SEI/ME - 10752672) details that the solution for supporting qualification offered by Microsoft (which would show up in the TCA) would include “the use of data to identify high-demand jobs and the skills necessary to fill them.”

As mentioned above, Microsoft’s press release on the launch of ‘*More for Brazil*’ indicates that both the courses at Worker School 4.0 and the “58 instructors who will offer tailored guidance to up to 315,000 people” will be offered by the company. The article also states that the platform “will offer more than 20 technology courses at different levels based on the main skills required by the job market, from digital literacy to more advanced modules in cloud computing, artificial intelligence and data science.” However, the technology courses were not exclusive of the training offered by the “old” Worker School, which had a broad range of training courses and counseling for different areas, such as “Environment and Health,” “Tourism, Hospitality and Leisure” and “Natural Resources,” among others.¹²¹

The point is not about evaluating the relevance of the emphasis on professional qualification in skills oriented to the job market in technology, but rather asking how and by whom that orientation was evaluated and defined. In articles published on the Microsoft ‘*More for Brazil*’ launch event, the ambiguity about who—the government or Microsoft—heads the project’s focus on worker profiling and referral to a given qualification is made plain in the speech given by Microsoft Brazil’s President, Tania Consetino. As reported by *Valor Investe*:¹²²

“Today we are training 44,000 IT professionals a year, when the market is demanding 70,000,” said Tania. “We need to accelerate our ability to attract and train professionals in the area of IT, including more young people and women,” the executive commented. “This puts us behind in the competitiveness ranking,” she warned.

The tendency to delegate assessments of the employment market and, therefore, the formulation of priorities for public policies within the New SINE project can also be observed in the scope of Open SINE. The justifications presented in Informational Note 4686/2019/ME, include a statement that private HRTech companies are capable of guiding the production of data collected within the scope of the program, as can be confirmed in the following passage:

Since they have experience in workforce intermediation and knowledge of the SINE database, partners have the conditions to provide assistance to guide incorporation into the SINE questionnaire of fields for gathering relevant information that leads workers to the most suitable job opportunities, in order to increase the likelihood of successful reintegration in the labor market and, therefore, the effectiveness of public policies.

The issue, we repeat, is not about evaluating, disregarding or opposing the information and demands from the private sector on the kind of job openings and professionals required, since there is a relative consensus among specialists in the area that this is a fundamental factor for the effectiveness and success of workforce intermediation (Moretto, 2018; Lobo and Anze, 2014; Marra et al., 2019). Instead, it is to highlight a concern regarding who sets the criteria for public policies. The Work Plan for the Technical Cooperation Agreement¹²³ describes in Point “X- EXPECTED RESULTS” that one of the agreement’s results is “to subsidize the creation of public policies supported by information and intelligence from the system.” The document also establishes that “the list of digital skills indicated for workers will be shared with the ‘Worker School 4.0’ qualification system.”

121 The full list can be seen at: <http://www.escoladotrabalhador.gov.br/cursos/>

122 <https://valorinveste.globo.com/mercados/renda-variavel/empresas/noticia/2020/10/20/microsoft-brasil-anuncia-parceria-com-governo-para-geracao-de-empregos-em-tecnologia.ghtml>

123 SEI/ME - 11518121.

It bears mentioning that, despite the announcement, there is no indication of when the new Worker School will be available. Registration on the platform has been suspended since August 15, 2019, following the decision of the Ministry of Economy, taken in April of that year, not to renew the agreement with the Universidade de Brasília, which up to then was the institution responsible for offering and making courses available.¹²⁴ Since that time, anyone who visits the initiative’s web site sees the following notice:



