

# AN OVERVIEW OF THE SOCIAL PROTECTION OF WORKERS IN THE GIG ECONOMY OF THE TRANSPORT SECTOR IN BRAZIL

**Felipe dos Santos Martins<sup>1</sup>**

**Geraldo Sandoval Góes<sup>1</sup>**

**Antony Teixeira Firmino<sup>2</sup>**

**Leonardo Alves Rangel<sup>1</sup>**

<sup>1</sup>Instituto de Pesquisa Econômica Aplicada (IPEA), Rio de Janeiro – RJ, Brasil

<sup>2</sup>Instituto Brasileiro de Geografia e Estatística (IBGE), Rio de Janeiro – RJ, Brasil

Technological advances have been transforming work relationships. Non-traditional work relationships are growing and conquering the space of traditional contracts. Consequently, ensuring adequate coverage of social protection systems for these evolving work relationships becomes a pressing challenge. This study undertakes an estimation of Gig Economy workers within Brazil's transport sector, using microdata from the Continuous National Household Sample Survey (Pnad Contínua) by the Brazilian Institute of Geography and Statistics (IBGE). The primary aim is to furnish valuable insights for the formulation of public policies geared towards enhancing social security inclusion. The estimation methodology pivots on two principal variables: occupation and the economic activity undertaken by these workers. The findings underscore that during the third quarter of 2022, the total count of Gig Economy workers in the transport sector surged to 1.7 million individuals; remarkably, a mere 23% of this cohort contributed to the Social Security system.

**Keywords:** Gig Economy; social security; transport sector; Brazil.



## UM PANORAMA DA PREVIDÊNCIA SOCIAL DOS TRABALHADORES DA ECONOMIA GIG DO SETOR DE TRANSPORTE NO BRASIL

O avanço tecnológico vem transformando as relações de trabalho. As relações não tradicionais de trabalho estão crescendo e conquistando o espaço dos contratos tradicionais. O desafio passa a ser, então, o de oferecer a cobertura dos sistemas de proteção social a esses trabalhadores. O presente estudo apresenta uma estimativa de quantos são esses trabalhadores da *Gig Economy* no setor de transportes no Brasil, a partir dos microdados da Pnad Contínua do IBGE, com o objetivo de servir como insumo para a elaboração de políticas públicas que visem a inclusão previdenciária. A metodologia utilizada para se estimar quantos são os trabalhadores da *Gig Economy* no setor de transportes considera duas variáveis principais: a ocupação e qual atividade esses trabalhadores exercem. Em relação ao número total da *Gig Economy* do setor de transporte, notou-se que esse grupo atingiu 1,7 milhão de pessoas no terceiro trimestre de 2022 e apenas 23% desses trabalhadores contribuíam para a Previdência Social.

**Palavras-chave:** *Gig Economy*; previdência social; setor de transporte; Brasil.

## UN PANORAMA DE LA PROTECCIÓN SOCIAL DE LOS TRABAJADORES EN LA ECONOMÍA GIG DEL SECTOR TRANSPORTE EN BRASIL

Los avances tecnológicos han transformado las dinámicas laborales, viendo un crecimiento de relaciones laborales no tradicionales que están desplazando a los contratos convencionales. En este contexto, surge el desafío de garantizar cobertura a estos trabajadores mediante los sistemas de protección social. Este estudio proporciona una estimación de la cantidad de trabajadores en la Economía Gig del sector transporte en Brasil, basándose en microdatos de la Pnad Contínua del IBGE. Su objetivo es servir como aporte para la formulación de políticas públicas orientadas a la inclusión en la seguridad social. La metodología empleada para estimar el número de trabajadores en la Economía Gig del sector transporte considera dos variables fundamentales: la ocupación y la actividad que desempeñan estos trabajadores. Respecto al número total de trabajadores en la Economía Gig del sector transporte, se observó que este grupo alcanzó la cifra de 1,7 millones de personas en el tercer trimestre de 2022, y únicamente el 23% de estos contribuyeron al sistema de Seguridad Social.

**Palabras clave:** Economía Gig; seguridad social; sector transporte; Brasil.

## 1. INTRODUCTION

The term “gig” originates from North American music history and has been in use since the early 20th century. It is employed to denote live performances by musical bands held at specific times, typically on weekends. Musicians often remained without scheduled performances during the rest of the week. In the economic realm, the Gig Economy is also referred to as the freelance economy or the on-demand economy. It characterizes the relationships between workers and companies that engage this workforce for sporadic services, devoid of traditional employment relationships. Such workers often include freelancers and the self-employed.

The outbreak of the Covid-19 pandemic has had a profound impact on various dimensions of economic activity, leading to transformative changes in the labor market, particularly within the Gig Economy. Changes can be observed both in a conjunctural and structural manner, (i) as evidenced by its likely expansion since the onset of the pandemic, driven by an increased number of individuals engaging in home deliveries, and (ii) by the introduction of greater flexibility in working hours. The effort to reduce costs has also been a driving force, affecting both the demand side for labor and the supply side in the quest for additional income. Another pertinent question concerns the extent to which Covid-19 has the potential to reshape the Gig Economy. Moreover, it is worth investigating how the pandemic has influenced employment within this sector.

An intriguing issue arises when considering how the Covid-19 pandemic has heightened vulnerability for individuals who were previously engaged in the Gig Economy and those who entered it as an alternative to more conventional forms of employment during the pandemic. As a result of this latter shift, short-term consequences have materialized:

1. **Income Reduction:** Individuals who transitioned to the Gig Economy during the pandemic often face a substantial reduction in income, particularly when the demand for their services experiences a decline.

2. **Social Vulnerability:** These individuals find themselves in a state of social vulnerability, characterized by the absence of crucial safety nets such as unemployment insurance, sickness benefits, and social security contributions by employers.

Over the long term, the effects become more complex due to the strategic responses of companies both within and outside the Gig Economy sector. Two key mechanisms come into play:

1. **Demand Decline:** The demand within the Gig Economy may decrease as the overall economic situation worsens due to the pandemic’s impact.

2. **Shift to Cost-Efficient Work Models:** Companies may opt for cost-effective and flexible forms of labor.

Historically, technological advancements have significantly transformed work relationships. The most pronounced changes have emerged during the Fourth Industrial Revolution, which gained momentum in the 2010s. This era has witnessed accelerated and disruptive alterations in the dynamics between employers and employees, or between contractors and contractees.

