THE VIABILITY OF IMPLEMENTATION OF THE JOB GUARANTEE PROGRAM IN BRAZIL

Vinicius Brandão[*]

Carmem Feijó[†]

Abstract

The persistence of elevated unemployment rates globally, particularly in Brazil during the latter half of the 2010s, underscores the necessity for a more comprehensive examination of economic policies aimed at fostering employment. Furthermore, in this context, work conditions are deteriorating with the proliferation of digital platform-based employment and the emergence of part-time work. This is occurring concurrently with policies designed to reduce labor costs and stimulate private investment. In this way, we present the fundamental bases of the Job Guarantee Program, conceived by Hyman Minsky, which places the state as the employer of last resort to eliminate involuntary unemployment. Furthermore, it is necessary to analyze the feasibility of implementing a job guarantee program in Brazil and how it would be integrated into the existing labor market structure.

[*]Professor at Ibmec University Center and Unigranrio-Afya, Researcher at Financialization and Development Study Group (FINDE/UFF). E-mail: v.brandao91@gmail.com

[†] Full Professor at Faculty of Economics of Federal Fluminense University (UFF), Researcher at National Council for Scientific and Technological Development (CNPq), coordinator of the Financialization and Development Study Group (FINDE/UFF). E-mail: cbfeijo@gmail.com

1. Introduction

The question of the persistent causes of unemployment is one that has been the subject of long-standing debate within the field of economic literature. Even developed countries with more formalized labor markets experience recurring difficulties in maintaining sufficient demand for labor, particularly during periods of economic downturn. In the case of developing countries, this problem is particularly pronounced given their heightened susceptibility to economic instability.

While the unemployment rate has reached relatively low levels in certain periods, such as in the period preceding the 2008 economic crisis, it is important to note that it has been challenging to achieve the pre-crisis unemployment rate in OECD countries (Heimberg, 2019). Furthermore, significant discrepancies in unemployment rates are evident across countries within this group (Gökten et al., 2024), with instances of underemployment also documented (Fontanari et al., 2021). These factors contribute to a deterioration in the labor market.

Since the end of the Bretton Woods Agreement and the oil shocks of the 1970s, liberalism has emerged as a dominant force in economic policy. In this context, there was a notable increase in calls for the implementation of liberal reforms and a reduction in state involvement. One of the primary hypotheses proposed was the crowding-out effect between public and private investment. This postulates that an increase in public investment results in a reduction in private investment[1].

In Brazil, the impact of liberal economic policies was most evident from the 1990s onwards, with the implementation of liberal reforms in accordance with the prescriptions set forth in the Washington Consensus. During the 2000s and the first half of the 2010s, there was a notable increase in state involvement in economic activities, particularly in the context of public investment, and in response to the global financial crisis of 2008. Nevertheless, throughout this period, obstacles to the implementation of economic policy remained in place, including the primary surplus target and the inflation target regime. Furthermore, the 2017 Labor Reform, which sought to reduce labor costs for employers and, in theory, lead

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[1] The crowding-out thesis gained prominence in economic discourse from the 1960s onwards, particularly among monetarists, and during the 1970s, as espoused by the new-classical school. For further information on monetarism, see Friedman (1962). For details on the new-classical school, see Lucas (1983) and Lucas and Sargent (1981).

to an increase in employment in Brazil, is also worthy of mention in the context of the labor market.

Despite a notable reduction in the unemployment rate between 2006 and 2014, when it fell below 5%, unemployment in Brazil remains a persistent challenge. From 2015 onward, the unemployment rate began to increase and exhibited a new upward movement from the Coronavirus crisis in 2020 up to mid-2021. While Brazil has witnessed a reduction in the unemployment rate since mid-2021, this decline can be attributed largely to the emergence of informal, part-time, or low-quality employment opportunities (Brandao, 2024).

In light of the deterioration of the labor market observed since the 1990s, there is a pressing need for the implementation of more robust public policies that directly address this issue. In this context, the Job Guarantee (JG)[2] proposal, which was initially developed by the American economist Hyman Minsky (1964; 1986 [2008]) and subsequently refined by contemporary authors such as Randall Wray (2000)[3], Pavlina Tcherneva (2017), and Fadhel Kaboub (2006), among others, is worthy of particular attention.

The Job Guarantee proposal posits that the state would assume responsibility for providing employment opportunities to any adult who is willing and able to work. In light of the persistent challenge of unemployment worldwide, particularly in Brazil, it is crucial to assess the viability of the Job Guarantee in Brazil, encompassing not only the costs and benefits of implementation but also the necessary steps to operationalize this program. It is worth noting that preliminary research on the Job Guarantee proposal for Brazil has already been conducted by Gomes and Lourenço (2009), Omizzolo (2019), and Vilella (2021). Therefore, the objective of this paper is to contribute to the advancement of research initiated by these works and address outstanding issues, such as the estimated investment required to implement the JG in Brazil in light of the country's unemployment landscape, particularly during the second half of the 2010s.

The objective of the initial section of this paper is to elucidate the fundamental tenets and attributes of the program, delineating its overarching principles and demonstrating its alignment with the tenets of a developing economy, as exemplified by the Brazilian economy.

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[2] The Job Guarantee in the literature is also called Employer of Last Resort (ELR), but in this paper we will only use the term Job Guarantee or its acronym JG.

[3] The research conducted on the Job Guarantee, especially those conducted by Randall Wray, typically incorporates the Modern Theory of Money (MMT), despite the relevance of the topic in the current debate. This essay, however, does not seek to engage in an MMT debate. For further information on MMT, please refer to Wray (2015).

Moreover, it is essential to provide illustrative examples of the implementation of analogous programs in other countries, including Argentina and India.

