

REPORT

Minimum Wage and the Labor Market: National and International Evidence and Implications for Brazil



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Labor Market: National and Interna-
tional Evidence and Implications for
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Rio de Janeiro, RJ, 2026. 40 pp.



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1. INTRODUCTION

The minimum wage is one of the most important institutions in the labor market. By establishing a legal wage floor, it seeks to protect lower-income workers, reduce exploitation in asymmetric employment relationships, and ensure a minimum level of remuneration. At the same time, by directly affecting labor costs, the minimum wage can influence hiring decisions, formalization, prices, productivity, firm profitability, and public spending. For this reason, its economic and social effects are the subject of extensive debate in the Brazilian and international literature.

The discussion of the minimum wage involves a range of potential benefits and costs. On the one hand, increases in the minimum wage can raise the earnings of low-paid workers, reduce wage inequality, and contribute to poverty reduction, especially when the workers who benefit belong to low-income households. On the other hand, if the wage floor is too high relative to worker productivity or the local wage structure, it may have adverse effects on employment, formalization, and productive dynamism. Evaluating the policy, therefore, requires considering not only its nominal or real value but also its relative position in the wage distribution.

This relative dimension is particularly relevant in Brazil. The country has a national minimum wage that applies to highly heterogeneous labor markets. States with different levels of income, productivity, sectoral composition, informality, and occupational structure are subject to the same legal wage floor. Thus, the same minimum wage may represent a relatively small share of the typical wage in some federative units and a very large share in others. This heterogeneity means that the economic intensity of the minimum wage varies substantially across the country.

Moreover, the Brazilian minimum wage has an institutional characteristic that extends its reach: it serves not only as a wage floor in formal employment but also as a reference for earnings in the informal sector and for social security and social assistance benefits. This multiple role makes the minimum wage both a labor market policy and an important instrument of social and fiscal policy. Its effects, therefore, cannot be assessed solely from the perspective of formal employment; it is also necessary to consider its impacts on inequality, poverty, informality, productivity, and the sustainability of public finances.

This report aims to synthesize Brazilian and international evidence on the effects of the minimum wage and discuss its implications for Brazil. The literature review is organized around five main dimensions: inequality and poverty, formalization, employment, productivity, and fiscal effects. This structure helps identify the different channels through which the minimum wage affects the economy and the contexts in which its effects tend to be more positive, more limited, or potentially adverse. Broadly speaking, the literature suggests that adverse effects become more likely when the minimum wage reaches a level high enough to influence wage determination for a substantial



share of the workforce.

In addition to the literature review, the report uses the Kaitz index to measure the relative position of the minimum wage in the earnings distribution. The index is defined as the ratio of the minimum wage to a reference wage measure and is widely used in economic research and international comparisons. Our main measure is the minimum wage as a proportion of the median wage,¹ as it more directly captures the proximity between the legal wage floor and the typical worker's earnings in each local labor market. As a complementary measure, we also use the minimum wage as a proportion of the average wage, which is more sensitive to the upper tail of the earnings distribution.

Based on this indicator, the report conducts a descriptive analysis in three stages. First, it places Brazil in an international perspective by comparing its Kaitz index with those of other economies. Next, it examines the evolution of the relative minimum wage at the national level between 1996 and 2025, showing how increases in the real value of the wage floor have changed its position in the earnings distribution over time. Finally, it examines the territorial heterogeneity of the indicator in the recent period, showing that the same national minimum wage may have different economic intensities across federative units.

Calculating the Kaitz index for Brazil is particularly relevant not only because of its intrinsic value as a measure for monitoring the potential distortions associated with the minimum wage in the labor market, but also because it is widely used internationally to assess wage compression. We therefore compare the relative importance of the minimum wage across countries. This exercise shows that Brazil's position in the international ranking varies substantially depending on whether the mean or the median wage is used as the denominator of the Kaitz index. This result reflects the high degree of earnings inequality in the Brazilian labor market, particularly at the top of the distribution, which is why we adopt the median as our main reference. From this perspective, Brazil has the sixth-highest Kaitz index among the countries analyzed, suggesting a relatively high degree of wage compression, with potentially important implications for public policy in light of the findings from the literature review.

The domestic analysis of the Kaitz index reveals substantial differences in the economic intensity of the Brazilian minimum wage across federative units. Because the wage floor is set nationally, its proximity to local wage structures varies considerably across the country. In states in the North and Northeast, the minimum wage is very close to the median wage, reaching 100% of this benchmark in Alagoas and Maranhão. At the other extreme, the Federal District, Santa Catarina, and São Paulo have significantly lower index values, indicating that the same legal wage floor places less pressure on local wage structures. This territorial heterogeneity is central to the Brazilian debate, as it suggests that a uniform national policy may have very different economic implications across regions. The minimum wage may be more binding, and therefore pose greater risks of adverse effects on employment, formalization, and productivity, precisely in labor markets with lower incomes and less capacity to absorb higher labor costs.

This exercise illustrates the importance of the Kaitz index as a tool for monitoring the minimum wage both across regions and over time. By expressing the absolute value of the wage floor relative to the local wage structure, the index helps identify where and when the minimum wage becomes more or less binding—information that neither its nominal nor its real value can directly reveal. The historical evolution of the indicator, for example, shows that the substantial real increases in

¹The median wage corresponds to the earnings of the worker at the center of the wage distribution, such that half of workers earn no more than this amount and half earn at least this amount.



the minimum wage during the 1990s and 2000s not only raised workers' purchasing power but also brought the wage floor significantly closer to typical earnings throughout the country, increasing its economic intensity in a way that would not be apparent from an analysis restricted to its absolute value. Similarly, the territorial comparison shows that future increases in the minimum wage do not have the same economic significance in São Paulo and Maranhão, even though the nominal amount is identical. In this sense, the Kaitz index provides a valuable analytical tool for assessing the potential effects of minimum wage policy, informing debates on future adjustments, and guiding the design of public policies that account for the structural heterogeneity of the Brazilian labor market.

The report is organized as follows. Chapter 2 reviews the literature on the effects of the minimum wage, distinguishing between international and Brazilian evidence. Chapter 3 describes the historical evolution of the minimum wage in Brazil, emphasizing the transition from regional wage floors to a national minimum wage, real increases following the Real Plan, and recent adjustment rules. Chapter 4 presents the data sources and procedures used to construct the Kaitz index. Chapter 5 discusses the results, placing Brazil in an international perspective and examining the territorial heterogeneity of the relative minimum wage across federative units. Finally, Chapter 6 presents the main conclusions and implications for the debate on minimum wage policy in Brazil.