These modifications are notably exemplified by the rise of digital platforms, which have brought about substantial transformations in labor relations across sectors, including transportation and various other services.

Informality has long been a prominent feature of Brazil's labor market, and it is essential to acknowledge that digital platforms did not introduce this issue to the country. However, it cannot be denied that these digital platforms, often operating in the gray areas or entirely outside of labor legislation (Alaimo, Chaves, & Soler, 2019; Bosch, Pagés & Ripani, 2018), have contributed to a trend toward labor market deregulation (Costanzi & Santos, 2023). Consequently, this trend has led to a lack of protection for workers, sparking intense debates on labor regulation and social protection for digital platform workers.

Significantly, it is worth highlighting the dynamics of social security coverage for workers and its comparison with specific data from the Gig Economy, particularly in the transport sector. According to data from Continuous PNAD/IBGE, the percentage of the employed population aged 14 or older without social security coverage ranged from 65.8% in 2016 to 63.7% in 2022, with no discernible trend from 2020 onwards. Conversely, the Gig Economy in the transport sector, as elucidated in this study, exhibited a clear declining trend from 2016 to 2022, reaching a mere 23.6% in the latter year. Even during the years of the pandemic, this trend did not reverse, implying that digital platforms for passenger and freight transport are structured around labor relations deregulation and the absence of social security protection for workers.

In European countries, the expansion of the total workforce in digital platforms is perceived as exacerbating labor market precariousness, primarily because it erodes coverage levels and potentially fragments social protection systems (Costanzi & Santos, 2023). Such scenarios pose a threat to the sustainability of these social protection systems. These consequences, apart from the obvious risks to workers and protective systems, may also undermine social cohesion in countries where the concept of the nation is closely intertwined with social rights, particularly social security (Esping-Andersen, 1990).

A significant portion of the ongoing debate regarding labor regulation for platform workers centers on the legal interpretation of the contractual relationship between these workers and digital platforms. On one hand, platforms contend that workers should be classified as independent contractors. This classification would absolve the platforms from expenses associated with funding social security systems in the countries where they operate. Thus, this strategy is often perceived as an attempt to circumvent the establishment of an employment relationship between workers and platforms and, consequently, to curtail operational costs. Conversely, various worker collectives and lawmakers argue that the most effective means of ensuring social protection for platform workers is by officially recognizing an employment relationship.

In addition to the debate concerning the legal interpretation of the contractual relationship between workers and platforms, the discourse surrounding platform work regulation also delves

into the issue of long working journeys. This phenomenon arises from the highly competitive environment and low remuneration within the platform economy. Long working journeys further raise concerns about occupational safety and health at work (Barreira, 2021) and compromise the attention and skills required for the profession, thereby elevating the risk of accidents (Santos, 2021).

Indeed, in countries where the Fourth Industrial Revolution has been significantly reshaping labor markets, it is evident that non-traditional work relationships, such as part-time work, fixed-term work, intermittent work, and platform work, are on the rise, gradually encroaching upon the space traditionally occupied by standard employment contracts characterized by 40-hour workweeks, well-defined subordination relationships, and comprehensive social protection.

The challenge of integrating digital economy workers, although fundamentally similar, manifests differently in various regions. For instance, in Western European countries with established and extensive social protection systems, the issue is relatively new but steadily growing, stemming from companies' adoption of modern technologies that often push the boundaries of existing labor legislation. Conversely, in Latin American countries, where informal work relationships have long been a challenge, the problem has now assumed a contemporary guise within the framework of the platform economy.

Fundamental shifts in work relationships have emerged because social protection systems were originally structured under the assumption of prevalent traditional employment relationships, wherein funding for the system was predominantly sourced from contributions made by both companies and employees. Consequently, the rise of non-traditional work relationships poses twofold implications. Firstly, it results in individual implications for employees, characterized by a lack of social security protection. Secondly, it challenges the very foundations of the social protection systems, as their funding mechanisms are compromised, thus endangering their long-term sustainability. Consequently, the primary challenge is to extend the coverage of social protection systems to encompass these diverse work relationships (Behrendt & Nguyen, 2018; Behrendt et al., 2019), while simultaneously ensuring the systems' sustainability.

This transformation is notably pronounced in developing countries, including Brazil, especially those grappling with a historical prevalence of informality within their labor markets (Alaimo et al., 2019). For these nations, the challenge is inherently twofold.

In the present context, two occupations have significantly gained prominence in recent years, offering insights into the latest labor market transformations: app-based drivers and delivery workers.

This article aims to analyze the situation of Gig Economy workers within the transport sector, focusing on app-based drivers and delivery workers. By doing so, it sheds light on the challenges involved in expanding social coverage for this category of workers.

In prior investigations, Góes et al. (2021, 2022) provide information about critical aspects of the Gig Economy within the transport sector in Brazil:

(i) During the fourth quarter of 2021, there were approximately 1.5 million individuals in the Gig Economy in the transportation sector. Among these, 61.2% comprised app drivers and taxi drivers, 20.9% were motorcycle drivers engaged in delivery services, 14.4% were working as motorcycle taxi drivers, and the remaining portion was involved in delivering goods via alternative means of transportation.

(ii) Even before the Covid-19 pandemic, there was a notable surge in app-based platforms. Analyzing the progression of self-employed workers in delivery services, the second quarter of 2021 displayed a growth of 979.8% compared to the first quarter of 2016.

These statistics underscore the necessity of examining the social security coverage implications arising from the rapid growth of this contemporary form of platform-driven work. In relation to the social security dimension of the Gig Economy, significant findings emerged from this study utilizing data from Continuous PNAD:

(i) During the third quarter of 2022, a mere 23% of Gig Economy workers in the transport sector in Brazil contributed to (and thus were covered by) the Social Security system.

(ii) Furthermore, those employed in the Gig Economy within the transport sector contributed less to social security compared to other self-employed workers, with a contribution rate of 33%.

(iii) Notably, regional disparities were observed in the social security contributions of workers engaged in the Gig Economy within the transport sector. While over a third of these workers contributed to social security in the Southern region of Brazil (37.0%), the contribution rate was approximately 10% in the Northern region.

This study is structured into six sections, including this introduction. Section 2 provides a contextual overview of the pension dimension within the Gig Economy. The third section presents an overview of the social protection system in Brazil. Sections four and five delve into the methodology employed and present the results pertaining to social security protection for Gig Economy workers within the transport sector, respectively. Finally, the sixth section offers concluding remarks.