Based on this analysis, we will present an overview of the Brazilian labor market and an examination of the potential implementation of the program within the context of the Brazilian economy. This paper will present the current limitations of the Brazilian labor market and the potential benefits of implementing a program designed to enhance the country's capacity to eliminate involuntary unemployment. In conclusion, an estimation of the financial investment required to implement the Job Guarantee Program in Brazil will be presented.

2. The Job Guarantee Program

The role of employment has been a prominent topic in economic literature since the seventeenth century, with notable contributions from William Petty, David Ricardo, and Karl Marx. Each of these thinkers approached the topic from a distinct perspective, offering insights into the impacts of unemployment on the economy and society (Kaboub, 2006). In 1899, William Petty identified unemployment as a societal problem that required a solution. However, the author's concern was not humanitarian in nature, as it pertained to the unemployed. Rather, it was an assessment of the potential for this unused human capital to enrich the nation and increase infrastructure.

David Ricardo (1821) subsequently addressed the issue of the replacement of human labor with machines in chapter 31 of Principles of Political Economy and Taxation, emphasizing the adverse consequences for workers. Marx (2013, pp. 706–710) posits that the unemployed or semi-employed, whom he refers to as the "industrial reserve army," play a pivotal role in the capitalist system, as they exert downward pressure on labor's bargaining power.

In the twentieth century, Keynes wrote about the importance of full employment and highlighted the role of the government in maintaining the level of aggregate demand and reestablishing positive expectations in periods of recession and high uncertainty. These periods are characterised by a decline in income, consumption and private investment (Keynes, 1936[1983]).

From the perspective of Keynesian theory, it is important to highlight the significance of public investment in maintaining employment and fostering economic growth. The debate

on the importance of sustaining the level of employment commenced prior to the publication of Keynes' magnum opus. In 1931, Richard Kahn presented a dissertation on the employment multiplier, which postulated that local investment would stimulate the labor market and, in turn, foster the local economy.[4].

The contributions of various authors, especially those of J.M. Keynes, provided Hyman Minsky with the topic of the state as an employer of last resort and the creation of the Job Guarantee Program. Minsky (1964, 1965, 1986 [2008]) emphasized the necessity of job creation for all able and willing workers as a primary mechanism for economic stability and poverty alleviation. The JG would entail a government program whereby the state would assume the responsibility of employing the unemployed population, thereby mitigating the adverse effects of the decline in aggregate demand resulting from unemployment. As Minsky (1986 [2008], p. 343) observed:

> The main instrument of such a policy [full employment] is the creation of an infinitely elastic demand for labor at a floor or minimum wage that does not depend upon long- and short-run profit expectations of business. Since only government can divorce the offering of employment from the profitability of hiring workers, the infinitely elastic demand for labor must be created by government.

The proposal, which drew inspiration from Minsky's writings, underwent further development at the hands of a larger number of researchers starting in the 1990s. Among those who contributed to this endeavour are Wray (2000), Forstater (2001), Tcherneva (2012; 2017), Kaboub (2006), and others. The principal characteristics of this proposal are outlined by Tcherneva and Wray (2005). (i) JG should provide an elastic and infinite demand for labor, that is, the program should be able to offer employment to any citizen who is capable of working; (ii) remuneration is a fixed minimum amount that is sufficient to provide a minimum standard of quality of life; (iii) jobs are not fixed, which allows the private sector to absorb the workers supported by JG and no longer in a reserve army. (iv) The JG aims to prepare people for a future fixed job, therefore workers should be allocated to functions that are useful for a future job; (v) Workers should be allocated to JG in functions that are also useful to society; (vi) The state should act as the financier of the program.

The JG would serve as a buffer stock, which the private or even the public sector could draw upon when it decides to increase investments and hire more workers. In this scenario, rather than remaining idle, the workers would remain active in the labor market and

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[4] Kahn's employment multiplier provided a point of reference for Keynes in the development of his income multiplier. (Kregel, 1988).

receive a minimum income that would allow them to maintain a minimum quality of life while seeking new employment opportunities.

In this manner, when the private sector seeks to hire new personnel, the prospective workforce would be comprised of individuals who have been assigned to the JG Program. In this scenario, the employees would retain the autonomy to decline private sector job offers. However, it is acknowledged that in the event of more lucrative job opportunities in the private sector, these workers may transition from their position in the JG Program to the new roles.

It is imperative to underscore the distinction between full employment policies, which are particularly championed by Keynes and Kalecki, and the Job Guarantee. In the first case, full employment policies would be achieved by stimulating aggregate demand, which could be accomplished through measures such as increasing public investment or redistributing income. In other words, full employment would be achieved through the implementation of economic policies designed to achieve this objective. In contrast, the Job Guarantee would function as a stock of jobs, that is to say, it would be a specific policy guaranteeing that any individual who is available and able to work would be offered a position in the event of unemployment (Sawyer, 2003). It is noteworthy that full employment policies may or may not include programs such as the Job Guarantee.

In this sense, as a state-funded program, the Job Guarantee can target the specific jobs that will be created, in contrast to general policies designed to stimulate full employment. In other words, workers can be assigned to strategic sectors that contribute to the well-being of the community and the country's economic development.

One area of contention is the potential for an increase in wages paid to workers in the private sector. It is therefore important to note that the objective of the programme is to provide an income for workers that enables them to maintain a minimum standard of living. Therefore, the only consequence of this would be a reduction in the number of people forced to accept employment that does not provide a minimum income. Consequently, both the private and public sectors would be required to offer remuneration at a level commensurate with or above that provided by the JG.