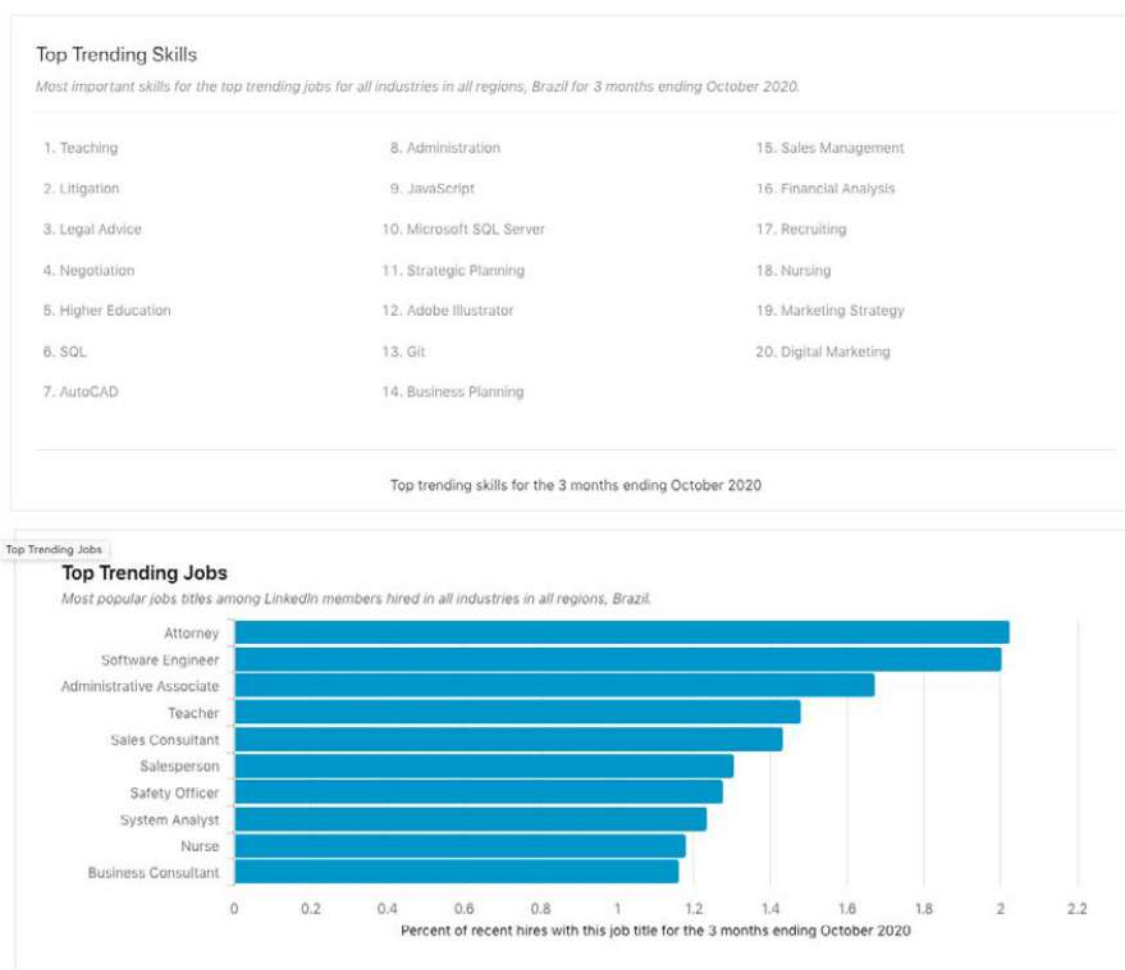
Figure 10: Alert screen on the Worker School site: “Attention: the Worker School platform is undergoing a technological transition process and is temporarily unavailable. Services will resume shortly.”

The concern with who defines and orients public policies joins concerns about who they prioritize. Thus, despite not appearing in the TCA, as explained previously, it is worth noting the mention in the Secretariat for Human Capital Management Report¹²⁵ of Microsoft’s commitment to providing data on job opportunities and the most sought-after skills on LinkedIn, using the LinkedIn *Economic Graph* tool “to enable better assessment of local economic needs and professional qualification demanded by the market.”

Exploratory navigation of the tool shows the disconnect between the scope of the profile of job listings and the skills and qualifications of the audience for Microsoft’s and SINE’s respective platforms. (see Section 3.1):

124 <https://www.convergenciadigital.com.br/cgi/cgilua.exe/sys/start.htm?UserActiveTemplate=site&infoi-d=55212&sid=46#.X9HgwqpKgWo>

125 SEI/ME - 10752672



Figures 11 and 12: Numbers and information on the skills most required and the most popular kinds of jobs in Brazil from August to September 2020, according to LinkedIn data.

Source: <https://graph.linkedin.com/insights/labor-market>

As mentioned above, most jobs offered on SINE are for production line operators (7.4%), followed by janitors (4.92%) and retail salesclerks (4.91%), revealing a huge discrepancy between the audiences for each platform. Furthermore, unlike the education that would be required to fill most of the jobs listed on the LinkedIn platform, the vast majority (85.33%) of candidates for listings on SINE have an educational level of completed secondary school.

Finally, in addition to the lack of transparency discussed in the previous chapter, there is one last point to address in relation to the public and private sectors in implementing ADM: the exchange of information and strategic data on the economy and the labor market. If at first the public employment policy model was “imported” from developed countries, the global labor market context seems to indicate an inversion of this trend. Regarding changes in the European labor market, German sociologist Ulrich Beck (1999) uses the term “Brazilianization” to characterize the process of increasing job insecurity, the increase in deregulation of social protections and the relaxation of labor laws in European countries.

The set of data from SINE—one of the largest workforce intermediation systems in the world (Marra; Oliveira; Martins, 2019)—and the short-term indices from administrative records for the Brazilian state,

such as CAGED and RAIS, are configured as a privileged source of information on one of the world’s main labor markets. As Lobo and Anze (2014) emphasize, the SINE network is a rich source of information not only in relation to the actions actually carried out by the system or observed in the employment market, but also because they provide indications of potential and unrealized trends. Moretto (2018) highlights that the relevance of the information generated in the implementation of workforce intermediation actions, referral for qualification, requests for unemployment subsidies and the microcredit program, facilitate a situational assessment of the formal employment market. This makes a longer term analysis possible, in order to confirm trends in structural changes in the formal occupational sector and also to augment “decision-making in the sphere of public policies that are not limited solely to those related to work” (idem., p. 225).