## **2. THE CONTEXTUALIZATION OF THE SOCIAL PROTECTION OF WORKERS AT GIG ECONOMY**

The Gig Economy presents multifaceted implications within the labor market, notably concerning social security coverage for individuals engaged in these novel labor relations. Therefore, it is imperative to elucidate the scope of what constitutes the Gig Economy and underscore the key characteristics of the Brazilian social security system. According to the Cambridge Dictionary, the Gig Economy is defined as “a form of work for people who have temporary jobs or do separate jobs, each paid separately, rather than working for an employer.”

Defining the Gig Economy has proven to be a challenge for numerous researchers and research institutions worldwide. For instance, the International Classification of Status in Employment delineates concepts like “on-demand workers” (work on demand) and “dependent contractors”.

Building upon the discussion initiated by Góes et al. (2021), it is pivotal to clarify that the Gig Economy is characterized in that report by: i) the absence of a formal employment relationship; ii) the capacity to render services to multiple claimants; and iii) irregular working hours. While some referenced studies may interpret this term differently, these outlined characteristics form the basis of empirical analysis in this article.

In this context, it is evident that the Gig Economy encompasses various work forms, including micro-entrepreneurs, platform workers, and self-employed individuals (freelancers). Thus, it is crucial to emphasize that in this paper the Gig Economy is not confined solely to work intermediated by digital platforms. Nevertheless, other scholars, such as Pastore (2020), employ the Gig Economy concept to encapsulate professionals working specifically through these platforms.

Global estimates of Gig Economy professionals, according to the World Bank, exhibit significant variations across countries; however, its growth trajectory remains indisputable (Pastore, 2020). This expansion fuels the ongoing discourse regarding potential labor market precariousness. On one hand, workers achieve autonomy and the ability to flexibly exercise their work, thus generating income. On the other hand, they forfeit access to well-defined and obligatory labor rights and social protection that would be available if they were employees.

Indeed, Gig economy work does not guarantee essential rights such as minimum wage, paid rest, unemployment insurance, paid leave, and comprehensive social protection coverage (sickness allowance, survivor pension, retirement pension, maternity benefit), among others. Consequently, from a socio-legal perspective, workers assume the “social risk of work” and additionally shoulder the risk of the business, as they become the owners or responsible parties for the capital deployed (notebooks, smartphones, cars, motorcycles, bicycles), requiring them to manage capital depreciation and undertake new investments (De Stefano, 2016).

In terms of social protection, when the employment relationship transitions into a service provision<sup>1</sup> rather than that of an employee and employer, Gig Economy workers assume the

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1 As of the present moment, the prevailing legal understanding in higher courts within Brazil contends that no employer-employee relationship exists between platforms and professionals within the Gig Economy. Consequently, in this study, professionals will be regarded as own-account workers. However, it is imperative to note that a significant legal dispute is underway in Brazil and several countries, debating whether the relationship between professionals and platform companies involves the provision of intermediation services by the platform connecting the professional and the claimant. Alternatively, it examines if the professional is subject to subordination by the platform. The latter scenario, coupled with additional defining characteristics, might qualify as an employer-employee relationship, entitling the professional to various rights. Notably, this ongoing legal debate underscores whether the platform serves as a mere intermediary or exercises a level of control and subordination over the professionals. This distinction has substantial implications for the legal status of the professionals within the Gig Economy, determining their entitlement to labor rights and protections. In light of the foregoing, it's crucial to highlight the contributions of Pastore (2020) and Olivon (2022), who have extensively explored and analyzed this legal debate, shedding

primary responsibility for their inclusion (and the costs associated with it) and maintenance in the social security system.

Considering the aforementioned aspects, contributing to social security and consequently achieving the status of being covered by the system assures individuals not only a valid contribution period for future retirement but also provides coverage against various life contingencies and risks, such as accidents, illnesses, pregnancies, permanent or partial disabilities, and death.<sup>2</sup>

The social security system in Brazil, within its present framework, traces its roots back to the Federal Constitution of 1988. Subsequently, it has been modified through various Constitutional Amendments (EC 20/1998, EC 41/2003, EC 47/2005, EC 103/2019). The system comprises three principal components: (i) the General Social Security System (RGPS), directed towards private sector workers; (ii) Special Regimes for civil servants (referred to as the Own Pension Regimes for Servants – RPPS) and military personnel; and (iii) the Supplementary Pension System, a privately oriented system with optional membership and autonomous operation concerning the RGPS and the RPPSs.

The Social Security Benefits Law<sup>3</sup> in Brazil designates specific categories of individuals as mandatory insured persons under the General Social Security System (RGPS). For the scope of this study, the focus will primarily be on the individual contributor. An individual contributor in Brazil is someone who offers urban or rural services on an occasional basis to individuals or one or more companies without establishing a formal employment relationship. This category encompasses Gig Economy workers who provide services sporadically to individuals or companies, regardless of whether they utilize digital platforms.

In a notable step towards extending social security protection to Gig Economy workers, the Resolution of the Conselho Gestor do Simples Nacional (Simples Nacional Management Council) No. 148 introduced a mechanism for app drivers to affiliate with the social protection system as a Micro Empreendedor Individual (MEI), part of the Individual Micro-Entrepreneur program in Brazil. This innovation enables app drivers to secure social security coverage by making a monthly contribution equivalent to 5% of the prevailing minimum wage. Consequently, Gig Economy workers, particularly app drivers, can achieve the status of being covered by the social security system either as individual contributors or, specifically for app drivers, through registration as a MEI.

The primary objectives of this study are twofold: i) To understand the relationship between Gig Economy workers and the social security system; ii) To ascertain the coverage level for workers in the transport sector within the Gig Economy facilitating the development of

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light on its nuances and ramifications.

<sup>2</sup> As an example, consider the following situations: i) the driver or delivery person, in the event of an accident and removal from their professional activities, would receive the sickness benefit; ii) for female professionals, in addition to the benefit of the previous situation, in case of pregnancy, they would receive the maternity salary; iii) dependents of professionals, in the event of death (related or not to work), would receive the death pension.

<sup>3</sup> Law No. 8213 of 1991.



policy proposals, including potential public incentives, to enhance protective inclusion for this demographic or reinforce existing policies.