In addition to maintaining a minimum income, the JG offers additional benefits to both workers and society at large. In this regard, the objective is to assign each worker to a position that will facilitate the enhancement of their skills and facilitate their continued

learning, thereby enhancing their employability and facilitating future job reallocation. Furthermore, the program aims to address deficiencies in public services that are essential for the population and that require the attention of public authorities.

In this regard, the jobs created by the JG would be oriented towards addressing community needs. This could include an increase in the availability of workers in roles that support the population, such as educational assistants and popular legal assistance. In a context of increased need for investments that lead to sustainable development, the workers hired via JG can also perform services such as the recovery of squares and parks and activities that promote the preservation of the environment, such as recycling and environmental education.[5]

2.1. Experiences from similar programs to JG

There are two programs similar to the JG: the Plan Jefes de Hogar in Argentina and the Mahatma Gandhi National Rural Employment Guarantee in India (MGNREG)[6] (Kaboub, 2006). The aforementioned programs exemplify direct job creation policies financed by the state, akin to the Job Guarantee proposal. Consequently, this section will delineate the salient features of the two programs, contextualizing them within the economic and social milieu in which they were implemented and elucidating their principal outcomes.

2.1.1. Jefes de Hogar Program in Argentine

In their 2005 study, Tcherneva and Wray elucidate the financing, implementation, and objectives of the *Jefes de Hogar* Program in Argentina. They reveal that the program was financed by the Federal Government and initiated in the early 2000s. Its core tenet is the provision of a minimum income for the head of each household in exchange for a minimum of four hours and a maximum of six hours of work per day. To qualify for the employment program, families must meet at least one of the following criteria: (a) have a child or adolescent under the age of 18, (b) a pregnant woman (spouse or daughter) or a disabled person of any age (Golbert, 2007).

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[5] For an analysis of the relationship between job guarantee and sustainable development, see Forstater (2001).
[6] In addition to the two programs presented, it is also possible to mention the Youth Guarantee Program, which was implemented in Greece and other European Union countries during the eurozone crisis. The program was financed by the European Union with the objective of fostering employment and offering technical training to young individuals under the age of 25 who were neither employed nor engaged in academic pursuits (Boutsiouki, 2017; Escudero & Mourelo, 2015).

The work to be performed by the beneficiary of the program may include community service, professional training, completion of the formal education cycle, or joining a company through a formal employment contract. Furthermore, the families were required to demonstrate that the children and adolescents were duly enrolled in an educational institution and that they had received all the necessary vaccinations (Tcherneva & Wray, 2005; Golbert, 2007).

Golbert (2007) highlights that with respect to Argentina's economic circumstances, it is notable that between 2001 and 2002, the country experienced a currency crisis. This resulted in a significant increase in unemployment, reaching 18.4% in October 2001 and exceeding 21% in the first quarter of 2002. In this context, the program is implemented amidst a backdrop of elevated unemployment and social vulnerability. At the inception of the *Jefes de Hogar* program, it provided employment to approximately 500,000 individuals. Subsequently, the program expanded its reach, attaining its zenith in 2003 with an enrolment of nearly two million workers.

A significant aspect of the program is the remuneration received by each beneficiary. The benefit paid to each worker was 150 Argentine pesos per month between 2002 and 2005. In 2002, this amount constituted 75% of the Argentine minimum wage. By mid-2005, however, this ratio had deteriorated, reaching only 23% of the minimum wage in force. As the Argentine economy began to demonstrate indications of recovery, the program was reduced and ultimately terminated in 2006 (Ibid).

In this manner, the *Jefes de Hogar* Program exhibited characteristics that were consistent with the principles of the JG. Despite some shortcomings, including its limited reach among the unemployed and therefore limited impact, this was a successful employment generation program. Among its major successes was a reduction in the rates of indigence, achieved through a structure that was funded by the Federal Government and administered by local governments, with the objective of meeting the needs of the population that benefited from the program (Tcherneva & Wray, 2005).

2.1.2. Mahatma Gandhi National Rural Employment Guarantee Program (MGNREG) in India

The Mahatma Gandhi National Rural Employment Guarantee Program (MGNREG) was established in India in 2004 and underwent a renaming process in 2009 following the

program's expansion to all Indian states. The program's primary focus is on rural areas, with the objective of providing up to 100 days of employment per year for individuals residing in these regions. The remuneration to be provided to each beneficiary will be a minimum of the state-mandated wage and may fluctuate in accordance with the nature of the work performed. Moreover, in the event that the state is unable to place an eligible worker in a position within 15 days, that worker will commence receiving unemployment benefits. (Breitkreuz et al., 2017).

Consequently, the employment opportunities provided are oriented towards local development, with a particular emphasis on infrastructure projects at the local level, such as irrigation systems and small roads (Deininger & Liu, 2013). As noted by Breitkreuz et al. (2017), the policy's objectives can be broadly categorised into four main areas: 1) Social protection; 2) The creation of durable assets (such as water security, soil conservation, and higher land productivity) through the manual labour conducted by the workers; 3) The employment of disadvantaged workers, such as women; and 4) Inclusive growth in rural India through the policy's impact on livelihood security and democratic empowerment.

The program's scope is constrained to rural India due to the pervasiveness of extreme poverty in these regions. As observed by Breitkreuz et al. (2017), approximately 30% of the rural Indian population was living below the poverty line in the mid-2010s. The study by Breitkreuz et al. (2017) presents several noteworthy findings regarding the implementation of the program. Among the key observations are the following: a) An increase in the number of employment relationships among program participants. b) An expansion in employment opportunities for women, despite persistent inequality in the benefits paid to women and men. c) In regions where the wages offered to program beneficiaries are comparatively low or where job opportunities are limited, the positive impact may not be sustained over time.