2. LITERATURE REVIEW

The literature on the minimum wage has undergone a significant shift in recent decades. While the traditional approach emphasized the potential negative effects of increases in the wage floor on employment and hours worked, more recent empirical evidence suggests that these effects tend to be, in many contexts, smaller than predicted by simple competitive models. As summarized by Dube (2019b) and Dube and Lindner (2024), international experience, especially in developed countries, indicates that moderate increases in the minimum wage significantly raise the earnings of low-wage workers while producing relatively modest effects on employment. This evidence is consistent with the presence of labor market frictions, firms' wage-setting power, turnover costs, and other imperfections that mean low-wage labor markets do not necessarily operate as perfectly competitive markets.

Moreover, recent literature shows that the effects of the minimum wage cannot be evaluated solely through the employment-wage relationship. As discussed by Dube and Lindner (2024), an important advance in the literature over the twenty-first century has been the examination of how firms, workers, and markets adjust through multiple channels: prices, profits, productivity, turnover, workforce composition, firm entry and exit, the use of capital and other inputs, as well as changes in the wage distribution and inequality. This broader perspective is important because small employment effects do not imply an absence of adjustment, but rather that some of the costs and benefits of the minimum wage may be absorbed through other margins. In particular, recent evidence highlights the importance of pass-through to prices and potential productivity gains, while reinforcing the role of the minimum wage as an instrument of wage compression and inequality reduction at the bottom of the distribution.

At the same time, the literature also shows that the impacts of the minimum wage depend strongly on the institutional and economic context in which the policy is implemented. The magnitude of the increase, the extent to which the minimum wage binds across the wage distribution, the sectoral composition of affected workers, firms' ability to pass costs on to prices, local productivity, the level of informality, and the availability of alternative adjustment margins—such as profits, turnover, training, reallocation across firms, and productivity—are central to interpreting its effects. Thus, the relevant question is not only whether the minimum wage affects wages or employment, but under what conditions it raises earnings and reduces inequality at limited costs, and under what circumstances it may generate adverse effects. This perspective guides the following review, which organizes Brazilian and international evidence into five main dimensions: inequality and poverty, the informal labor market, employment, productivity, and fiscal effects.



2.1 Effects on Poverty and Inequality

A. International Evidence. The international literature on the minimum wage, inequality, and poverty highlights that the distributional effects of the policy depend on two main channels. The first is the direct effect on the wages of workers at the bottom of the distribution, which tends to reduce wage inequality when the legal wage floor raises the earnings of lower-paid workers. The second is the indirect effect on employment, prices, and household income, which may attenuate or even offset some of the distributional gains if increases in the minimum wage reduce employment opportunities for low-income groups.

One of the classic references in this debate is Lee (1999), who analyzes the experience of the United States during the 1980s. The author shows that the decline in the real value of the federal minimum wage contributed to rising inequality at the bottom of the wage distribution. The central interpretation is that when the minimum wage loses purchasing power, its ability to support the lowest wages diminishes, allowing greater dispersion between low-wage workers and the rest of the distribution. This evidence helped establish the view that the minimum wage can serve as an instrument for reducing wage inequality, particularly in the lower tail of the distribution.

Subsequently, Autor et al. (2016) reassess this evidence over a longer period in the United States. The authors confirm that the minimum wage contributes to reducing inequality at the bottom of the wage distribution but argue that the magnitude of this effect is smaller than suggested by earlier studies. This contribution is important because it qualifies the role of the minimum wage: it helps explain changes at the bottom of the distribution but should not be regarded as the sole explanation for broader shifts in wage inequality, which also reflect factors such as technological change, the educational composition of the workforce, labor market institutions, and relative demand for skills.

Evidence from developing countries reinforces this interpretation, particularly in contexts characterized by higher informality and substantial changes in the real value of the wage floor. Bosch and Manacorda (2010) analyze urban Mexico between the late 1980s and the early 2000s, a period marked by a sharp decline in the real minimum wage. The authors show that this deterioration contributed substantially to the rise in earnings inequality and accounts for virtually all of the increase in inequality at the bottom of the distribution. This finding is important because it shows that the minimum wage matters not only when it increases but also when it loses real value: its erosion weakens support for the lowest wages and allows greater dispersion at the bottom of the wage distribution.

When the analysis shifts from individual wage inequality to poverty and the distribution of household income, the results become more ambiguous. Neumark and Wascher (2002) argue that the minimum wage is an imperfect instrument for reducing poverty because not all workers who benefit belong to poor households, and some of the costs may fall on low-income workers through reduced employment. The authors find evidence that increases in the minimum wage raise both the likelihood of some poor households escaping poverty and the likelihood of previously nonpoor households falling into poverty, suggesting potentially modest or heterogeneous net effects.

In contrast, more recent evidence points to more favorable distributional effects. Dube (2019a) examines the distribution of household income in the United States and finds robust evidence that minimum wage increases raise incomes among households at the bottom of the distribution and reduce poverty among nonelderly individuals. The study is particularly relevant because it goes



beyond individual wages to examine household income directly, a measure more closely related to poverty. Its findings suggest that, in contexts where negative employment effects are limited, the minimum wage can serve as an effective redistributive instrument.

In summary, the international literature indicates that the minimum wage tends to reduce wage inequality at the bottom of the distribution, but its effects on poverty depend on the composition of beneficiary households, the magnitude of employment effects, informality, the ability to pass on costs, and interactions with other redistributive policies. Thus, the minimum wage can be an important tool for wage compression and poverty reduction, but its effectiveness varies according to institutional arrangements and labor market characteristics.

B. Brazilian Evidence. Brazil occupies a prominent position in the literature because it combines a national minimum wage with substantial regional heterogeneity, widespread informality, and a strong relationship between the legal wage floor and other sources of income. Moreover, the minimum wage in Brazil serves not only as a wage floor for formal employment contracts but also as a reference for social security and social assistance benefits and earnings in the informal sector. This characteristic broadens its potential distributional effects but also makes its evaluation more complex.

An important early reference is Neri et al. (2001), who discuss the so-called “lighthouse effect” of the minimum wage. The idea is that the minimum wage can serve as a reference for determining earnings even outside the formal sector, influencing informal workers, self-employed workers, and other groups not directly covered by labor legislation. This mechanism is particularly relevant in developing economies, where informality is high and enforcement of labor legislation is imperfect. In this context, the minimum wage can affect poverty not only through formal employment but also through its role as a social and economic reference for lower earnings.

Foguel et al. (2015) discuss the minimum wage as an instrument for poverty reduction in Brazil and conclude that its effects tend to be positive, although they depend on labor market responses. The evidence reviewed by the authors suggests that increases in the minimum wage have contributed to alleviating poverty, mainly by raising the earnings of low-paid workers. Importantly, this effect is not limited to the formal sector: a substantial share of poverty reduction occurs through the earnings of informal workers, whose pay also responds to the wage floor. Nevertheless, the authors emphasize that this conclusion should be interpreted with caution, as the available studies do not fully account for potential negative employment effects.