The next section presents the social security system in Brazil, with a focus on the General Regime for workers in the private sector.

### 3. THE SOCIAL SECURITY SYSTEM IN BRAZIL

The Brazilian Social Security System is intricately structured, comprising three distinct regimes catering to specific sectors of the population, each managed separately. These regimes include the General Regime (RGPS), tailored for private sector workers; the Special Regimes for civil servants (RPPS) and the military (SPSM); and the Complementary Pension Regime (RPC). As the study primarily focuses on workers in the Gig Economy, attention will be directed toward the RGPS, aimed at private-sector workers.

The RGPS stands as the largest branch within the Brazilian Social Security System. As of June 2022, data from the Ministry of Labor and Social Security reveals that the Instituto Nacional do Seguro Social (INSS) issued nearly 32 million benefits, amounting to approximately R\$ 81 billion in total value. The table presented below, Table 1, provides a detailed breakdown of the benefits and their respective amounts disbursed by the INSS during June 2022.

**Table 1 – INSS benefits paid in June 2022: quantities and amount**

	Quantity	Amount (R\$ billion)
<b>Benefits</b>	31,922,719	50.56
<b>Social security</b>	<b>31,157,226</b>	<b>49.49</b>
Retirement	21,912,231	36.04
Old age	11,852,026	14.61
Disability	3,268,107	4.79
Length of contribution	6,792,098	16.63
Survivor pension	8,134,877	11.82
Aid	1,037,743	1.54
Sickness allowance	876,757	1.39
Accident	138,768	0.13
Reclusion	22,218	0.03
Maternity pay	72,324	0.09
Others	51	0.00
<b>Accidents</b>	<b>765,493</b>	<b>1.08</b>
By disability retirement	206,471	0.38
Survivor pension	99,379	0.16
Sickness allowance	76,018	0.14
Accident assistance	358,320	0.39
Supplementary Aid	25,305	0.01

**Source:** Social Security Statistical Bulletin-MTP, June 2022.

As depicted in Table 1, nearly 32 million pension benefits were paid by the RGPS in June 2022, out of which almost 22 million were retirement benefits. Additionally, over 1 million benefits were granted in the form of aid for illnesses or accidents.

Concerning contributions to the system, the General Social Security System (RGPS) had an approximate 50.2 million contributors in the year 2020. For a comprehensive understanding of the distribution of contributors across different categories, Table 2 below presents this data over various years.

**Table 2 – RGPS contributors by categories and different years**

	2017	2018	2019	2020
Employees	39,231,178	39,540,313	40,390,900	38,161,778
Self-employed person	9,556,280	10,018,072	10,436,091	9,785,803
<i>CI_PC</i>	5,031,554	5,017,653	4,958,291	3,819,706
<i>PSPS</i>	1,686,433	1,670,768	1,657,673	1,478,924
<i>MEI</i>	2,838,293	3,329,651	3,820,127	4,487,173
Domestic	1,498,545	1,475,030	1,442,915	1,276,155
Optional	1,202,873	1,193,373	1,194,416	1,073,197
Special Insured	2,084	1,987	1,919	1,490
<b>Total</b>	<b>51,490,960</b>	<b>52,228,775</b>	<b>53,466,241</b>	<b>50,298,423</b>

**Note:** the number of contributors corresponds to the monthly average number of contributors

**Source:** Ansilero (2022), based on data from the Social Security Statistical Yearbook and the Social Security Statistical Bulletin.

The data from Table 2 show that employees constitute the largest category among contributors to the General Social Security System (RGPS), accounting for over 38 million individuals (75.9%). Following closely, self-employed persons represent 19.5% of the contributor base. Within this category, a breakdown reveals that 3.8 million contributors (7.6% of the total) contribute 20% of their remuneration (CI-PC), 1.4 million (2.9%) contribute at reduced rates through the Simplified Social Security Plan (PSPS), and 4.4 million<sup>4</sup> (8.9%) are individual microentrepreneurs (MEI).

In the introduction of this study, emphasis was placed on the significance of extending social security coverage to self-employed workers through the Brazilian National Social Security Institute (INSS). It was underscored that being covered by INSS extends beyond the prospect of securing an old age pension in the future; it provides essential protection for the worker and their family against a broad spectrum of life risks and contingencies, including accidents, illnesses, maternity-related events, as well as partial or permanent disabilities, and death. Furthermore, it was explicitly stated that Gig Economy workers, as conceptualized in this study, have the capacity to contribute to INSS either as individual contributors or as MEIs.

<sup>4</sup> The 4.4 million workers enrolled as Micro Entrepreneurs (MEI) represent only those who make their due payments to the Brazilian Internal Revenue System (Receita Federal do Brasil-RFB).

As individual contributors, workers can choose among two possibilities to make contributions to the Brazilian National Social Security Institute (INSS): the Complete Plan (PC) and the Simplified Social Security Plan (PSPS). Under the Complete Plan (PC), the contribution rate is set at 20% of the individual's earned remuneration, with payment flexibility available on a monthly or quarterly basis. This plan not only provides insurance coverage against various outlined risks but also grants entitlement to a retirement pension (including length of contribution benefit)<sup>5</sup> proportional to their contributions, based in the calculation formula specified in Constitutional Amendment (EC) No. 103/2019.

On the other hand, the Simplified Social Security Plan (PSPS) allows contributors to pay a monthly or quarterly contribution equivalent to 11% of the minimum wage. This plan affords insurance coverage against the aforementioned risks; however, the pension amount is capped at one minimum wage. Additionally, the retirement age is set at 65 for males and 62 for females.

In addition to contributing to the INSS as an individual contributor, individuals also have the option to formalize their status as an Individual Micro Entrepreneur (MEI), enabling retirement at age 65 for males and 62 for females, with the pension amount set at one minimum wage. This is facilitated through a monthly payment amounting to 5% of the minimum wage, allocated towards social security contribution, along with BRL 1 and BRL 5 for state and municipality taxes. These taxes are consolidated into a unified payment form, the MEI Simplified Collection Document.

Furthermore, MEI registration includes enrollment in the National Register of Legal Entities (CNPJ), granting the privilege to issue invoices and access technical support from the Brazilian Micro and Small Business Support Service (Sebrae), among other benefits. MEIs also enjoy exemption from federal taxes (PIS, IPI, CSLL, Cofins, and IRPJ), except for the contribution to the INSS. Micro-entrepreneurs with a maximum annual revenue of R\$81,000 and up to one employee receiving the minimum wage or the minimum wage for their respective category can participate. As part of their obligations, MEIs are required to annually complete the Annual Declaration of Billing of the Simples Nacional (DASN) and the Collection System in Monthly Fixed Values of the Simples Nacional Tributes (SIMEI).