Therefore, as in the Argentine case, the MGNREG does not have a universal reach. However, it has made significant progress, particularly among the most economically and socially disadvantaged populations. Additionally, it is an initial project with characteristics that indicate the potential for job creation and the provision of services for local communities.

2.2. Functional finance and inflation

The theory of functional finance, as put forth by Abba Lerner in 1943, serves as a foundational theoretical construct within the context of the JG proposal. The primary

assertion of Lerner's theory (1943) is that fiscal policy should be evaluated based on its outcomes, rather than through the lens of preconceived ideologies. In this regard, the author posits that:

> The central idea is that government fiscal policy, its spending and taxing, its borrowing and repayment of loans, its issue of new money and its withdrawal of money, shall all be undertaken with an eye only to the results of these actions on the economy and not to any established traditional doctrine about what is sound or unsound (Lerner, 1943, p.39)

In accordance with the tenets of functional finance, Lerner posits that the primary objective of fiscal policy is the eradication of unemployment and inflation. The author rejects the notion of adjusting the fiscal budget in accordance with the calendar year. Instead, he proposes that it should be aligned with the objectives of fiscal policy, as this approach may impede the attainment of full employment. In contrast with this perspective, it is important to acknowledge that the implementation of economic policies and budgets that limit fiscal policy to annual inflation and primary surplus targets, as exemplified by the macroeconomic policy in Brazil since the introduction of the macroeconomic tripod in 1999, prioritizes inflation and fiscal surplus objectives over the pursuit of full employment.

The implementation of a program such as the JG is subject to criticism on the grounds that it may give rise to an inflationary surge. Sawyer (2003) posits that the establishment of a job guarantee (JG) program would precipitate an increase in demand that would exceed the capacity of the supply chain to meet, resulting in an inflationary surge. Nevertheless, the author asserts that in this scenario, inflation would exceed the NAIRU (Non-accelerating Inflation Rate of Unemployment), which would result in an inflationary spiral.

In addition to the criticism that a JG program may result in an unemployment rate that is conducive to inflationary pressures, Sawyer (2003) also notes that a program aligned with the JG will function similarly to other Keynesian demand-stimulus policies, such as expansionary fiscal and monetary policies. The author posits that a JG program would serve a similar function as conventional economic policies, such as increasing public investment, reducing taxes, or lowering interest rates.

The hypothesis that such a program will increase inflation is based on the expectation that the program will create an increase in demand greater than the supply of goods and services. Accordingly, if this line of reasoning is accepted, the program would result in a notable increase in the average income and purchasing power of the population, without a corresponding increase in production capacity and, consequently, supply.

In this regard, it is crucial to underscore the countercyclical impact of the JG Program. As Mitchell & Wray (2005) observe, the number of jobs generated by a program like the JG will depend directly on the economic cycle. During periods of economic expansion, there is a tendency for the private sector to seek workers allocated to the JG, which results in a reduction in the number of workers allocated to the JG and an increase in the number employed in the private sector. Conversely, during periods of economic recession and job cuts, there would be an increase in demand for jobs in the JG. Moreover, the absorption of workers laid off in times of crisis would contribute to mitigating the impact of the recession on the economy as a whole, as the effect of the reduction in demand generated by an economic downturn would be lessened.

Furthermore, with regard to the potential for an inflationary spiral resulting from the introduction of a JG program, Wray (2018) posits that in an estimation of the U.S. economy, an inflationary shock would only be expected to manifest initially. Following the initial shock, there is a tendency for the economy to revert to the inflationary level that was observed prior to the implementation of the program. At this juncture, the countercyclical nature of this measure is underscored, as the level of public investment allocated to the JG will fluctuate in accordance with the pace of economic activity. Consequently, there will not be a sustained increase in demand, which could potentially lead to a continuous lack of control over the economy's price level.

In this way, it is understood from the functional finance framework used in formulating the concept of the state as an employer of last resort that the pursuit of inflationary stability cannot supersede the pursuit of full employment. It follows that the state should act as an active agent in the pursuit of full employment, exercising its prerogative to utilise public investment in this endeavour.

3. The Job Guarantee Program in Brazil: an alternative to the liberal project for the labor market

The implementation of a job guarantee (JG) program in Brazil, as in most developing countries, tends to encounter significant resistance, particularly with regard to the debate on fiscal space for the implementation of a program of considerable magnitude, balance of payments restrictions, and the potential inflationary consequences that the JG may generate. Gomes and Lourenço (2009) identify three significant obstacles to implementing a JG

program in Brazil: the external sector, increased public debt, and the fiscal target. Nevertheless, the authors posit that the external sector exerts a considerable influence on Brazilian inflation, which could render the program unfeasible. The prospective increase in public debt, coupled with the fiscal commitment to achieving a fiscal surplus, represent significant obstacles to the implementation of the programme in the country.

Nevertheless, it is crucial to examine the potential consequences of fiscal expansion on the balance of payments of developing countries and the underlying causes of inflation in this group of nations. Moreover, comparisons with social security programs are crucial for understanding the positive effects that the program would have, including with respect to economic growth.

3.1. Balance of Payments and fiscal constraints

In regard to the matter of balance of payments restrictions, Aidar and Braga (2020) elucidate that the diminution in balance of payments crises among developing countries during the initial two decades of the 21st century was associated with the augmentation of international liquidity and capital flows, and was not directly correlated with the fiscal circumstances of the countries that were the recipients of the financial flows. Nevertheless, as the authors posit, reliance on the external sector for balance of payments management tends to constrain the efficacy of monetary policy, rendering it susceptible to external capital flows. In Brazil, in particular, since the implementation of the Plano Real in 1994, the adjustment of external accounts has been conducted in accordance with the differential between the Brazilian interest rate and the international interest rate, with the objective of preventing capital flight and abrupt changes in the exchange rate.