The empirical literature on Brazil also highlights that the effects of the minimum wage can extend throughout the wage distribution. Lemos (2009) shows that, in developing countries such as Brazil, analyses of the minimum wage must consider both the formal and informal sectors, since the wage floor can affect a relatively large share of workers. This evidence reinforces the idea that the effects of the Brazilian minimum wage extend beyond workers directly paid at the legal minimum. Similarly, Afonso et al. (2011) contribute to the discussion by examining the minimum wage as an instrument for combating extreme poverty in the period following the Real Plan. The study shows that real increases in the minimum wage played an important role in reducing extreme poverty, but raises the question of whether its distributional effects might eventually be exhausted or become less effective at the margin. These findings are consistent with those of Foguel et al. (2015), who also find that the minimum wage can reduce poverty and raise earnings at the bottom of the distribution.

More recently, Engbom and Moser (2022) provide one of the most comprehensive analyses of the



minimum wage and inequality in Brazil. Combining administrative data and household surveys with a labor market equilibrium model, the authors show that the substantial real increase in the Brazilian minimum wage generated significant wage compression and spillover effects further up the earnings distribution. According to the study, the minimum wage accounts for a substantial share of the decline in earnings inequality observed in Brazil over recent decades. A central finding is that the effects of the minimum wage are not restricted to workers directly affected by the wage floor but spread through mechanisms involving competition among firms, worker reallocation, and wage adjustments for workers earning close to the minimum wage.

A recent synthesis of the literature is provided by Firpo and Portella (2025), who review the evidence on the decline in wage inequality in Brazil between 1995 and 2015. The authors emphasize that the reduction in Brazilian wage inequality resulted from the interaction of multiple factors, including changes in the educational composition of the workforce, declining returns to experience, narrowing wage differentials by race and gender, compression of firm wage premiums, and institutional changes. Within this set of mechanisms, the minimum wage plays a central role. According to the review, real increases in the wage floor account for nearly half of the decline in inequality in the formal sector, although their effects depended on favorable macroeconomic conditions, productivity growth, rising educational attainment, and increased formalization, which helped limit potential adverse effects on employment and informality. This evidence reinforces the importance of evaluating the minimum wage not only in terms of its real value but also through its ability to compress the wage distribution and its interaction with structural characteristics of the Brazilian labor market.

The effects on poverty and household income are directly examined by Sotomayor (2021), who exploits regional variation in the intensity of Brazil's national minimum wage. The author finds that minimum wage increases reduce poverty and inequality in the short run, particularly in the months immediately following adjustments. However, these effects tend to weaken over time, which is consistent with potential labor market adjustments, including job losses or reduced earnings among poorer households. This finding suggests that the minimum wage can be effective as a short-term redistributive instrument, but its lasting effects depend on the responses of firms, workers, and local labor markets.

In contrast, Neumark et al. (2006) offer a more cautious assessment of the effects of the Brazilian minimum wage on the distribution of household income. The authors emphasize that the policy may not be well targeted toward the poorest households, since many minimum wage earners live in households that are not at the bottom of the per capita income distribution. Moreover, potential negative employment effects may limit the policy's net impact on poverty. This evidence highlights an important distinction: the minimum wage can reduce inequality in labor earnings without necessarily producing proportional reductions in household poverty.

Taken together, the literature on Brazil suggests that the minimum wage played an important role in reducing wage and earnings inequality, particularly during periods of substantial real increases in the wage floor. The evidence is especially strong regarding wage compression and spillover effects at the bottom and in the lower-middle part of the distribution. The effects on poverty, although generally positive in the short run, depend more heavily on household composition, the employment status of beneficiaries, informality, and potential employment adjustments. Thus, in Brazil, the minimum wage should be understood as an important distributional policy, but not as a substitute for income transfer programs more directly targeted toward poor households.



2.2 Effects on the informal labor market

A. International Evidence. The relationship between the minimum wage and formalization is particularly relevant in developing economies, where a substantial share of workers are employed outside formal employment arrangements. In simple labor market models, an increase in the minimum wage could raise the cost of formal employment and encourage firms or workers to shift toward informal employment arrangements, especially when enforcement is limited. However, the empirical literature shows that this relationship is more complex. The minimum wage can affect not only the formal sector directly covered by legislation but also earnings in the informal sector, either through wage-setting reference mechanisms or through competition among firms and workers.

An important reference for developing countries is Gindling and Terrell (2005), who analyze Costa Rica. The authors show that the minimum wage affects wages in both the formal and informal sectors. This finding suggests that even when labor legislation is not fully enforced, the legal wage floor can serve as a reference for wage determination outside the formal sector. Rather than a strict separation between formal and informal labor markets, the evidence points to a partial transmission of minimum wage policy to segments not directly covered by legislation or characterized by lower levels of compliance with labor regulations.

In a subsequent study, Gindling and Terrell (2009) examine Honduras, a country with multiple minimum wages and low compliance with labor legislation. The authors show that the effects of the minimum wage vary according to sector, firm size, and the degree of legal coverage. This evidence is important because it indicates that the effects on formalization depend not only on the level of the minimum wage but also on institutional enforcement capacity and the productive structure. In economies characterized by small firms, low productivity, and limited enforcement, minimum wage increases may have more heterogeneous effects and potentially strengthen incentives for informality among firms and workers less able to absorb higher labor costs.

Evidence from Colombia also points to heterogeneous effects across sectors and helps qualify the relationship between the minimum wage and informality. Pérez Pérez (2020) exploits an unexpected shock to the real minimum wage and shows that the increase raised wages among workers earning close to the minimum in both the formal and informal sectors, although the effects were stronger among formal workers. The study also finds evidence of a reduction in informal employment. This result should not necessarily be interpreted as evidence that the minimum wage promotes formalization. One possible interpretation is that, in contexts where the minimum wage also serves as a reference for informal wages, increases in the wage floor may raise the cost of informal labor and reduce demand for this type of employment arrangement. Thus, informality is not merely an adjustment margin in response to higher costs in the formal sector, as it can also be directly affected by the minimum wage when the legal wage floor influences wage determination outside the formal sector.

From a theoretical perspective, Meghir et al. (2015) argue that informality should be understood as the outcome of interactions among firm productivity, labor market frictions, and formalization costs, based on a model estimated for Brazil using data from the Monthly Employment Survey (PME). Although the study does not focus exclusively on the minimum wage, its contribution is important for interpreting the effects of this policy. In markets with heterogeneous firms, increases in formal sector costs can alter the composition of firms and jobs, affecting decisions to operate formally or informally. Thus, the effects of the minimum wage on formalization depend on the distribution of



productivity, enforcement, registration costs, and firms' ability to pass costs on to prices or absorb them through profit margins.

In summary, the international literature suggests that the minimum wage can have ambiguous effects on formalization. On the one hand, minimum wage increases may raise the relative cost of formal employment and encourage a shift toward informality in contexts of weak enforcement and low productivity. On the other hand, the evidence shows that the minimum wage frequently affects informal wages as well, serving as a reference for the labor market as a whole. Therefore, the relationship between the minimum wage and formalization depends strongly on institutional arrangements, the intensity of labor law enforcement, preexisting levels of informality, and each country's productive structure.