It is important to highlight that individual contributors to social security have the flexibility to initiate their payments at a rate of 11% based on the social security floor, constitutionally set at the minimum wage. Moreover, those contributing at 11% of the floor may also choose to start contributing at the 20% rate under the Complete Plan. This decision between the Complete Plan (PC) and the Simplified Social Security Plan (PSPS) is irreversible; insured persons can choose between these plans at any point, ensuring compliance with legal requisites and making the necessary obligatory adjustments for this transition (Ansiliero et al., 2020).

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<sup>5</sup> EC 103/2019 extinguished the retirement benefit based on length of contribution for new entrants to the social security system. However, for those already in the system, it created the possibility of still receiving this benefit by complying with some of the transition rules.

In the case of the Individual Micro Entrepreneur (MEI), the contribution period can be factored into the calculation of the retirement length of contribution, contingent upon the completion of payments to the INSS equating to 20% of the minimum wage value.

Faced with these three aforementioned options, the worker must delineate their preferences and, within their means, opt for the manner in which their affiliation and contribution to the INSS will be structured.

The subsequent sections of this paper delve into the empirical aspect of this study. The following section outlines the methodology employed, while Section 5 estimates the comprehensive count of Gig Economy workers in the transport sector and assesses the extent of pension coverage for this demographic. Additionally, it discusses the hurdles encountered in augmenting pension coverage for these workers.

#### **4. METHODOLOGY AND INFORMATIONS SOURCES**

The empirical exploration of the Gig Economy in Brazil remains relatively nascent. In terms of legal aspects, Bruna de Sá Araújo's study,<sup>6</sup> "Gig Economy and the New Labor Relations" illuminates the gaps in the Brazilian legal framework concerning the regulation of emerging labor relations facilitated through digital platforms. This regulation is imperative, either to sustain the Gig economy business model or to uphold workers' fundamental rights and guarantees, thus mitigating precarious work conditions.

In this realm of research, the works of Lapa (2021) and Góes et al. (2021, 2022) are noteworthy. Lapa (2021) employs the PNAD Covid-19 database, a specialized survey by IBGE focusing on health and labor areas, to empirically investigate the categories of app-based couriers and drivers. It is crucial to emphasize that, as per the mentioned author, discerning how many of these workers employ digital platforms is challenging. Consequently, this study opted to focus on individuals lacking a formal work permit.

In Góes et al. (2021), an initial analytical approach is presented to empirically analyze Gig Economy workers in the transport sector in Brazil. The authors used the bases of PNAD Covid-19 and Continuous PNAD, refining the methodology by analyzing occupation and activity when estimating app-based workers. This article adopts the categorization outlined in Góes et al. (2022), wherein Gig Economy workers in the transport sector are categorized into four groups, as elucidated in Table 3. It is important to highlight that this latter article delineates the profile of Gig Economy workers in the transportation sector in the country, presenting characteristics such as race, gender, and income, among others.

Subsequently, we will elucidate the principal sources of labor market information and their linkages with available data related to the Gig Economy in Brazil. A concise history

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<sup>6</sup> This study can be read at: <<https://ieadireito.jusbrasil.com.br/artigos/733130052/gig-economy-e-as-novas-relacoes-de-trabalho>>.

and evolution of the Continuous National Household Sample Survey (Continuous PNAD), a survey that presently tracks workforce evolution, will be provided. Since 2012, its outcomes have allowed the production of quarterly indicators regarding working conditions and annual indicators concerning diverse topics. To achieve this, the survey visits each household for five consecutive quarters.

However, the Continuous PNAD was not specifically designed to ascertain whether employed individuals carry out their work through applications, for instance, drivers involved in passenger and goods transportation workers. Consequently, a limitation arises as IBGE surveys do not exclusively capture app-based workers in categories such as passenger and goods transport, particularly concerning taxi drivers.

This limitation is significant because, even though a notable rise is attributed to app-based drivers, the proportion of traditional taxi drivers within the total category is non-negligible. Therefore, determining how many of them operate through apps necessitates a dedicated questionnaire inquiry, specifically inquiring whether their work is mediated by platforms like Uber, 99, inDrive, iFood, Rappi, etc. This, if feasible, would distinctly characterize labor relations, occupations, and activities of the undertakings. The results were tabulated using data from the Continuous PNAD for the quarters spanning from 2016 to 2022.

Regarding classifications, it is vital to underscore that in the ongoing household surveys by the Brazilian Institute of Geography and Statistics (IBGE), occupations are classified following the Classification of Occupations for Household Surveys (COD - Classificação de Ocupações para pesquisas Domiciliares), while activities are categorized based on the National Classification of Household Economic Activities (CNAE-Domiciliar 2.0 - Classificação Nacional de Atividades Econômicas Domiciliar).

The classification of occupations utilized in this study stems from the Brazilian Institute of Geography and Statistics (IBGE) and is designed for household surveys. This classification system, known as the Classification of Occupations for Household Surveys (COD), aligns with the International Standard Classification of Occupations (ISCO-08) by the International Labour Organization (ILO). COD mirrors ISCO-08 at the broadest level (large group) and aggregates several main subgroups, subgroups, and unit groups. Additionally, the classification of activities is based on the International Standard Industrial Classification of all Economic Activities (ISIC Rev 4) by the United Nations.

**Table 3 – Classification of workers in the Transport Gig Economy into subgroups according to occupation**

		Occupation		
		8321 – Motorcycle drivers	8322 – Car, taxi and van drivers	9331 – Hand and pedal vehicle drivers
Activity	49030 – Passenger road transport	Motorcycle taxi driver	App driver and taxi driver	
	49040 – Freight transport by road	Motorcycle goods delivery		Delivery of goods via other means
	53002 – Courier activities	Motorcycle goods delivery	Delivery of goods via other means	Delivery of goods via other means

**Source:** Conjuncture note nº 14 of conjuncture letter nº 55.

It's imperative to acknowledge the inherent limitations of this data source when studying the Gig Economy in the transport sector. While the Continuous PNAD (National Household Sample Survey) has its constraints, it remains the most robust and comprehensive source of information for analyzing the Gig Economy in Brazil.