As has been described, although Points 9.8 and 9.9 of the TCA stipulate the prohibition of transferring to Microsoft “information protected by fiscal, corporate and commercial secrecy,” the clauses do not seem to guarantee safeguards regarding the transfer of information that is not protected by that secrecy, such as situational and structural information and knowledge on the labor market. It is important to highlight this aspect since it is relevant for the scope of this agreement that in the last few years Microsoft has acquired companies related to using data and automated workforce intermediation tools, such as Bright Media Corporation and LinkedIn.

In this sense, while the TCA is a legal instrument that does not provide for the transfer of resources between the parties, cases such as New SINE could lead to a reinterpretation of what a resource is in this context, as noted by Bruno Bioni, recalling that, currently, perhaps one of the most valuable assets in the hands of government is data.

7. FINAL CONSIDERATIONS

This investigation into the process for designing and implementing an automated decision-making system in the context of New SINE demonstrated an important aspect of the perception that the different actors consulted—whether members of the government, ex-officials or workers’ representatives—have on the use of AI technology by government agencies for implementing public employment policies. In general, these tools are *a priori* considered neutral technologies that only act as mechanisms to aid in the implementation of public employment policies on behalf of a public sector that is known to be overburdened.¹²⁶ The lack of concern for the possible risks posed by artificial intelligence tools and automated decision-making contrast with the manifest concern for the use of personal data and the frequent mention of the General Data Protection Act, which came into force while this research was being conducted.

The current scenario of record levels of unemployment, heightened by the impact of the COVID-19 pandemic, makes the initiative for mitigating the difficulties of insertion into the formal labor market seem very timely, above all for groups that have historically been more vulnerable. The context contributes to the implementation of solutions such as ADM-SINE, shielding them from facing greater questioning of their risks and impact, due to the need for quick answers and the presentation of results to meet the urgent problem. Thus, the pandemic context is presented as a privileged occasion for implementing the Technical Cooperation Agreement between Microsoft and the government, which was conceived of based on the response of that corporation to a public request for proposals for “the selection of private entities interested in proposing actions to face the negative impact caused in the Brazilian productive sector by the COVID-19 pandemic.”¹²⁷

In this context, the belief in a “techno-solution” to resolve structural problems related to employment and professional qualification¹²⁸ joins a “techno-welfarism” led by a Big Tech firm like Microsoft, with whom the government signs an agreement that results in privileged access to a valuable database on the Brazilian labor market. In exchange for a potential improvement in performance that involves no increase in expenditure for public authorities, in the framework of an economic policy aligned with the rhetoric of austerity, the government does not seem to be paying attention to the strategic and economic nature of the data at stake in the New SINE initiatives, whether in the agreement signed with Microsoft for the modernization of the jobs portal or in opening up the database to the private sector in the Open SINE project.

In describing the recurring concerns in the debate over the relationship between public policies and threats to people’s privacy, Beatriz Busaniche notes that often the most imminent danger related to technological “solutionism” is lost from sight: the negligence of those who hold the development of the implementation in their grasp. For her, in the Latin American context, “the imminent risk in terms of privacy is not the construction of an authoritarian state, but rather the real, tangible, evident existence of a negligent state” (Busaniche, 2019). In the case of this investigation, the neglect is related less to the risks for personal privacy

126 It is undeniable that, despite the diagnostic dysfunctions, the digital tools already available to SINE have provided the system with greater agility and the possibility of including people who live far from locations housing the network’s physical service centers, as well as shortening lines at those centers, as highlighted by researchers who have been following the topic (Moretto, 2018; Reis, 2019; Marra; Oliveira; Martins, 2019).

127 Public Request for Proposals No. 5/2020.

128 In the review of project-related documents to which we had access, it is noteworthy, for example, the fact that at no point is the cause of unemployment or even the lack of effectiveness of SINE’s intermediation mentioned. These problems are only ever presented in the form of numbers and/or results.

than to those associated with the uses that could be made of the knowledge extracted based on access to the data, along with the influence of private entities, especially Big Tech, on the orientation of public policy.

Another important issue when it comes to critical evaluation is how the implementation of technologies automating decision-making or the opening up of large public databases to the private sector have an unequal impact on different segments of the population. This asymmetry is not necessarily linked to the technological system’s “internal problems,” such as the logic regulating the algorithmic processing or the distribution of variables in the database (although this may also happen), but rather in how different groups do or do not have the privilege of making use of such tools. In the case of SINE, as happened with the Good Payers’ Registry,¹²⁹ in addition to the topics mentioned, the population potentially most affected is that which will be absorbed into the automated decision-making not (only) because their consent was not sought for the use of data in legal terms but due to their social and economic vulnerability. Therefore, a fundamental question that we should ask ourselves in these cases is who or which groups can refuse to “be inside” this type of system. In other words, who has the privilege of opting out, i.e., of choosing not to participate?¹³⁰

Evaluation of the issue from this perspective means upending the perspective on the impact of digital technologies on human rights. In addition to the requisite attention to personal data protection and the specific effects of discrimination stemming from the automation of decisions, the complexities described above demand another type of attention. In other words, it becomes necessary to look closely at systemic and structural aspects, especially those related to the multiple forms of asymmetry and opacity implied in the massive adoption of technologies like artificial intelligence, which modify not just the scale, but also the nature of the problems that arise from their use.