The implementation of a fiscal tightening policy is identified as a necessary component of a liberal economic policy agenda, with the objective of controlling inflation. It is contended that the range of potential measures to avert capital flight or even sudden fluctuations in the exchange rate extends beyond the confines of fiscal restraint. In addition to employing interest rates as a means of regulating capital flows, alternative measures may be utilized. A substantial body of literature on the Brazilian economy emphasizes the necessity of implementing measures such as capital controls to mitigate the impact of financial cycles on the balance of payments (Ferrari & Paula, 2006; Prates & Cunha, 2013; Carvalho & Sicsu, 2004; Sampaio & Weiss, 2020). Furthermore, authors affiliated with the IMF, such as Hélène Rey (2015), emphasize the necessity for the implementation of capital controls in developing

countries due to the lack of monetary policy autonomy in countries without convertible currency and the inability to open financial accounts. In addition to capital controls, it is important to recall that Brazil has a substantial volume of international reserves, which affords the country a precautionary reserve to manage the external account and the exchange rate in periods of potential international crises[7].

3.2. The potential for inflationary pressures in Brazil in the context of the JG Program

In regard to the potential for inflation, it is essential to clarify that this paper's interpretation, aligned with post-Keynesian theory, posits that an increase in demand exceeding the growth in supply can lead to demand-driven inflation. It is therefore important to consider estimates such as those presented by Braga (2013) and Braga & Summa (2016), which found no statistical evidence to support the occurrence of demand inflation in Brazil during the 2000s and early 2010s. Instead, imported inflation was identified as the primary contributor to Brazilian inflation during this period, driven by exchange rate pressures or the rise in commodity prices.

Nevertheless, with regard to the issue of inflationary control, Galbraith (2008) makes the observation that the path to full employment entails a strategy of wage convergence, driven by the expansion of total demand and anchored by the stability of key prices, as exemplified by the case of oil. In this regard, the work of Braga (2013) underscores the pivotal role that government policies governing fuel price management played in Brazil during the latter half of the 2000s. The readjustment rule adopted by Petrobras at the time was designed to prevent the transfer of short-term fluctuations in oil prices to the end consumer. Therefore, in light of Brazil's productive structure, it can be argued that controlling key prices and pursuing an active exchange rate policy represent feasible and efficient solutions for controlling inflation.

In light of the potential for the implementation of the JG in Brazil to precipitate an inflationary surge, it may be prudent to consider a phased approach to its introduction. This could serve to mitigate the impact of the increased demand on both the fiscal budget and the

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[7] Sampaio & Weiss (2020) demonstrate that developing countries capitalized on the heightened international liquidity during the 2000s, significantly augmenting their international reserves. This was also shaped by the apprehension generated by the exchange rate crises that transpired during the 1990s.

broader economy[8]. In this scenario, the program should be implemented in phases, commencing with the most socially vulnerable segments of the population to alleviate extreme poverty. In this manner, the demand shock associated with the implementation of a program that guarantees employment due to the increase in beneficiaries' income would be mitigated, in addition to reducing the fiscal impact.

3.3. Job Guarantee and the social security programs

Although not a conventional social program, the JG benefits primarily lower-income families, in which the effects of unemployment are typically more detrimental, as well as families with a higher marginal propensity to consume in relation to income. Consequently, an analysis of the economic impact of this type of investment in the Brazilian economy can be conducted based on estimates of the multiplier effect for programs linked to direct cash transfers, such as the Bolsa Família Program, the Continuous Cash Benefit (BPC), and Unemployment Insurance.

In this regard, Neri et al. (2015) highlight that the multiplier effect on GDP of programs such as Bolsa Família, BPC, and Unemployment Insurance is as follows: The respective values are 1.78, 1.19, and 1.06 (Table 1). Therefore, the expenditures incurred in these programs result in a greater return to the GDP than the initial investment. The Bolsa Família Program and the BPC are restricted to low-income families. Consequently, they tend to have a greater multiplier effect than unemployment insurance benefits, for example, since the families who benefit from the former two programs have a higher marginal propensity to consume.

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[8] The concept of a phased implementation of the Job Guarantee is also addressed by Kaboub (2006), who presents a proposal for the gradual introduction of the programme in Tunisia.

Table 1- Multiplier effect of social transfer programs*

	GDP	Final Consumption	Final Consumption of the Families
Bolsa Família	1.78	1.98	2.40
Continuous Cash Benefit	1.19	1.32	1.54
Unemployment insurance	1.06	1.18	1.34

Source: Neri et al. (2015).
* The authors utilized the IBGE's system of National Accounts for 2009 to calculate the multiplier effect.

The multiplier effect of cash transfer programs in Brazil is significant due to the pivotal role that household consumption plays in the Brazilian economy. Castro (2011) posits that, in addition to the higher marginal propensity to consume, the economically disadvantaged segments of the Brazilian population tend to consume fewer imported products, which serves to further contribute to the generation of a positive multiplier effect on the Brazilian economy. In this sense, the effect of public investment in cash transfers tends to have a positive impact on household consumption, which in turn has a positive effect on GDP. Neri et al. (2015) highlight that the multiplier effect of cash transfer programs on final household consumption is even more pronounced in comparison to their impact on GDP. With regard to unemployment insurance, the multiplier effect on final household consumption is 1.34 (Table 1).