B. Brazilian Evidence. Brazil is a particularly relevant case for analyzing the relationship between the minimum wage and formalization. The country combines a national minimum wage, substantial regional heterogeneity, high informality, and a strong role for the minimum wage as a reference for labor earnings and social benefits. Moreover, the distinction between formal and informal employment is central to the functioning of the Brazilian labor market, as formal hiring costs, labor law enforcement, and firm productivity vary substantially across regions and sectors.

One of the earliest relevant contributions for Brazil is Fajnzylber (2001), who examines the effects of the minimum wage across the earnings distribution using data from the Monthly Employment Survey (PME). The study considers formal employees, informal employees, and self-employed workers, showing that the effects of the minimum wage are not restricted to the formal sector. This evidence is important because it indicates that the legal wage floor can influence the earnings structure across different employment categories, including segments in which labor legislation does not directly apply.

The idea that the minimum wage affects the informal sector also appears in Neri et al. (2001), who discuss the so-called "lighthouse effect". According to this interpretation, the minimum wage serves as a social and economic reference for earnings determination, including among informal workers. The concentration of informal workers earning exactly one minimum wage suggests that the legal wage floor may influence wage negotiations outside formal employment relationships. This mechanism is particularly important in Brazil because it extends the potential reach of minimum wage policy beyond workers formally covered by labor legislation.

The studies by Lemos (2004) and Lemos (2009) reinforce this interpretation. Using Brazilian data, these studies show that the minimum wage affects wages and employment in both the formal and informal sectors. The author emphasizes that evidence from developed countries is insufficient to understand the Brazilian case because, in developing economies, the minimum wage affects a larger share of workers and operates in an environment characterized by weaker enforcement and greater informality. Thus, the effects of the minimum wage on formalization cannot be evaluated solely from the perspective of formal employment directly covered by legislation.

Recent evidence advances this discussion by examining more directly the interaction between the minimum wage and informality. Derenoncourt et al. (2025) study the substantial real increase in the Brazilian minimum wage between 2000 and 2009, a period in which informality remained high. The authors find almost complete pass-through of minimum wage increases to informal workers employed by formal firms, a group that accounts for a substantial share of informal workers. They

also find limited reallocation from formal to informal employment. This result is important because it suggests that minimum wage increases can raise earnings even among informal workers without necessarily inducing a substantial shift from formal to informal jobs.

Haanwinckel and Soares (2021) develop and estimate a model of the Brazilian labor market featuring worker and firm heterogeneity, search frictions, endogenous formalization decisions, and labor market regulation, including the minimum wage. The study starts from an apparent paradox in the Brazilian experience: between 2003 and 2012, informality declined substantially while the real minimum wage increased significantly. The authors show that this pattern cannot be explained by the minimum wage alone but rather by the interaction between regulation, workforce composition, and productivity. In particular, their counterfactual simulations indicate that, holding workforce education and productivity constant, the minimum wage increase observed during the 2000s would have put upward pressure on informality. The observed decline in informality can only be rationalized within the model when improvements in educational attainment, productivity gains, and their equilibrium effects on wages, unemployment, and formalization decisions are considered simultaneously. Thus, the study reinforces that the effects of the minimum wage on informality in Brazil should not be interpreted in isolation but in conjunction with structural changes in labor supply and productivity.

Recent evidence from Parente et al. (2025) reinforces the idea that a large informal sector can substantially alter the distributional effects of the minimum wage in Brazil. Combining empirical evidence with a quantitative model featuring heterogeneous firms that choose whether to operate formally or informally, the authors show that real increases in the minimum wage during the 2000s reduced inequality within the formal sector but increased inequality in the informal sector and encouraged the reallocation of workers toward informal employment. In states where the minimum wage was more binding, the policy was associated with a larger decline in formal-sector inequality but also with higher informality and greater aggregate inequality. In their quantitative simulations, holding other factors constant, the minimum wage increase would have raised aggregate earnings inequality by 4.1%, despite reducing inequality within the formal sector. These results suggest that, in economies with high informality, the effects of the minimum wage on inequality cannot be assessed solely through wage compression among formal workers, as they also depend on adjustment margins between formal and informal employment.

Taken together, the Brazilian literature indicates that the effects of the minimum wage extend beyond the formal sector. The existence of the “lighthouse effect”, pass-through to informal workers, and effects across the earnings distribution show that the legal wage floor serves as a broad reference in the Brazilian labor market. However, the effects on formalization in the strict sense are ambiguous. Minimum wage increases may raise formal hiring costs and, in some contexts, encourage informal employment arrangements; however, they may also increase earnings in the informal sector without generating substantial reallocation between sectors. Thus, in Brazil, the relationship between the minimum wage and formalization should be understood as the outcome of interactions among the level of the wage floor, labor law enforcement, firm productivity, regional labor market structures, and the role of the minimum wage as a reference for formal and informal earnings.



2.3 Effects on Employment

A. International Evidence. The literature on the effects of the minimum wage on employment is one of the most extensive and debated areas in labor economics. In simple competitive models, an increase in the minimum wage above the equilibrium wage tends to reduce labor demand, especially among low-productivity or low-skilled workers. However, models featuring monopsony power, search frictions, turnover costs, and information asymmetries show that moderate increases in the minimum wage can raise wages without necessarily reducing employment. In this case, the net effect depends on the degree of employer market power, the magnitude of the increase, policy coverage, the ability to pass costs on to prices, and alternative adjustment margins such as hours worked, turnover, profits, and productivity.

The seminal study by Card and Krueger (1994) marked an important turning point in this debate. The authors examine the 1992 minimum wage increase in New Jersey, comparing fast-food restaurants in that state with similar restaurants in Pennsylvania, where the minimum wage did not increase. Contrary to the simplest prediction of the competitive model, the study finds no evidence of a decline in employment following the increase in the wage floor. This finding had a major impact on the literature, suggesting that low-wage labor markets may exhibit sufficient frictions and employer market power to allow wage increases without substantial job losses.

The evidence presented by Card and Krueger (1994), however, was subsequently challenged by Neumark and Wascher (2000). Using administrative payroll data, the authors reassess the same episode and find negative employment effects. This debate became central to the literature, not only because of the conflicting findings but also because it highlighted the importance of data quality, control group selection, and employment measurement. Subsequently, the literature increasingly emphasized more rigorous empirical designs, exploiting institutional variation across comparable locations.