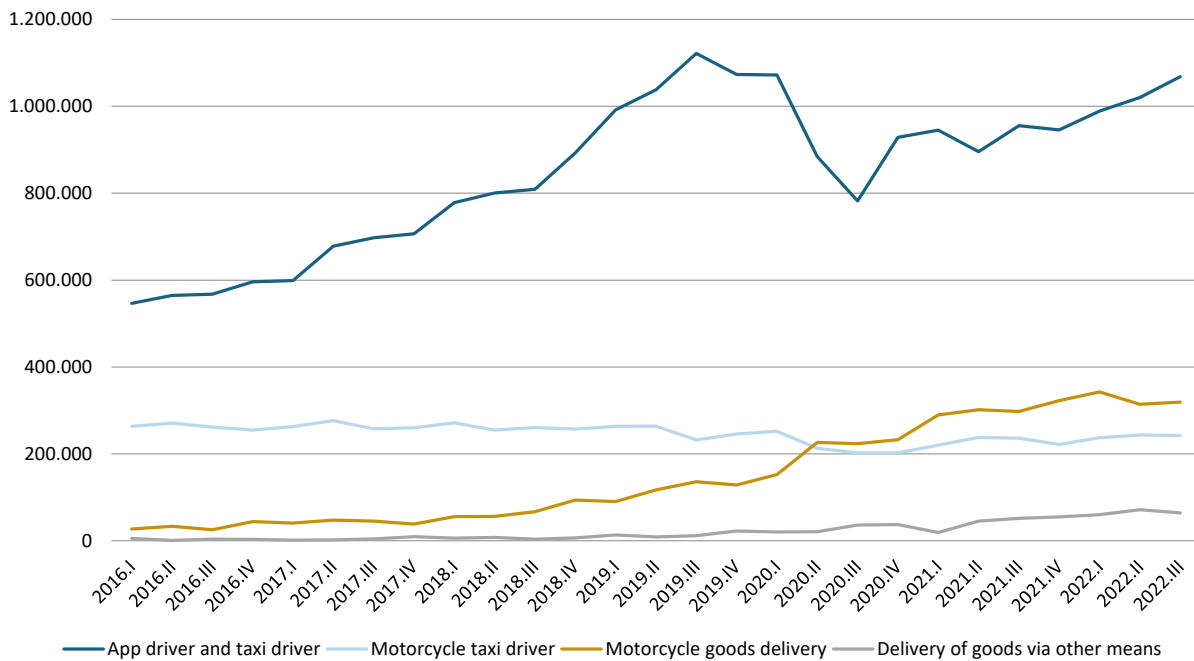
For the examination of social security contributions, variables V4032 and V4049 were utilized. These variables record whether a worker contributed to social security in their primary or secondary occupation, respectively. It's noteworthy that contributions made at the primary occupation were taken into account. In essence, if an individual identified themselves as part of the Gig Economy within the transport sector in their primary job, their social security situation within that occupation was ascertained, and vice versa.<sup>7</sup>

## 5. RESULTS

The findings reveal a progressive rise in the workforce engaged in the Transport Gig Economy. Specifically, the number of app drivers and taxi drivers increased from 945,000 in the last quarter of 2021 to 1.068 million in the third quarter of 2022. Additionally, the count of goods delivery workers via other means escalated from 55,000 to 64,000 during the same period, as summarized in Graph 1.

<sup>7</sup> It is noted here that the indirect social protection of Gig Economy workers in the transport sector was observed. That is, if the person works in the Gig Economy without contributing to social security, but has another employment relationship where he makes payments to the social protection system. The results were not statistically significant and this approach was disregarded in the analysis.

**Graphic 1 – Evolution of the Gig Economy contingent in the transport sector**

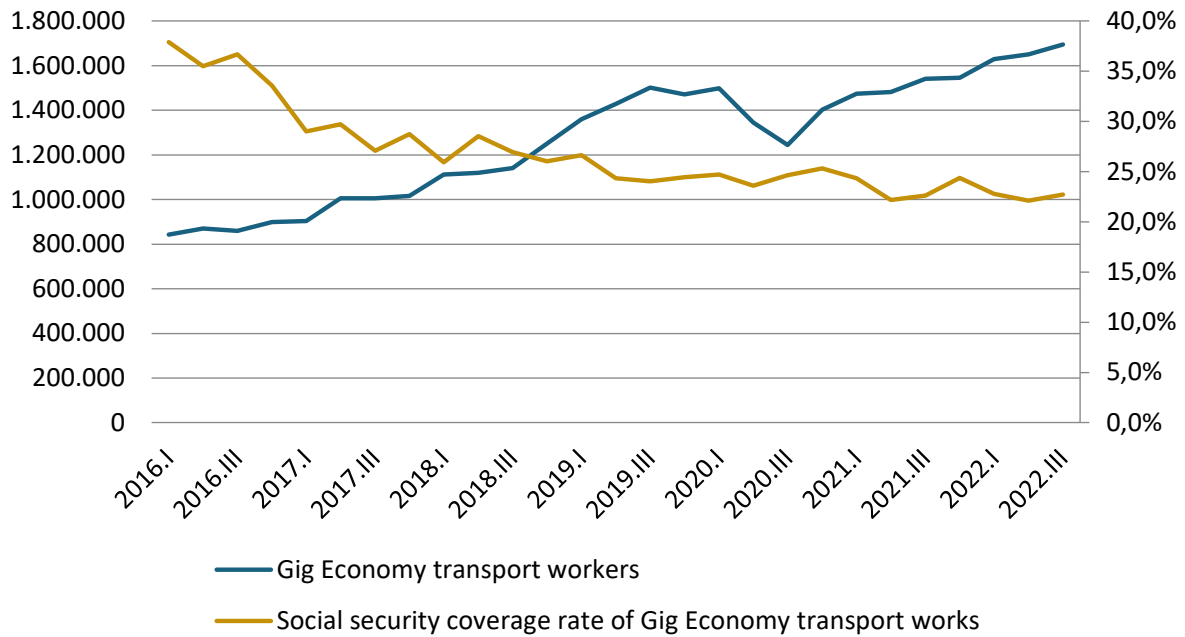


**Source:** Continuous Pnad/IBGE.

Consequently, the total count of Gig Economy workers in the transport sector reached 1.7 million individuals by the third quarter of 2022, an increase from 1.5 million at the end of 2021. Among these, 23% are actively contributing to social security within this occupation, be it their primary or secondary occupation<sup>8</sup> (see Graph 2). Notably, this percentage exhibited a higher value in mid-2016, experienced a decline towards the end of 2016 and through 2017, and has maintained relative stability from 2019 to the present. It's essential to underscore that, for social security contribution statistics, the subgroup involved in goods delivery via alternative transportation means had to be excluded due to insufficient statistical representation throughout most of the analysis period.