Nevertheless, it is important to note that JG differs significantly from these social programs. It is important to note that, in addition to providing income support to unemployed individuals, the JG also has the direct effect of increasing the production of goods and services within the country. When a worker is directed to producing a good or providing a service that was not previously undertaken, this also contributes to the generation of national wealth.

The JG initiative is predicated on the creation of employment opportunities that also seek to cultivate community services in accordance with the specific needs and circumstances of each individual worker and region. In this manner, in addition to furnishing a minimal income to a significant proportion of the population, the beneficiaries would contribute directly to local development, which is expected to generate an even greater multiplier effect than the conventional and targeted income transfers that have been applied in Brazil.

Moreover, it is important to acknowledge that the unemployment insurance benefit is a limited program when viewed in the context of the Brazilian population that is not employed in a formal capacity. In order to qualify for this benefit, applicants are required to

have been employed under a formal job contract for a minimum of 18 months prior to making their initial claim, which may last up to five months. Therefore, those who are self-employed or employed in the private or public sectors without a formal contract are not eligible for this benefit in the event of job loss.

3.4. Additional benefits from Job Guarantee Program in Brazil

In addition to the direct benefits of reducing unemployment and providing income for unemployed workers in Brazil, the Job Guarantee (JG) has a positive effect on workers' self-esteem and health. The elevation of self-esteem resulting from the guarantee of employment and income to provide at least the basic necessities is an important factor in improving the mental and physical health of the lower-income sectors of the Brazilian population.

The provision of employment is not the sole objective of the JG. The development of activities aimed at strengthening the local community and aligning with the skills and interests of the worker is also a crucial aspect of this project, as is the qualification of the labor force. In this regard, the training and technical qualification of workers directly enhances productivity and, subsequently, the quality of the worker in question, while also increasing their employability in the private sector. Consequently, the JG will function as a reserve of workers for the private sector. Consequently, during periods of economic expansion, there will be an increased demand for workers allocated to the JG. Consequently, the technical qualifications of these workers will also have a beneficial effect on employers in the private sector, given that the JG also has a positive impact on worker training.

One of the factors that enables Brazilian public institutions to gain an operational advantage in the implementation of the JG is their ability to respond to local demands. Brazil's most far-reaching social programs, such as Bolsa Família, are financed by the federal government but are implemented at the municipal level. With regard to the operationalization of the JG, the States and Municipalities would assume a pivotal role, particularly given their status as agencies with greater proximity and comprehension of local demands, in addition to their capacity to facilitate the program's outreach.

Nevertheless, the concentration of the financial resources allocated for the implementation of the JG within the federal budget can be attributed to two primary factors. The most apparent rationale is that the federal government is the sole federative entity with the financial capability to execute a program of this scale. It is thus a necessary condition that

the Union provide funding for the JG. A second reason pertains to regional inequality in the Brazilian labor market. It is thus necessary to invest in regions with the most adverse labor market conditions in proportion to their needs.

4. Investment Estimates for the Job Guarantee Program in various countries

In the initial decades of the 21st century, the existing literature was further developed, resulting in a more refined estimation of the JG in various countries. In this regard, estimates have been formulated regarding the requisite investments to implement the JG in countries with disparate labor market realities and varying investment capacities. Table 2 presents the findings of research studies that estimate the financial resources necessary to implement the JG in various countries. It is important to note that these studies are unified by their reliance on Minsky's conceptualizations of a program such as the JG, a post-Keynesian theoretical framework, and the fundamental assumptions of the JG Program presented at the outset of this paper.

Table 2- Estimated investments for implementation of the Job Guarantee Program in different countries (%GDP)

Country's estimation % of GDP		Reference
Saudi Arabia	5.4	Kaboub et al (2015)
Australia*	2.3	Mitchell and Watts (2020)
Austria**	3.7	Haim (2021)
United States of America	3.9	Kaboub (2013)
Greece***	2.2	Antonopoulos et al (2014)
Ireland	Between 1 and 2	Wray (2013)
Mexico**	5.1	Sovilla et al (2021)
Tunisia****	3	Kaboub (2006)

* Investment needed to reduce unemployment from 10 to 4%.
**The paper estimates different scenarios, with the percentage presented being the scenario of the greatest fiscal effort
*** Investment necessary to reduce unemployment by 64%
**** Maximum annual estimate for implementing the JG in stages.

In regard to the aforementioned works, it is noteworthy that this body of literature has made significant contributions to the development of knowledge in developing countries, including Mexico and Tunisia. In this regard, the work of Kaboub (2006) is noteworthy for its emphasis on a phased implementation of the JG Program in Tunisia, with the objective of mitigating the fiscal impact of its introduction. In addition, the work by Sovillo et al. (2021) presents a significant discussion on the influence of the JG Program on the private sector.

In their analysis of the Mexican economy, the authors estimate that for every 100 jobs created via the JG Program, 16 jobs would be created in the private sector. Moreover, the projected financial return on investment for implementing the JG in Mexico is estimated to be 25% of the total expenditure on the program, derived from direct and indirect taxation.

In regard to the work of Kaboub et al. (2015) concerning the projected implementation of the JG in Saudi Arabia, it is noteworthy to mention the estimation of operational costs and those pertaining to social security for the implementation of the program. The authors have projected that operational costs would amount to approximately 10%, while costs related to social security would constitute 15% of the total expenditure.

In addition to the fiscal expenditure estimates for implementing the JG, the works of Antonopoulos (2014), Wray (2013), Mitchell & Watts (2020), and Haim (2021) on Greece, Ireland, Australia, and Austria, respectively, contribute to an understanding of the impact of implementing the Program in the context of an economic crisis. In the case of Greece, Antonopoulos' estimate indicates that the JG will reach up to 64% of the unemployed population in Greece. Additionally, it is estimated that the net cost of implementing the JG will be a maximum of 2.2% of GDP, which already considers the return of 40% of the amount spent via direct and indirect taxes.