129 Law 12.414/2011 and Supplementary Law 166/2019. Initiative that shared the financial information history of up to 150 million economically active Brazilians with credit institutions in 2019.

130 We owe this question to Simone Browne who, in conversation with David Lyon on surveillance systems at the IV International LAVITS Symposium, asked: “Who can opt out?”

REFERENCES

- ALGORITHM WATCH (2020). Automating Society Report 2020. Access: December 10, 2020. Available at: <https://automatingsociety.algorithmwatch.org/wp-content/uploads/2020/10/Automating-Society-Report-2020.pdf>
- BARBOSA FILHO, F.; FERREIRA, M.; ARAÚJO, P.L. (2020). “O Novo Sine: mudanças do modelo brasileiro de intermediação de mão de obra.” In: Mercado de trabalho: conjuntura e análise: n. 68, abr. 2020. Brasília: IPEA. Access: September 21, 2020. Available at: http://repositorio.ipea.gov.br/bitstream/11058/9994/1/bmt_68_novo_sine.pdf
- BECK, U. O que é globalização? Equívocos do globalismo: respostas à globalização. São Paulo: Paz e Terra, 1999.
- BORGES, M. (2018). Sistema Nacional de Emprego: uma agenda de revitalização e novos cenários com a tecnologia da informação. In: MORETTO Amilton (et al.) (Org.). As transformações do trabalho e o Sistema Público de Emprego como instrumento de inclusão social. Fortaleza: Instituto de Desenvolvimento do Trabalho.
- BUCHER, T. (2020). Imaginários e políticas dos algoritmos: entrevista com Taina Bucher. Blog DigiLabour. Access: December 10, 2020. Available at: <https://digilabour.com.br/2020/07/12/imaginarios-e-politicas-dos-algoritmos-entrevista-com-taina-bucher/>
- BUSANICHE, Beatriz (2019). Negligencia, la primera amenaza a nuestra privacidad. Presentation at Webinar LAVITS 2020. Fundación Vía Libre. Available at: <https://www.vialibre.org.ar/negligencia-la-inminente-amenaza-a-nuestra-privacidad/>
- CACCIAMALI, M.C.; JOSÉ-SILVA, M.F. (2018) Novos tempos e o sistema público de emprego. In: MORETTO Amilton (et al.) (Org.). As transformações do trabalho e o Sistema Público de Emprego como instrumento de inclusão social. Fortaleza: Instituto de Desenvolvimento do Trabalho.
- COMITÊ GESTOR DA INTERNET NO BRASI [CGI.br / NIC.br]; CENTRO REGIONAL DE ESTUDOS PARA O DESENVOLVIMENTO DA SOCIEDADE DA INFORMAÇÃO [Cetic.br] (2020). Pesquisa sobre o Uso das Tecnologias de Informação e Comunicação nos Domicílios Brasileiros – TIC Domicílios 2019. Access: September 1, 2020. Available at: https://www.cetic.br/media/docs/publicacoes/2/20201123121817/tic_dom_2019_livro_eletronico.pdf.
- COALIZÃO DIREITOS NA REDE (2020). ANPD militarizada: risco para a proteção de dados pessoais. Access: December 10, 2020. Available at: https://www.cetic.br/media/docs/publicacoes/2/20201123121817/tic_dom_2019_livro_eletronico.pdf
- CORSEUIL, C.H., FRANÇA, M. (2020, September). Inserção dos jovens no mercado de trabalho em tempos de crise. In: Mercado de trabalho: conjuntura e análise / Instituto de Pesquisa Econômica Aplicada, Ano 26. Brasília. Access: December 10, 2020. Available at: https://www.ipea.gov.br/portal/images/stories/PDFs/mercadodetrabalho/201104_bmt_70_dossie_a1.pdf.
- DEDECCA, C.S. (2009). O sistema público de emprego e a estratégia de desenvolvimento. In: GOZALEZ, R.; MATOS, F. (Org.). Emprego, trabalho e políticas públicas. Fortaleza: IDT, pp. 49–75.