An important contribution in this direction is Dube et al. (2010), who compare contiguous counties on opposite sides of state borders in the United States. This strategy aims to better control for local labor market trends by comparing geographically close areas subject to different minimum wage policies. The authors find positive wage effects but no substantial adverse employment effects in restaurants and other low-wage sectors. Recent evidence from Dube (2026) reinforces this interpretation in a setting involving a particularly large increase in the wage floor. Examining the increase in the minimum wage to US\$20 in California's fast-food sector, the author finds substantial wage gains, small or statistically insignificant employment effects, and a marked reduction in worker separation rates. Taken together, these findings suggest that when empirical comparisons account for comparable local labor markets and prior employment trends, estimated negative employment effects tend to be smaller, while other adjustment margins, such as reduced turnover, may play an important role.

More recently, Cengiz et al. (2019) extend this analysis by examining 138 minimum wage increases in the United States between 1979 and 2016. The authors analyze changes in the number of jobs across wage brackets and show that minimum wage increases reduce the number of jobs paying below the new wage floor, as expected, while increasing the number of jobs in wage brackets just above the minimum. The net effect on low-wage employment is small or close to zero. This study is particularly important because it shifts the focus from aggregate employment to the distribution of jobs across wage brackets, allowing the reallocation of jobs around the new wage floor to be



examined directly.

A recent contribution by Neumark and Rodriguez-Lopez (2026) revisits this interpretation using modern difference-in-differences and event-study designs employed in the recent minimum wage literature. The authors reexamine evidence associated with Cengiz et al. (2019) and Dube and Lindner (2024), arguing that findings of no employment effects are sensitive to specification choices, event definitions, the construction of the dependent variable, sample selection, and weighting. In particular, they show that replacing employment-to-population ratios with variable denominators with measures based on a fixed population or log employment, and considering effects throughout the wage distribution, yields negative and statistically significant employment effects of minimum wage increases in the United States, particularly in the restaurant sector. This evidence reinforces that the recent literature should not be interpreted as establishing a definitive consensus on the absence of employment effects, but rather as a field in which findings remain sensitive to empirical design and measurement choices.

Despite the predominance of recent evidence pointing to small employment effects, the literature also shows that impacts may be more negative in specific contexts. Jardim et al. (2022), examining the minimum wage increase in Seattle, find evidence of reductions in hours worked and low-wage employment under certain specifications. This finding suggests that the effects of the minimum wage may depend on the initial level of the wage floor, the magnitude and speed of the increase, local economic conditions, and firms' ability to adjust along margins other than employment.

In summary, the international literature indicates that there is no universal employment elasticity with respect to the minimum wage. Recent evidence suggests that moderate increases in the wage floor tend to raise wages with small or negligible employment effects in many contexts, particularly when labor markets exhibit frictions and some degree of employer market power. However, very large or rapid increases, or increases affecting low-productivity sectors, may generate more substantial negative effects, including through reduced hours worked or lower job creation. Thus, employment effects depend strongly on the institutional context, the relative level of the minimum wage, and the local productive structure.

B. Brazilian Evidence. The Brazilian case presents characteristics that make the analysis of the employment effects of the minimum wage particularly relevant. Unlike federal countries where regional minimum wages are widely used, Brazil has a national minimum wage that applies to highly heterogeneous state labor markets. Moreover, the country combines high informality, substantial regional differences in productivity, and a strong incidence of the minimum wage at the bottom of the wage distribution. These characteristics mean that the same national wage floor may be less binding in some states and considerably more binding in others.

For Brazil, important contributions are provided by Lemos (2004) and Lemos (2009), who examine the effects of the minimum wage in a labor market characterized by high informality. Using monthly data for Brazil between 1982 and 2000, Lemos (2004) estimates the effects of the minimum wage on wages and employment in the formal and informal sectors, finding positive wage effects and negative employment effects in both sectors, although the latter are relatively small in magnitude. In a subsequent study, Lemos (2009) reinforces this interpretation by showing that the minimum wage compresses the Brazilian wage distribution, again with small and generally negative employment effects. Taken together, these studies are important because they show that the effects of the minimum wage in Brazil are not restricted to the formal sector directly covered by labor legislation.



High informality, weaker labor law enforcement, and the proximity of the legal wage floor to the earnings of a substantial share of workers mean that the minimum wage also affects wages and informal employment. Thus, the Brazilian experience suggests that the effects of the wage floor in developing economies should be analyzed by considering both its distributional impacts and potential spillover effects between formal and informal employment.

The Brazilian literature also points to negative but modest employment effects. Ulyssea (2006) reviews the empirical literature on Brazil and concludes that there is a consensus that the minimum wage reduces wage inequality among workers who remain employed. Regarding employment, the author argues that estimated effects tend to be negative but small in magnitude, with potentially stronger impacts in the informal sector. This conclusion is important because it qualifies the debate: the minimum wage appears to have substantial distributional effects, but its employment costs, although identified in some studies, do not appear to be particularly large in the aggregate. It is worth noting that, since the study was published in 2006, its analysis does not incorporate much of the real increase in the minimum wage observed in Brazil over the following two decades.

More recent studies better explore regional heterogeneity in the incidence of the minimum wage. Saltiel and Urzúa (2022) examine the substantial real increase in the Brazilian minimum wage during the 2000s using administrative data and geographic variation in exposure to the wage floor. The authors find limited aggregate effects on formal employment but identify larger negative employment elasticities for groups and sectors more exposed to the minimum wage. This finding is particularly relevant for Brazil because it shows that average effects may conceal heterogeneous impacts across workers, sectors, and locations.

The assessment by Foguel et al. (2015) helps place the employment effects of the minimum wage within a broader public policy framework. The authors examine its impacts on the labor market, poverty, and the public budget in Brazil and find that minimum wage increases tend to reduce formal employment in the long run while increasing informal employment, suggesting a margin of reallocation between sectors. Although the estimated elasticities are small, this finding indicates that the policy may generate substantial hiring costs in the sector covered by labor legislation, particularly in lower-productivity regions and segments. At the same time, the study shows that the minimum wage can contribute to poverty reduction by increasing the earnings of low-paid workers, including those in the informal sector. Thus, the study emphasizes the potentially conflicting effects of the policy: its distributional gains must be assessed alongside possible changes in employment composition and fiscal costs, which are particularly important in Brazil because social security and social assistance benefits are indexed to the minimum wage.

Finally, Engbom and Moser (2022) provide a more recent contribution by combining administrative and household survey data with a labor market equilibrium model. Although the study primarily focuses on earnings inequality, the authors also quantify the effects of real minimum wage increases on employment and aggregate output. Its central contribution to this section is to show that the minimum wage can generate substantial wage compression and spillover effects across the earnings distribution, while its employment effects depend on the responses of firms and workers in general equilibrium.

Haanwinckel and Soares (2021) also contribute to the interpretation of the employment effects of the minimum wage by showing that these effects depend on its interaction with informality, workforce composition, and productivity. The study begins with the observation that, between 2003 and 2012, Brazil experienced a substantial real increase in the minimum wage alongside significant

declines in informality and unemployment. In their counterfactual simulations, the authors show that the minimum wage increase, considered in isolation, would tend to increase informality and unemployment. However, this effect was offset by changes in workforce composition, particularly rising educational attainment, and productivity gains. Thus, the study suggests that the employment effects of the minimum wage cannot be evaluated separately from the structural conditions of the labor market.