In the case of the study on Ireland, Wray (2013) identifies significant challenges to the implementation of the JG, largely due to the constraints imposed by the country's monetary policy within the context of the euro zone. Nevertheless, the author asserts that even under the prevailing regulations, Ireland could implement a program analogous to the JG, which, even in a constrained manner, would facilitate job creation, particularly in the context of the euro zone crisis.

With regard to the Australian study, the same methodology was employed despite the ongoing impact of the Coronavirus pandemic that began in 2019. As in the study for Mexico, Mitchell & Watts (2020) indicate that jobs are generated in the private sector as a result of the creation of jobs directly by JG. They suggest that for every 100 jobs created directly by JG, 20 jobs are generated in the private sector. Furthermore, the authors indicate that the net cost to reduce the unemployment rate from 10% to 4% is 2.3% of the gross domestic product. This calculation incorporates estimated expenditures and a projected return of 30% on the invested amount through direct and indirect taxation. However, the estimate does not

account for other potential benefits, such as enhanced quality of life, decreased crime rates, and reduced mental health issues, among others.

In Haim's (2021) work, which presents a JG proposal for Austria in the context of the Coronavirus pandemic, the author's estimates indicate that the program would yield additional positive effects beyond the reduction of unemployment. Among the benefits would be a reduction in income inequality, as measured by the Gini coefficient, from 0.346 to a value between 0.335 and 0.341. Additionally, there would be a reduction in the portion of the population at risk of poverty, which would fall from a range of 37.9 to 47.9% to a range of 4.3 to 19.3%.

In conclusion, the work of Kaboub (2013) demonstrates that the costs of implementing a JG program in the United States are less significant when compared to the expenses incurred to save Wall Street financial institutions during the 2008 crisis. A net cost estimate indicates that 3.65% of GDP would be required to create 23.4 million jobs via JG in the United States.

5. Investment estimate for the Job Guarantee Program in Brazil

It is crucial to adapt the Job Guarantee (JG) to varying economic circumstances and labor market conditions, as these factors vary considerably across the globe. In addition to the unemployment rate, there are diverse levels of informality in the labor market and disparate institutional frameworks regarding social protection in relation to work.

The implementation of the JG in Brazil in phases represents an alternative that, in addition to mitigating the fiscal impact of the program's implementation, prioritizes the lower-income classes. In this sense, as previously indicated, the multiplier effect of federal government transfers directed towards the lower-income population exerts a proportionately greater influence on GDP and family consumption expenditure. Consequently, the initial stages of implementing the JG in Brazil, with a particular focus on lower-income brackets, would give rise to a more pronounced multiplier effect.

The implementation of a JG program in a country like Brazil, which has experienced significant unemployment rates, particularly since the 2015-2016 recession, has prompted criticism regarding the size of the investment required to implement such a program. In order to ascertain the requisite investment to implement and maintain the JG in Brazil, it is necessary to consider the average amount of unemployment insurance paid. This can then

be extrapolated in relation to the number of unemployed people, thus providing an estimate of the amount to be spent annually to keep the program active.

In this context, the average amount paid to each beneficiary of unemployment insurance is estimated using the annual average of the ratio of the total amount spent and the amount paid for unemployment insurance. This is in order to ascertain an average wage to be paid for the implementation of the JG in Brazil. The mean amount paid in unemployment insurance benefits between 2012 and 2020 ranged from an average of R$ 795 in 2012 to an average of R$ 1,322 in 2020. This equates to approximately 1.3 times the minimum wage.

The rationale for employing the mean remuneration paid out in unemployment insurance benefits over the specified period is based on the premise that this is the social benefit that is in direct competition with the JG, or indeed, the social benefit that would be largely superseded by the introduction of the JG. Although the JG is structured to have a broader scope than unemployment insurance, if the amount paid by the JG were to be lower than that paid for unemployment insurance, it would have the effect of making the latter more attractive to workers who had a formal employment relationship before becoming unemployed. Furthermore, it would contribute to increasing the income disparity between workers in the formal and informal sectors.

In order to estimate the total costs and revenues associated with the implementation of the JG in Brazil, we will utilize the metrics presented in the aforementioned studies. In alignment with the findings of the study conducted by Sovillo et al. (2021) on the subject of Mexico, we will utilize the ratio of 16 new jobs created in the private sector for every 100 jobs generated through the implementation of JG. With regard to the revenue generated by the investment required to implement JG, the studies presented exhibit a considerable degree of variation. In the case of Greece, the estimated return on the investment is 40% in taxes on the amount spent to implement JG, while in Australia the figure is 30%, and in Mexico it is 25%. In this regard, we will utilize the most conservative estimate from the Mexican case, despite the aforementioned considerations. Furthermore, we will employ the additional cost estimate from the study by Kaboub (2015) for Saudi Arabia, specifically 10% of the amount spent on operating costs and 15% of the amount spent on social security expenses.

The principal findings are presented in Table 3 below. In this context, the estimation was predicated on the assumption that unemployment would be eradicated following the

implementation of the JG in Brazil. In order to achieve the creation of the requisite number of jobs, the number of jobs that should be created via the JG was calculated, and the number of private jobs that would be generated due to the implementation of the program was added. The number of unemployed workers fluctuated between approximately 7.5 million in 2012 and 14 million during the Coronavirus pandemic between 2012 and 2020.[9].