- DIEESE (2020). Boletim Especial 10/11/2020 - Desigualdade entre negros e brancos se aprofunda durante a pandemia. São Paulo. Access: December 10, 2020. Available at: <https://www.dieese.org.br/boletimespecial/2020/boletimEspecial03.pdf>
- FRAGOSO, N., MASSARO, H. (2019, December 19). Cadastro Base e amplo compartilhamento de dados pessoais: a que se destina? JOTA Info. Access: December 10, 2020. Available at: <https://www.jota.info/opiniao-e-analise/artigos/cadastro-base-e-amplo-compartilhamento-de-dados-pessoais-a-que-se-destina-19122019>
- GOVERNO FEDERAL. Relatório Anual do Observatório das Migrações Internacionais, 2019. Access: September 1, 2020. Available at: <https://www.justica.gov.br/news/collective-nitf-content-1566502830.29>.
- HEAVEN, W. (2020, November 12). AI is wrestling with a replication crisis. MIT Technology Review. Access: December 10, 2020. Available at: <https://www.technologyreview.com/2020/11/12/1011944/artificial-intelligence-replication-crisis-science-big-tech-google-deepmind-facebook-openai/>
- HAO, K. (2019, February 4). This is how AI bias really happens—and why it’s so hard to fix. MIT Technology Review. Access: December 10, 2020. Available at: <https://www.technologyreview.com/2019/02/04/137602/this-is-how-ai-bias-really-happensand-why-its-so-hard-to-fix/>
- INSTITUTO BRASILEIRO DE GEOGRAFIA E ESTATÍSTICAS [IBGE], Diretoria de Pesquisas, Coordenação de Trabalhos e Rendimento, Pesquisa Nacional por Amostra de Domicílios Contínua 2012/2019. Access: September 1, 2020. Available at: https://biblioteca.ibge.gov.br/visualizacao/livros/liv101707_informativo.pdf
- IBGE (2020). Indicadores IBGE Pesquisa Nacional por Amostra de Domicílios Contínua Trimestre Móvel Jul-Set 2020. Access: December 10, 2020. Available at: https://biblioteca.ibge.gov.br/visualizacao/periodicos/3086/pnacm_2020_set.pdf
- JANNUZZI, P.M. (2017) Indicadores Sociais no Brasil. Campinas: Editora Alínea.
- LOBO, V., ANZE, V. (2014) A importância estratégica da política pública de intermediação de mão-de-obra. Mercado de trabalho: conjuntura e análise, 20(57), 53-64. Access: December 10, 2020. Available at: http://repositorio.ipea.gov.br/bitstream/11058/3433/1/bmt57_completo.pdf.
- LOBO, V., ANZE, V. (2016). Duas diretrizes para a reestruturação do sistema nacional de emprego. Mercado de Trabalho, 61, 43-48. Access: December 10, 2020. Available at: http://repositorio.ipea.gov.br/bitstream/11058/7315/1/bmt61_duasdiretrizes.pdf
- LOGAREZZI, L. (2016). Guia prático da lei de acesso à informação. São Paulo: Artigo 19. Access: December 10, 2020. Available at: <https://artigo19.org/wp-content/blogs.dir/24/files/2016/10/Guia-Pr%C3%A1tico-da-Lei-de-Acesso-%C3%A0-Infoma%C3%A7%C3%A3o.pdf>
- MARRA, E., OLIVEIRA, K., MARTINS, L. (2018) O serviço de intermediação de mão de obra da administração pública estadual de minas gerais entre 2015 e 2018: efetividade, públicos e perspectivas. Mercado de Trabalho: conjuntura e análise, 26(28), 99-100. Access: December 10, 2020. Available at: <https://artigo19.org/wp-content/blogs.dir/24/files/2016/10/Guia-Pr%C3%A1tico-da-Lei-de-Acesso-%C3%A0-Infoma%C3%A7%C3%A3o.pdf>

- MARRAFON, M.A.; MEDON, F. (2019) Importância da revisão humana das decisões automatizadas na Lei Geral de Proteção de Dados. set. 2019. Access: September 1, 2020. Available at: <https://www.conjur.com.br/2019-set-09/constituicao-poder-importancia-revisao-humana-decisoes-automatizadas-igpd>
- MATOS, Franco de (2011). Boas práticas dos serviços públicos de emprego no Brasil. Brasília, DF: MTE.
- MICROSOFT NEWS CENTER (2020, April 13). Sistema Nacional de Emprego (SINE) testa uso de Inteligência Artificial para aumentar eficiência na oferta de oportunidades de trabalho. Access: December 10, 2020. Available at: <https://news.microsoft.com/pt-br/sistema-nacional-de-emprego-sine-tes-ta-uso-de-inteligencia-artificial-para-aumentar-eficiencia-na-oferta-de-oportunidades-de-trabalho/>
- MONTEIRO, Renato Leite (2018). Existe um direito à explicação na lei geral de proteção de dados do Brasil? Artigo estratégico, no. 39, pp. 1–14. Access: December 10, 2020. Available at: <https://igarape.org.br/wp-content/uploads/2018/12/Existe-um-direito-a-explicacao-na-Lei-Geral-de-Protecao-de-Dados-no-Brasil.pdf>
- MORETTO, A. (2018). O SINE NO SECULO XXI - Informação, Tecnologia e Políticas Publicas de Trabalho. In: As transformações no mundo do trabalho e o 88 Sistema Público de Emprego como instrumento de inclusão social. Fortaleza: Instituto de Desenvolvimento do Ceará.
- NIKLAS, J., SZTANDAR-SZTANDERSKA, K., SZYMIELEWICZ, K. (2015). Profiling The Unemployed in Poland: Social and Political Implications of Algorithmic Decision Making. Fundacja Panoptykon. Access: December 10, 2020. Available at: https://panoptykon.org/sites/default/files/leadimage-biblioteka/panoptykon_profiling_report_final.pdf
- OBSERVATÓRIO NACIONAL DO MERCADO DE TRABALHO (2020, 1st quarter). Boletim das políticas públicas de emprego, trabalho e renda. Access: December 10, 2020. Available at: <https://portalfat.mte.gov.br/wp-content/uploads/2020/06/Boletim-PPTER-1%c2%ba-Trimestre-de-2020.pdf>
- OECD (2020). Recommendation of the Council on Artificial Intelligence, OECD/LEGAL/0449. Access: December 10, 2020. Available at: <https://legalinstruments.oecd.org/en/instruments/OECD-LEGAL-0449>
- O’LEARY, C.J. et al. (2019). The effect of job referrals on labor market outcomes in Brazil. IDB Working Paper Series, n. 948. Access: December 10, 2020. Available at: https://publications.iadb.org/publications/english/document/The_Effect_of_Job_Referrals_on_Labor_Market_Outcomes_in_Brazil.pdf
- ORGANIZAÇÃO INTERNACIONAL DO TRABALHO (1948). C088 - Organização do Serviço de Emprego. Access: December 10, 2020. Available at: https://www.ilo.org/brasil/convencoes/WCMS_235132/lang-pt/index.htm
- PASQUALE, F. (2016). The Black Box Society – The Secret Algorithms That Control Money and Information. Cambridge, London: Harvard University Press.
- REIS, L. (2019) Um estudo da macro e micro implementação da política de intermediação de mão de obra em postos do Sine com melhores desempenhos em Minas Gerais. Trabajo de Conclusión de Curso (Licenciatura en Administración Pública) - Fundação João Pinheiro, Escola de Governo Professor Paulo Neves de Carvalho.