Taken together, the Brazilian literature suggests that the employment effects of the minimum wage are, on average, modest but not necessarily zero. The findings point to small negative effects across several specifications, with greater sensitivity among workers, sectors, and regions more exposed to the wage floor. This heterogeneity is fundamental to understanding the Brazilian case: because the minimum wage is set nationally, its economic intensity varies according to local wage structures. Therefore, increases in the wage floor may have important distributional effects, but their employment impacts tend to depend on regional productivity, informality, sectoral composition, and the degree of exposure of each local labor market to the minimum wage.

2.4 Effects on Productivity

A. International Evidence. The relationship between the minimum wage and productivity has received increasing attention in the economic literature. Traditionally, studies on the minimum wage have focused on its effects on employment, wages, and inequality. However, more recent evidence shows that firms can respond to increases in the wage floor by adjusting margins beyond employment, such as internal organization, worker effort, training, turnover, workforce composition, prices, profits, and the reallocation of workers across firms. Thus, the effects of the minimum wage on productivity can operate both through mechanisms within firms and through changes in the allocation of workers across establishments with different productivity levels.

An important early contribution is Riley and Rosazza Bondibene (2017), who examine the introduction of the National Minimum Wage in the United Kingdom and its subsequent increases. The authors find evidence that firms more exposed to the minimum wage experienced higher labor costs but also achieved gains in labor productivity and total factor productivity (TFP). These findings are consistent with mechanisms involving organizational improvements, increased worker effort, reduced turnover, and greater efficiency in the use of labor. The central interpretation is that the minimum wage can act as a cost shock that induces firms to reorganize production processes and make more efficient use of their workforce.

The literature also highlights the reallocation channel across firms. Dustmann et al. (2022) study the introduction of the national minimum wage in Germany and show that the policy raised wages without reducing aggregate employment. At the same time, low-wage workers were reallocated from smaller, less productive, and lower-paying establishments to larger, more productive, and higher-paying establishments. This finding is important because it suggests that the minimum wage can improve labor allocation in the economy by shifting workers toward more productive firms and reducing employment in low-wage, low-productivity jobs.

Subsequent evidence from Germany refines this interpretation. Hälbig et al. (2024) examine the effects of the minimum wage on productivity and reallocation using linked administrative firm data. The authors find persistent firm-level productivity gains and an increase in aggregate productivity in



manufacturing. However, rather than supporting an explanation based solely on reallocation across firms, their findings suggest that a substantial share of productivity gains stems from improvements within firms themselves, rather than exclusively from the exit of less productive firms or the reallocation of workers toward more productive firms. This evidence reinforces the idea that productivity can respond endogenously to changes in labor costs.

Another important dimension is individual worker productivity. Coviello et al. (2022) examine how minimum wage increases affect the productivity of existing employees and find evidence of higher individual productivity following increases in the wage floor. Similarly, Ku (2020) examines piece-rate workers and finds evidence consistent with increased effort following minimum wage adjustments. These studies are consistent with efficiency wage theories, according to which higher wages may increase motivation, reduce absenteeism and turnover, and improve worker performance.

On the other hand, the literature also shows that productivity gains are not automatic. Draca et al. (2011), examining the introduction of the minimum wage in the United Kingdom, find that the policy raised wages and reduced profitability among the most affected firms, without strong evidence of productivity gains sufficient to fully offset the increase in costs. This finding is important because it shows that firms can adjust along different margins: in some contexts, additional costs are absorbed through lower profits; in others, through prices, production reorganization, reduced turnover, or efficiency gains.

Taken together, the international literature suggests that minimum wage increases can affect productivity through at least two channels. The first is the within-firm channel, whereby higher labor costs induce reorganization, greater worker effort, training, or task substitution. The second is the reallocation channel, whereby workers move from less productive to more productive firms. The net effect depends on the magnitude of the increase, firms' initial productivity, market structure, managerial capacity, and the degree of labor law enforcement.

B. Brazilian Evidence. In Brazil, the relationship between the minimum wage and productivity must be understood in light of three central characteristics of the labor market: the existence of a national minimum wage, substantial regional and sectoral productivity heterogeneity, and widespread informality. Because the same wage floor applies to very different local labor markets, its economic intensity varies considerably across regions and sectors. In areas with lower productivity and lower median wages, the minimum wage tends to be more binding, potentially generating stronger effects on costs, firm composition, informality, and worker allocation.

The main recent reference for Brazil is Engbom and Moser (2022). Although the study focuses on earnings inequality, its contribution is directly relevant to the discussion of productivity. The authors combine administrative data and household surveys with a labor market equilibrium model featuring heterogeneous firms. The study shows that the substantial real increase in the Brazilian minimum wage produced wage compression not only among workers directly paid at the wage floor but also further up the earnings distribution. This occurred because the minimum wage raised earnings at the bottom of the distribution and generated spillover effects for workers earning above, but still close to, the minimum wage, narrowing wage differentials between workers and firms. At the same time, the policy induced the reallocation of workers from less productive to more productive employers, helping offset the effects of a modest reduction in employment on aggregate output.

This mechanism is particularly important for Brazil because it suggests that the minimum wage



can affect not only individual earnings but also the allocation of workers across firms. In a market characterized by substantial productivity heterogeneity, more productive firms tend to have a greater capacity to absorb increases in labor costs, whether through profit margins, efficiency gains, or greater ability to retain workers. Less productive firms, by contrast, may respond by reducing hiring, losing workers, or scaling back operations. As a result, minimum wage increases may induce the reallocation of employment toward more productive employers. In this sense, the policy acts both as an instrument of wage compression and as a force reshaping the productive structure by changing the distribution of workers across firms with different productivity levels.

The literature on firms and inequality in Brazil reinforces the importance of this channel. Alvarez et al. (2018) show that between-firm differences played a central role in the decline in earnings inequality in Brazil between 1996 and 2012. Although the study does not directly examine the minimum wage as its main variable, it demonstrates that firm heterogeneity is fundamental to understanding Brazilian wage dynamics. This evidence is consistent with the interpretation of Engbom and Moser (2022), in which the minimum wage affects the wage distribution partly by compressing between-firm wage differentials and changing the allocation of workers across firms.

More recent studies have examined more directly how the minimum wage affects firm dynamics in Brazil. Luduvic et al. (2024) analyze the impact of the minimum wage on the life cycle of Brazilian firms. The study argues that minimum wage increases may reduce the growth of young firms, particularly those still in the early stages of developing productive capabilities, while also weakening incentives for innovation and expansion throughout the firm life cycle. This evidence suggests a potential trade-off: although the minimum wage may raise earnings and encourage reallocation toward older, more established firms, it may also constrain the expansion of young firms with growth potential, affecting business dynamism.