Table 3- Estimated Investment to implement JG Program in Brazil

Year	Total expenditure		Tax Revenues		Net cost		% GDP
2012	R$	60.285,12	R$	15.071,28	R$	45.213,84	1.0%
2013	R$	78.320,11	R$	19.580,03	R$	58.740,08	1.2%
2014	R$	80.579,28	R$	20.144,82	R$	60.434,46	1.1%
2015	R$	110.158,00	R$	27.539,50	R$	82.618,50	1.5%
2016	R$	167.274,15	R$	41.818,54	R$	125.455,61	2.1%
2017	R$	204.959,90	R$	51.239,08	R$	153.719,93	2.5%
2018	R$	203.537,12	R$	50.884,28	R$	152.652,84	2.3%
2019	R$	206.864,05	R$	51.716,01	R$	155.148,04	2.3%
2020	R$	225.725,55	R$	56.431,39	R$	169.294,16	2.4%

Source: PNAD Contínua, IBGE and Ministry of Finance.

As evidenced in Table 3, the projected expenditure for JG maintenance increase following the Brazilian economic recession, which occurred in 2015 and 2016. Additionally, the analysis indicates a modest growth trajectory over the subsequent three-year period, extending from the 2015-2016 biennium onwards. It is also noteworthy that the proportional values in relation to GDP increased after 2014, not only due to the rise in the number of unemployed, but also as a consequence of the economic recession. Consequently, these values represent a larger proportion of GDP.

With regard to the investment value in proportion to the GDP to be made for the maintenance of the JG Program, it is evident that even in 2020, when Brazil was confronted with the crisis generated by the Coronavirus pandemic, which resulted in an increase in unemployment and a decline in GDP, the investment to be made would be approximately 2.4% of GDP. Therefore, even in the most adverse scenario for the Brazilian labor market, the investment estimates as a proportion of the GDP remain aligned and even below the estimates made for other developing countries, as illustrated in Table 2. Furthermore, the countercyclical mechanism of this program is worthy of note, as the amounts spent tend to decrease as the economy recovers.

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[9] Data from PNAD Contínua, IBGE.

From this perspective, one of the beneficial outcomes would be the alleviation of the economic crisis. Based on this estimate, it can be seen that between 2012 and 2014, the expenditures for the maintenance of the JG would be below 1.20% of the GDP. Therefore, this investment would be capable of mitigating the adverse effects of the subsequent economic downturn in Brazil, preserving a portion of the population's consumption that would otherwise be eroded by the rise in unemployment. Moreover, the maintenance of the consumption level provides a positive signal to the private sector, thereby contributing to the mitigation of the minor negative impact on the investment level of this sector of the economy.

With regard to the fiscal effort required for the implementation of the JG in Brazil, it is important to emphasise that, in addition to its greater reach among the Brazilian population without jobs, this is an economic policy that generates a direct reduction in spending on other state programmes, including unemployment insurance and economic policies to combat poverty, as exemplified by the Bolsa Familia program[10]. The implementation of the JG in Brazil does not entail the immediate exclusion of existing social programs. Rather, as the program advances, there tends to be a gradual reduction in the amounts spent on this type of program. Consequently, the investment per period would increase gradually. Moreover, these projected expenditures are intended to provide a more concrete indication of the fiscal commitment that would be required to implement the JG. It is important to note that this type of program is not solely intended to provide income to unemployed individuals; it is also designed to facilitate employment.

Therefore, it can be concluded that the implementation of the JG in Brazil is not merely a social benefit, but rather a public investment in social and economic development. This is because the program not only aims to reduce poverty, but also places full employment at the centre of the country's economic policy. It is encouraging to note that over the past few decades, the Brazilian labor market has experienced periods of heightened activity, coinciding with increased public investment relative to the country's gross domestic product (GDP). Therefore, public investment, both as a catalyst for economic growth and as a direct means of eliminating unemployment, as exemplified by the Job Guarantee, is essential for Brazil's economic recovery process.

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[10] In 2019, the annual budget of the Bolsa Família Program was 32 billion Brazilian real, which reached 13 million families, or approximately 41 million individuals (Ministry of Finance, 2021).

6. Final Remarks

The discussion concerning the implementation of the Job Guarantee, particularly in Brazil, is a crucial element in the development of proposals that aim to address the issue of unemployment. During the latter half of the 2010s in Brazil, the Brazilian labor market witnessed a deterioration in conditions. In light of the proposal to eliminate unemployment and increase public investment to achieve this goal, it is common to include discussions of the potential effects that this policy would have on inflation and the fiscal budget. Nevertheless, it is asserted that the inflationary impact would only be significant if this type of investment resulted in an increase in demand that exceeded the supply of production within the country. Moreover, the external sector's impact on Brazilian inflation was underscored, a factor that, as evidenced in the literature presented, can be mitigated through capital control and an active exchange rate policy.

In addition to the direct creation of jobs by the JG, we also emphasize the multiplier effect that this type of public investment has on the country's economy. Given the analysis of the multiplier effects of programs such as Unemployment Insurance, Bolsa Família, and BPC, it can be reasonably assumed that the JG will generate an impact on GDP greater than that invested. Furthermore, it is important to highlight that the JG has the potential to serve as a countercyclical adjustment policy. The program's design allows for an increase in public investment during periods of economic downturn and a reduction in investment during periods of economic growth.

The inclusion of an investment estimate for implementing the Job Guarantee Program in Brazil was intended to contribute to the ongoing debate and research on the subject, as it is related to other estimates that have already been made for other countries, including developing countries. This provides greater specificity and clarity regarding the fiscal effort that would be required to implement the JG. This estimate for Brazil is not an end in itself, but rather a contribution to the ongoing debate about the Job Guarantee and improving labor market conditions in the context of rising unemployment and informality, particularly in developing countries.

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