ROSSETTO, M. (2019) O Sistema Nacional de Emprego (SINE): As fragilidades de um grande sistema público. [Dissertation] Universidade Federal do Rio Grande do Sul, Instituto de Filosofia e Ciências Humanas, Programa de Posgrado em Políticas Públicas, Porto Alegre, BR-RS.

SILVA, P., MEDEIROS, J. (2019, December). A polêmica da revisão (humana) sobre decisões automatizadas. ITS Rio. Access: December 10, 2020. Available at: <https://feed.itsrio.org/a-pol%C3%AAmica-da-revis%C3%A3o-humana-sobre-decis%C3%B5es-automatizadas-a81592886345>

TEIXEIRA, M., BORSARI, P. (2020). Mercado de trabalho no contexto da pandemia: a situação do Brasil até abril de 2020. Campinas: Unicamp, Cesit. Access: December 10, 2020. Available at: <https://www.cesit.net.br/mercado-de-trabalho-no-contexto-da-pandemia-a-situacao-do-brasil-ate-abril-de-2020/>

ZANATTA, R., SANTOS, B., CUNHA, B., SALIBA, P.; GOULART DE ANDRADE, E. (2020) Perfil das Autoridades de Proteção de Dados Pessoais: civis ou militares? São Paulo: Associação Data Privacy Brasil de Pesquisa.

Laws and regulations

Decree 76.403 of October 8, 1975. Creating the National Employment System (SINE) and establishing other measures. Access: December 10, 2020. Available at: http://www.planalto.gov.br/ccivil_03/decreto/1970-1979/D76403.htm

Decree 4.829 of September 3, 2003. Addressing the creation of the Brazilian Internet Steering Committee – CGI.br, on the Internet governance model in Brazil and establishing other measures. Access: December 10, 2020. Available at: http://www.planalto.gov.br/ccivil_03/decreto/2003/d4829.htm

Decree 8.638 of January 15, 2016. Instituting the Digital Governance Policy in the arena of agencies and entities of direct, autarchic and foundational Federal public administration. Access: December 10, 2020. Available at: http://www.planalto.gov.br/ccivil_03/ato2015-2018/2016/decreto/d8638.htm

Decree 8.777 of May 11, 2016. Instituting the Open Data Policy of the Federal Executive Branch. Access: December 10, 2020. Available at: http://www.planalto.gov.br/ccivil_03/ato2015-2018/2016/decreto/d8777.htm

Decree 8.789 of June 29, 2016. Regarding the sharing of databases in Federal public administration. Access: December 10, 2020. Available at: http://www.planalto.gov.br/ccivil_03/ato2015-2018/2016/decreto/d8789.htm

Decree 10.046 of October 9, 2019. Regarding the governance of data sharing in the realm of Federal public administration and instituting the Citizen Registry and the Central Data Governance Committee. Access: December 10, 2020. Available at: http://www.planalto.gov.br/ccivil_03/ato2019-2022/2019/decreto/D10046.htm.