8 Estimates of the contribution to social security in the main and secondary job were made, as well as by category of the Gig Economy of transport, however, as these were not statistically significant in the period of analysis, it was decided to delete them from the study.

**Graph 2 – Evolution of the amount (left axis) and social security coverage rate (right axis) of Gig Economy transport workers**

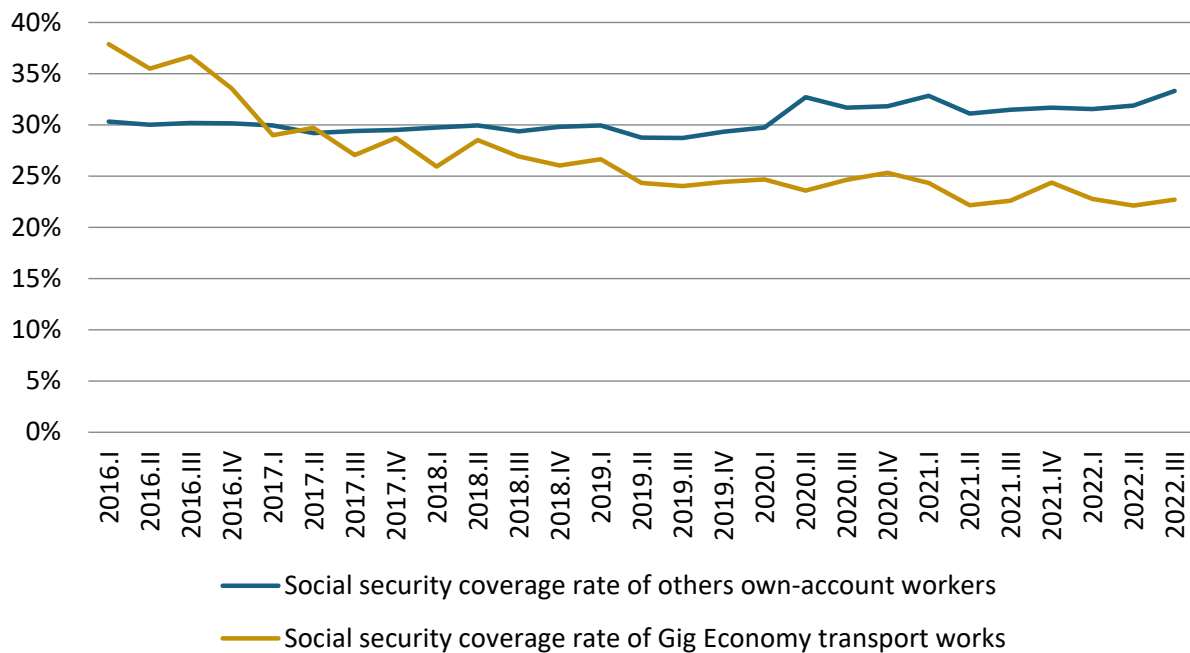


**Source:** Continuous Pnad/IBGE.

In comparison with other own-account workers in the country not involved in the Gig Economy within the transport sector, the stability of the percentage of social security contributors is more evident (see Graph 3). It's important to note that this category constitutes a heterogeneous group, encompassing highly skilled professionals such as doctors as well as less educated individuals like own-account salespeople. The data suggests that approximately 30% of own-account workers, excluding those in the Gig Economy, contributed to social security during the period. By the third quarter of 2022, this figure had risen to 33%. The impact of the pandemic on own-account workers across the nation is evident, reflected in the graph through a notable shift in the series from the second quarter of 2020 to the first quarter of 2021. Despite this, a comparison of the trajectories of contributors' percentages indicates a decline for Gig Economy transport workers, potentially pointing to an escalation in vulnerability for this sector, leaving them uncovered by the social security system to various risks.



**Graph 3 – Social security coverage rate of Gig Economy transport workers and others own-account workers**



Source: Continuous Pnad/IBGE.

The regional distribution of the Transport Gig Economy workforce was also analyzed, revealing distinct levels of social security contribution across Brazilian macro-regions (Table 4). The data underscore that workers in this sector in the Northern and Northeastern regions demonstrate lower social security contribution rates compared to their counterparts in other regions. In the Southern region, however, a substantial 37.0% of transport Gig Economy workers actively contribute to social security.

**Table 4 – Distribution of transport Gig Economy workers by Brazilian macro-regions**

Region	Number of contributors working in the Transport Gig Economy <sup>1</sup>	Number of workers in the transport Gig Economy <sup>1</sup>	Percentage of contributors
North	14,244	149,023	9.6
North East	64,36	391,147	16.5
Southeast	225,352	836,079	27.0
South	60,561	163,84	37.0
Midwest	20,673	90,196	22.9
Brazil	385,19	1,630,285	23.6

Source: Continuous Pnad/IBGE.

<sup>1</sup>Exclusive transport Gig Economy workers in the subcategory delivery workers in other means of transport.

Despite the limitations imposed by the database, the study highlights a significant Gig Economy workforce in the transport sector, reaching 1.7 million workers by the third quarter of 2022. However, the data, as illustrated by Table 4, indicates a low percentage of these workers covered by Social Security. This lack of coverage implies a substantial portion of the workforce without the protection offered by the Brazilian Social Security system against various risks (accidents, diseases, death, etc.) and life cycle contingencies (maternity and aging).

The data reveals a concerning social security coverage gap among workers in the transport sector of the Gig Economy, with only 23% of them covered among the estimated 1.7 million workers. Expanding social security protection for Gig Economy workers is a longstanding challenge, particularly in countries with high informality in the labor market, as is the case in Brazil. The percentage of social security contributors among own-account workers, excluding those in the Gig Economy of the transport sector, although higher, stands at 33% of the total workers.

To address the issue of lack of contribution among own-account workers, since the 2000s, Brazil has introduced various policies to encourage social security inclusion among own-account workers, including those within the Gig Economy.