The evidence from Saltiel and Urzúa (2022) also contributes to this discussion by exploiting heterogeneous exposure to the minimum wage across firms and local labor markets in Brazil. Although the study focuses on formal employment, its findings are relevant to productivity because they show that minimum wage effects vary according to the degree of exposure of sectors and localities to the wage floor. This heterogeneity is consistent with the idea that more productive firms and sectors with greater capacity to absorb costs may respond differently from low-productivity firms operating with narrower margins.

Finally, international evidence from developing countries helps interpret the Brazilian case. Badaoui et al. (2022) show that, in economies with high informality, a substantial share of firms may have average productivity below the minimum wage. In such contexts, full compliance with the wage floor may be unfeasible for low-productivity firms, creating incentives for informality, noncompliance, or market exit. This mechanism is particularly relevant to Brazil, where informality and productivity heterogeneity mean that the minimum wage may have very different effects across regions, sectors, and types of firms.

In summary, the literature on Brazil suggests that the minimum wage can affect productivity through worker reallocation, between-firm wage differentials, and changes in firm dynamics. The strongest evidence points to a reallocation channel toward more productive employers, while recent studies also highlight potential negative effects on young firms with growth potential and on incentives for innovation. Thus, the effects of the minimum wage on productivity in Brazil depend on the interaction between the relative level of the wage floor, firm productivity, informality, sectoral structure, and employers' ability to adjust.



2.5 Fiscal Effects

A. International Evidence. The international literature on the fiscal effects of the minimum wage is smaller than the literature on employment, wages, and inequality, but it makes an important contribution to policy evaluation. The central point is that minimum wage increases can affect public budgets through different channels. On the one hand, higher wages may increase revenues from income taxes, social security contributions, and payroll contributions. On the other hand, if an increase in the wage floor reduces employment, hours worked, or firm profitability, it may lead to lower tax revenues and higher spending on unemployment insurance and other social benefits. Thus, the net fiscal effect depends on the interaction between wages, employment, profits, formality, and the design of the tax and social protection systems.

One of the most direct references on this topic is Bauer et al. (2009), who examine the fiscal effects of a minimum wage in Germany. The authors show that the policy could increase public revenues through higher income tax receipts and social security contributions. However, these gains would be more than offset by higher spending on unemployment benefits and lower corporate tax revenues. The main finding is that the minimum wage may generate negative net fiscal effects when additional tax revenues from wages are outweighed by losses associated with employment and profitability.

Another relevant fiscal channel is tax compliance. Tonin (2011) examines the interaction between the minimum wage and tax evasion in a setting where firms and workers can underreport earnings. The author shows that the introduction or increase of the minimum wage may generate a concentration of reported earnings around the wage floor and induce greater tax compliance among some workers. This mechanism may increase tax revenues but also reduce the disposable income of workers who previously received part of their earnings without reporting them. The study's contribution is to show that the minimum wage can affect not only actual earnings but also income reported to tax authorities.

The literature on the economic incidence of the minimum wage is also relevant to the fiscal debate. Harasztosi and Lindner (2019), studying a large minimum wage increase in Hungary, show that a substantial share of the costs was passed on to consumers through higher prices, while employment effects were relatively small. Although the study does not focus on public budgets, its findings are important because the distribution of costs among firms, consumers, and workers affects different tax bases. Whether costs are absorbed through prices, profits, or employment has different fiscal implications.

Similarly, Draca et al. (2011) show that the introduction of the minimum wage in the United Kingdom reduced profitability among the most affected firms without generating substantial employment effects. This finding suggests that part of the cost of the minimum wage may be borne by firm owners. From a fiscal perspective, this adjustment margin matters because lower profits may reduce corporate tax revenues, even when higher wages increase payroll contributions or workers' income tax payments.

Finally, MaCurdy (2015) discusses the minimum wage as a redistributive instrument compared with transfer and taxation policies. The author argues that the minimum wage may be less well targeted than traditional fiscal instruments because not all workers who benefit belong to poor households, and part of the cost may be passed on to consumers through higher prices. This perspective is important for fiscal analysis because it places the minimum wage within the broader set of



redistributive policies, allowing comparisons with transfers financed through public budgets.

In summary, the international literature suggests that the fiscal effects of the minimum wage are ambiguous and depend on the institutional context. When minimum wage increases raise reported wages while preserving employment, they may increase tax revenues and social security contributions. However, when they reduce employment or profits, or increase spending on social benefits, they may generate a net fiscal cost. Moreover, in economies characterized by tax evasion, informality, or income underreporting, the minimum wage may affect the tax base itself by changing the degree of tax compliance.

B. Brazilian Evidence. In Brazil, the fiscal effects of the minimum wage are particularly relevant because the national wage floor plays a role that extends beyond the labor market. In addition to serving as a reference for the earnings of formal and informal workers, it also serves as an index for a substantial share of social security and social assistance benefits. This characteristic distinguishes Brazil from many other countries, as real increases in the minimum wage are automatically transmitted to retirement benefits, pensions, social assistance benefits, and other payments linked to the wage floor, with simultaneous effects on income distribution, poverty, and the sustainability of public finances.

The fiscal relevance of the minimum wage must be understood in light of the broader institutional design of social security and social assistance. As discussed by Tafner and Giambiagi (2007), although the Brazilian social security system has undergone reforms since the 1988 Constitution, it has continued to face substantial financial imbalances, strong pressures on the public budget, and complex interactions with the labor market, informality, and social assistance policies. Giambiagi and Tafner (2024) further argue that recent pension reforms, although important, have not completed the adjustments needed to address population aging, the rigidity of mandatory expenditures, and long-term fiscal sustainability. This perspective is central to the minimum wage debate because increases in the wage floor affect not only workers' earnings but also the value of social security and social assistance benefits linked to the minimum wage, broadening their fiscal and distributional effects. Thus, evaluating minimum wage adjustments requires considering their effects on labor earnings, poverty, incentives for formalization, and the sustainability of public finances.

An important empirical reference on this topic is Foguel et al. (2015), who examine the effects of the minimum wage on the labor market, poverty, and the public budget in Brazil. The authors emphasize that the minimum wage can reduce poverty and raise earnings at the bottom of the distribution, but may also generate substantial fiscal pressures. The main fiscal channel stems from the indexation of social security and social assistance benefits to the wage floor. Thus, evaluating minimum wage policy in Brazil requires considering not only its labor market effects but also its impact on mandatory expenditures.

The relationship between the minimum wage and social security is directly examined by Neri and Giambiagi (2000). The authors analyze the role of the minimum wage as a floor for social security benefits and discuss alternatives that respect budget constraints. The study emphasizes that minimum wage adjustments have important social effects, particularly for beneficiaries receiving the minimum benefit, but also increase social security expenditures. This tension between social protection and fiscal sustainability is one of the defining features of the Brazilian debate.