Decree 10.332 of April 28, 2020. Instituting the Digital Government Strategy for 2020 to 2022, in the realm of agencies and entities of direct, autarchic and foundational Federal public administration and establishing other measures. Access: December 10, 2020. Available at: http://www.planalto.gov.br/ccivil_03/ato2019-2022/2019/decreto/D10046.htm

Decree 10.474 of August 26, 2020. Approving the Governance Structure and Table of Commissioned Workers and Positions of Trust for the National Data Protection Authority, as well as modifying and changing commissioned workers and positions of trust. Access: December 10, 2020. Available at: <https://www.in.gov.br/en/web/dou/-/decreto-n-10.474-de-26-de-agosto-de-2020-274389226>

Public summons for public hearing No. 1 of February 18, 2019. Published in the Diário Oficial da União on February 20, 2019, ed. 36, section 3, p. 32. Brasília: Ministério da Economia. Access: December 10, 2020. Available at: https://www.in.gov.br/web/guest/materia/-/asset_publisher/Kujrw0TZC2Mb/content/id/64175385/do3-2019-02-20-edital-de-convocacao-de-audiencia-publica-n-1-de-18-de-fevereiro-de-2019-64174975

Public Request for Proposals No. 2/2019. Published in the Diário Oficial da União on April 09, 2019, ed. 68, section 3, p. 25. Brasília: Ministério da Economia. Access: December 10, 2020. Available at: <https://www.in.gov.br/en/web/dou/-/edital-de-chamada-publica-n-2-2019-70720458>

Public Request for Proposals No. 5/2020. Published in the Diário Oficial da União on July 01, 2020, ed. 124, section 3, p. 31. Brasília: Ministério da Economia. Access: December 10, 2020. Available at: <https://www.in.gov.br/en/web/dou/-/edital-de-chamamento-publico-n-5/2020-264463658>

Estratégia Brasileira para a Transformação Digital - E-Digital (2018). Brasília. Access: December 10, 2020. Available at: <https://www.gov.br/mcti/pt-br/centrais-de-conteudo/comunicados-mcti/estrategia-digital-brasileira/estrategiadigital.pdf>

Estratégia de Governança Digital - EGD 2016-2019 (2018). Brasília: Ministério do Planejamento, Desenvolvimento e Gestão. Access: December 10, 2020. Available at: <https://www.gov.br/governodigital/pt-br/estrategia-de-governanca-digital/revisaodaestrategiadegovernancadigital20162019.pdf>

Law 6.125 of November 4, 1974. Authorizing the Executive Branch to set up the Social Security Data Processing Company (DATAPREV) and establishing other measures. Access: December 10, 2020. Available at: http://www.planalto.gov.br/ccivil_03/leis/L6125.htm

Law 7.998 of January 11, 1990. Regulating the Unemployment Subsidies Program, the ‘Bonus’ Salary and instituting the Worker Protection Fund (Fundo de Amparo ao Trabalhador, FAT), as well as establishing other measures. Access: December 9, 2020. Available at: http://www.planalto.gov.br/ccivil_03/leis/l7998.htm

Law 8.019 of April 11, 1990. Amending the Worker Protection Fund (Fundo de Amparo ao Trabalhador, FAT) legislation and establishing other measures. Access: December 7, 2020. Available at: http://www.planalto.gov.br/ccivil_03/Leis/l8019.htm

Law 8.078 of September 11, 1990. Regarding consumer protection and establishing other measures. Access: December 10, 2020. Available at: http://www.planalto.gov.br/ccivil_03/Leis/l8019.htm

Law 8.666 of June 21, 1993. Regulating Art. 37(XXI) of the Federal Constitution, instituting regulations for tenders and contracts of Public Administration and establishing other measures. Access: December 10, 2020. Available at: http://www.planalto.gov.br/ccivil_03/leis/l8666cons.htm

Law 12.414 of June 9, 2011. Governing the formation and query of databases with payment information for natural persons or legal entities, for the creation of credit history. Access: December 10, 2020. Available at: http://www.planalto.gov.br/ccivil_03/_ato2011-2014/2011/lei/l12414.htm

Law 12.527 of November 18, 2011. Regulating access to information stipulated in Art. 5(XXXIII), Art. 37(3) (II) and in Art. 216(2) of the Federal Constitution; amending Law 8.112 of December 11, 1990; repealing Law 11.111 of May 5, 2005 and dispositions of Law 8.159 of January 8, 1991; and establishing other measures. Access: December 10, 2020. Available at: http://www.planalto.gov.br/ccivil_03/ato2011-2014/2011/lei/l12527.htm Access: December 2, 2020.

Law 12.965 of April 23, 2014. Establishing principles, guarantees, rights and responsibilities for Internet use in Brazil. Access: December 10, 2020. Available at: http://www.planalto.gov.br/ccivil_03/ato2011-2014/2014/lei/l12965.htm

Law 13.709 of August 14, 2018. General Data Protection Act [Lei Geral de Proteção de Dados]. Access: December 10, 2020. Available at: http://www.planalto.gov.br/ccivil_03/ato2015-2018/2018/lei/L13709.htm

Law 13.667 of May 17, 2018. Regarding the National Employment System (SINE), created by Decree No. 79.403 of October 8, 1975. Access: December 10, 2020. Available at: http://www.planalto.gov.br/ccivil_03/ato2015-2018/2018/lei/L13667.htm

Supplementary Law 166 of April 8, 2019. Amending Supplementary Law 105 of January 10, 2001, and Law 12.414 of June 9, 2011, to address good payer records and regulate operators' civil liability. Access: December 10, 2020. Available at: https://www.in.gov.br/materia/-/asset_publisher/Kujrw0TZC2Mb/content/id/70693213/do1-2019-04-09-lei-complementar-n-166-de-8-de-abril-de-2019-70693117.