The Simplified Social Security Plan, initiated in 2007, offers coverage to own-account workers through a monthly contribution equivalent to 11% of the minimum wage, providing access to a range of benefits offered by social security.

Similarly, the creation of the Individual Microentrepreneur (MEI) under Complementary Law No. 128/2008 aimed to increase social security coverage among own-account workers and formalize informal microenterprises. Enrolling as a MEI entails monthly costs equivalent to 5% of the minimum wage, as a social security contribution, plus additional amounts based on state or municipal taxes, promoting social security inclusion. Studies indicate that the institution of the PSPS and the MEI were relatively successful in increasing social security coverage of own-account workers and regularizing microbusinesses but with high costs due to subsidized plans (IPEA & SPREV/MTP, 2021).

In striving to enhance inclusion within these policies, a fundamental approach has been to minimize contributions for non-employed individuals, making the spectrum of social security coverage enticing for workers. Presently, a diverse array of options is available for own-account workers to make contributions to social security, encompassing the Complete Plan (20% of the monthly salary), the Simplified Social Security Plan (11% of the minimum wage per month), and registration as a MEI (5% of the minimum wage per month).

However, as evidenced earlier, despite the relative success of these policies, a considerable coverage gap persists, notably among the focal group of this study—Gig Economy workers in the transport sector. Considering this protective deficit, discussions on regulating work through applications have gained momentum, both within the media and the National Congress.<sup>9</sup>

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<sup>9</sup> See CEPI FGV (2021).

Broadly, the ongoing debates and propositions revolve around two primary approaches. The first approach advocates for maintaining the status quo, essentially reinforcing the existing setup wherein drivers and couriers operate as autonomous service providers in relation to the digital platforms. Consequently, they operate without formal labor rights and social security coverage. Conversely, the second approach emphasizes the compulsion to designate these professionals as employees, thereby ensuring they are granted the full array of rights associated with formal employment contracts.

It is pertinent to note that perpetuating the current situation, all other factors held constant, would do little to ameliorate the existing protective gap for these workers. Conversely, imposing an employee status might potentially reduce the workforce's size in comparison to the current workforce. This effect has been observed in Spain, where a regulation implemented in 2021 mandated the employment of delivery workers by digital platforms.<sup>10</sup>

In essence, the issue of low coverage of app-based workers is a new layer of the problem of informality in the Brazilian labor market. It highlights the challenge for the social protection system to include the large contingent of unprotected workers.

## **6. FINAL CONSIDERATIONS**

This article endeavors to present innovative research on the social security aspects concerning workers within the Gig Economy, particularly focusing on the transport sector. As highlighted in the introduction, the advent of the Fourth Industrial Revolution has emphasized the necessity of ensuring that workers engaged in varied activities and labor structures are encompassed within comprehensive social protection systems. Brazil is no exception to this discourse, experiencing a conspicuous transformation among Gig Economy workers, particularly those in the transport sector.

Within Brazil, the General Social Security Regime (RGPS) offers the opportunity for own-account workers, a category that includes Gig Economy workers, to register as individual contributors. Notably, app-based drivers have the option to avail social security coverage under the Microentrepreneur (MEI) scheme.

In terms of the total number of Gig Economy participants in the transport sector, the data indicates a significant rise, reaching 1.7 million individuals in the third quarter of 2022, a marked increase from the 800,000 individuals at the outset of 2016. Key estimates derived from the data are as follows:

(i) Only 23% of Gig Economy workers in the transport sector contributed to Social Security in the third quarter of 2022, with their contribution rate being lower than that of total own-account workers, excluding those in the Transport Gig Economy (33%).

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<sup>10</sup> As the reform instituted by Spain is recent, most sources of information come from the press. In this sense, see Regidor (2021), Cano (2022) and Lomba (2022).

(ii) This percentage of contributors within the Gig Economy was higher in mid-2016 but witnessed a decline towards the end of 2016 and in 2017, stabilizing since then.

(iii) Regional disparities are evident in the social security contributions of Gig Economy workers in the transport sector, with over a third of workers in the Southern region contributing to social security (37.0%), whereas in the Northern Region, this figure was approximately 10%.

The challenge of protecting these workers aligns, to a large extent, with the broader challenge faced by all own-account workers in the country — ensuring consistent contributions to the social security system amid income volatility and occasional income insufficiencies.

It is worth noting that social security coverage under MEI is subsidized, amounting to 5% of the minimum wage. As individual contributors, the contribution can either constitute 20% of their earnings or 11% of the minimum wage, both of which are also subsidized.

The data presented in section 4 unequivocally underscores a coverage gap issue among Gig Economy workers in the transport sector in Brazil, a gap that is even more pronounced compared to other own-account workers. A nuanced understanding of this reality, including its regional dynamics and the income levels of these professionals — given the highly variable nature of their income — is crucial for proposing public policies aimed at broadening social security coverage for this cohort of workers.

The contribution of this study, fundamentally, lies in enhancing our comprehension and knowledge regarding the social security situation among Gig Economy workers in the transport sector. As a direction for future research, evaluating internationally implemented public policies aimed at extending protective coverage to this cohort of workers and assessing the extent to which such policies could prove effective in the Brazilian labor market holds considerable promise.

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**Felipe dos Santos Martins**

<https://orcid.org/0000-0001-7146-8047>

Doctor in Economics, Universidade Federal Fluminense (UFF). Researcher at PNPd, Instituto de Pesquisa Econômica Aplicada (IPEA).

[fsmartins@outlook.com.br](mailto:fsmartins@outlook.com.br)

**Geraldo Sandoval Góes**

<https://orcid.org/0000-0002-5367-8654>

PhD in Economics, Universidade de Brasília (UnB).

[geraldo.goes@ipea.gov.br](mailto:geraldo.goes@ipea.gov.br)

**Antony Teixeira Firmino**

Bachelor in Statistics from the National School of Statistical Sciences (ENCE).

<https://orcid.org/0000-0002-3867-7039>

[antony.firmino@ibge.gov.br](mailto:antony.firmino@ibge.gov.br)

**Leonardo Alves Rangel**

<https://orcid.org/0000-0002-0562-6008>

Doctor in Public Policies, from Federal University of Rio de Janeiro (PPED/UFRJ).

[leonardo.rangel@ipea.gov.br](mailto:leonardo.rangel@ipea.gov.br)