Law 13.853 of July 8, 2019. Amending Law 13.709 of August 14, 2018 on personal data protection and creating the National Data Protection Authority; and establishing other measures. Access: December 10, 2020. Available at: http://www.planalto.gov.br/ccivil_03/ato2019-2022/2019/lei/l13853.htm

Law 14.010 of June 10, 2020. Regarding the Temporary and Emergency Legal Framework for legal relationships under Private Law (Regime Jurídico Emergencial e Transitório das relações jurídicas de Direito Privado, RJET) during the coronavirus (COVID-19) pandemic. Access: December 10, 2020. Available at: http://www.planalto.gov.br/ccivil_03/ato2019-2022/2020/lei/L14010.htm

Ruling 15/2013/PGF/AGU. Issues related to agreements and other similar adjustments addressed in the scope of the Permanent Chamber for Agreements appointed via Ordinance/PGF 98 of February 26, 2013. Access: December 10, 2020. Available at: <https://www.gov.br/agu/pt-br/composicao/procuradoria-geral-federal-1/arquivos/PARECERN152013CAMARAPERMANENTECONVENIOSDEPCONSUPGFAGU.pdf> Inter-ministerial Ordinance 147 of May 31, 1995. Access: December 10, 2020. Available at: <https://cgi.br/portarias/numero/147/>.

MTE Ordinance No. 945 of December 14, 2000. Regarding the filling out, delivery and oversight of the RAIS base year 2000, and payment of ‘bonus’ salary. Access: December 10, 2020. Available at: <https://www.legisweb.com.br/legislacao/?id=182214>.

Ordinance 68 of March 7, 2016. Approving the Federal Public Administration Digital Governance Strategy for 2016–2019 and attributing to the Secretariat for Information Technology the responsibility specified therein. Published in Diário Oficial da União of March 9, 2016, ed. 46, section 1, p. 115. Brasília: Ministério do Planejamento, Orçamento e Gestão. Access: December 10, 2020. Available at: https://www.in.gov.br/materia/-/asset_publisher/Kujrw0TZC2Mb/content/id/22437493/do1-2016-03-09-portaria-n-68-de-7-de-marco-de-2016-22437447

Ordinance 21.130 of September 22, 2020. Provides for the procedures for qualification of legal entities of private law, for profit or not for profit, including entrepreneurial companies (companies), associations, philanthropic entities and trade unions that undertake workforce intermediation activities, to act as partners for the National Employment System (SINE), under the scope of the Open SINE project, addressed in Resolution 826 of March 26, 2019 and its amendments; and establishing other measures. Access: December 10, 2020. Available at: <https://www.in.gov.br/en/web/dou/-/portaria-n-21.130-de-22-de-setembro-de-2020-278927023>

Bill 5051 of 2019. Establishing principles for the use of Artificial Intelligence in Brazil. Access: December 10, 2020. Available at: <https://www25.senado.leg.br/web/atividade/materias/-/materia/138790>

Regulation (EU) 2016/679 of the European Parliament and of the Council of April 27, 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data and repealing Directive 95/46/EC (General Data Protection Regulation). Access: December 10, 2020. Available at: <https://eur-lex.europa.eu/legal-content/PT/TXT/?uri=celex%3A32016R0679>

CODEFAT Resolution 560 of November 28, 2007. Establishing standards for executing integrated actions of the Public Employment, Labor and Income System, under the scope of the National Employment System (SINE). Access: December 10, 2020. Available at: <https://www.legisweb.com.br/legislacao/?id=106300>

CODEFAT Resolution 826 of March 26, 2019. Regarding orientations for sharing the National Employment System (SINE) database with legal entities of private law, for profit or not for profit, including entrepreneurial companies (companies), associations, philanthropic entities and trade unions that undertake workforce intermediation activities, to act as partners for the National Employment System (SINE), under the scope of the Open SINE project, addressed in Resolution. Published in Diário Oficial da União on April 2, 2019, ed. 63, section 1, p. 20. Brasília: Ministério da Economia. Access: December 10, 2020. Available at: https://www.in.gov.br/materia/-/asset_publisher/Kujrw0TZC2Mb/content/id/69660357/do1-2019-04-02-resolucao-n-826-de-26-de-marco-de-2019-69660275

Resolution 844 of November 28, 2019. Amending Resolution 826 of March 26, 2019 establishing orientations for sharing the National Employment System (SINE) database with legal entities of private law, for profit or not for profit, including entrepreneurial companies (companies), associations, philanthropic entities and trade unions that undertake workforce intermediation activities. Published in Diário Oficial da União of November 29, 2019, ed. 231, section 1, p. 94. Brasília: Ministério da Economia. Access: December 10, 2020. Available at: <https://www.in.gov.br/web/dou/-/resolucao-n-844-de-28-de-novembro-de-2019-230458158>