The distributional dimension of this indexation also deserves attention. Because the minimum wage



serves as a reference for social security and social assistance benefits, its adjustments affect not only low-paid workers but also beneficiaries at different points in the per capita household income distribution. Using microdata from the 2021 Continuous National Household Sample Survey (PNAD Contínua), Giambiagi and Tafner (2024) show that only 9.0% of retirees and pensioners receiving one minimum wage were in the bottom three deciles of the per capita income distribution, while 32.1% were in the bottom half of the distribution. At the same time, 38.0% of these beneficiaries were in the seventh decile, and approximately 60.0% were between the seventh and tenth deciles. This pattern suggests that minimum wage increases, when transmitted to social security benefits, have broad distributional effects but are not closely targeted toward the lowest-income households.

This finding reinforces that the minimum wage can have important distributional effects but should not be regarded as a perfect substitute for more targeted redistributive instruments. In Brazil, the indexation of social security and social assistance benefits to the minimum wage broadens the social reach of the policy but also means that a substantial share of the fiscal cost associated with real increases in the wage floor benefits households that are not at the bottom of the income distribution.

The social dimension of this indexation is further highlighted by Dedecca et al. (2006). The authors examine low-income households and show the importance of social security benefits in household income. This discussion is fiscally relevant because it indicates that delinking the minimum social security benefit from the minimum wage could reduce budgetary pressures but could also affect the incomes of vulnerable households. Therefore, the fiscal debate cannot be separated from the distributional effects of the policy.

The analysis by Afonso et al. (2011) also contributes to this discussion by examining the minimum wage as an instrument for combating extreme poverty in the period following the Real Plan. The study shows that real increases in the minimum wage played an important role in reducing extreme poverty, but raises the question of whether its distributional effects might eventually be exhausted or become less effective at the margin. This perspective is relevant to fiscal policy because, if the budgetary cost of increasing the wage floor grows faster than its additional effects on poverty, more targeted policies may become more cost-effective alternatives.

More recently, Sanches (2023) examines the effects of a policy of real minimum wage increases in interaction with fiscal policy. The study suggests that different combinations of minimum wage adjustments and fiscal policy may generate different effects on economic activity. This contribution is important because minimum wage policy can affect the economy not only through public expenditure but also through aggregate demand, household consumption, and government revenue channels.

Taken together, the Brazilian academic literature shows that the minimum wage has a much broader fiscal dimension than in countries where the wage floor affects only employment contracts. In Brazil, real increases in the minimum wage raise the incomes of workers and benefit recipients but also place pressure on mandatory expenditures, particularly social security and social assistance spending. Moreover, the distribution of beneficiaries receiving payments linked to the minimum wage suggests that part of the fiscal cost of the policy benefits households outside the bottom of the income distribution. Therefore, the fiscal evaluation of the minimum wage must consider three elements: social and distributional gains, the impact on the public budget, and the availability of alternative, more targeted income transfer instruments.

Analyses of the fiscal impact of the minimum wage are not limited to the academic literature. The issue is also addressed in technical studies produced by independent institutions and the federal government, particularly because of the indexation of mandatory expenditures to the national minimum wage.

According to STN/MF (2025), each R\$1.00 increase in the minimum wage raises central government expenditures by R\$429.3 million per year, while increasing social security revenues by only R\$7.4 million. The estimated net deterioration in the primary fiscal balance would therefore be R\$422.0 million. This estimate reflects the fact that personnel expenditures, social security benefits, the Continuous Cash Benefit (Benefício de Prestação Continuada, BPC/LOAS), unemployment insurance, and the salary bonus (abono salarial) are linked to the minimum wage and accounted for 67.9% of total primary expenditure in 2024. To illustrate the magnitude of this fiscal impact, Bijos (2026) notes that this amount would be sufficient to finance the installation of water cisterns for rural households in Brazil's semiarid region, reducing the remaining gap toward universal coverage under this public policy by approximately 19.5%.

Similarly, IFI (2026) points out that this indexation mechanism, combined with growth in the number of benefits, particularly retirement and temporary disability benefits processed through Atestmed, generates persistent pressure on expenditures under the General Social Security Regime (Regime Geral de Previdência Social, RGPS), which are projected to increase from 8.1% of GDP in 2025 to 9.1% in 2030. In turn, IFI (2025) links minimum wage indexation to a set of automatic expenditure mechanisms that help explain the projected increase in primary expenditures from 18.9% of GDP in 2025 to 20.8% in 2032, contributing to growing primary deficits and an increase in General Government Gross Debt (Dívida Bruta do Governo Geral, DBGG), which is projected to exceed 100% of GDP in 2030.

The Federal Government's Civil Servants' Pension Scheme (Regime Próprio de Previdência Social, RPPS), in turn, constitutes another important source of pressure on federal mandatory expenditures, due to the aging of retirees and pensioners and the demographic maturation of the scheme. Projections by the Independent Fiscal Institution (Instituição Fiscal Independente, IFI) indicate that Constitutional Amendment No. 103/2019 slows the growth of pension expenditures but does not reverse their upward trend, only mitigating long-term fiscal pressures (IFI, 2019).

In this context, Law No. 15,077/2024, which capped real increases in the minimum wage at 2.5%, can be interpreted as an attempt to contain fiscal pressures associated with indexation. However, IFI (2026) considers this constraint insufficient, since the granting of new benefits—rather than only increases in benefit amounts—remains one of the main drivers of expenditure growth. Furthermore, IFI (2023) estimates that a policy of real minimum wage increases ranging from 0.6% to 2.5% would raise expenditures by between R\$2.9 billion and R\$12.7 billion, with a limited effect on revenues, estimated at between R\$47 million and R\$213 million. Thus, the fiscal risk associated with expenditure indexation to the minimum wage remains relevant even when real increases are limited.

This mechanism has important implications for fiscal policy design. Bijos (2026) argues that when mandatory expenditures grow automatically under a fiscal rule that limits the expansion of total spending, as in Brazil's new fiscal framework, the result tends to be a reduction in the fiscal space available for discretionary spending, which currently accounts for less than 10% of federal primary expenditures. In this sense, the debate on the minimum wage in Brazil must consider not only its effects on earnings and poverty but also its interaction with budgetary rigidity and the medium-



and long-term sustainability of public finances.



3. HISTORICAL EVOLUTION OF THE MINIMUM WAGE IN BRAZIL

The minimum wage was introduced in Brazil during the Getúlio Vargas administration by Decree-Law No. 2,162 of May 1, 1940. Initially, it had different rates across 22 regions to account for differences in price levels throughout the country, with rates determined by regional commissions. Regional differences in minimum wage rates were gradually reduced over time, until only two regions, corresponding to two groups of states, remained in 1983 (Paim & Este, 2005).

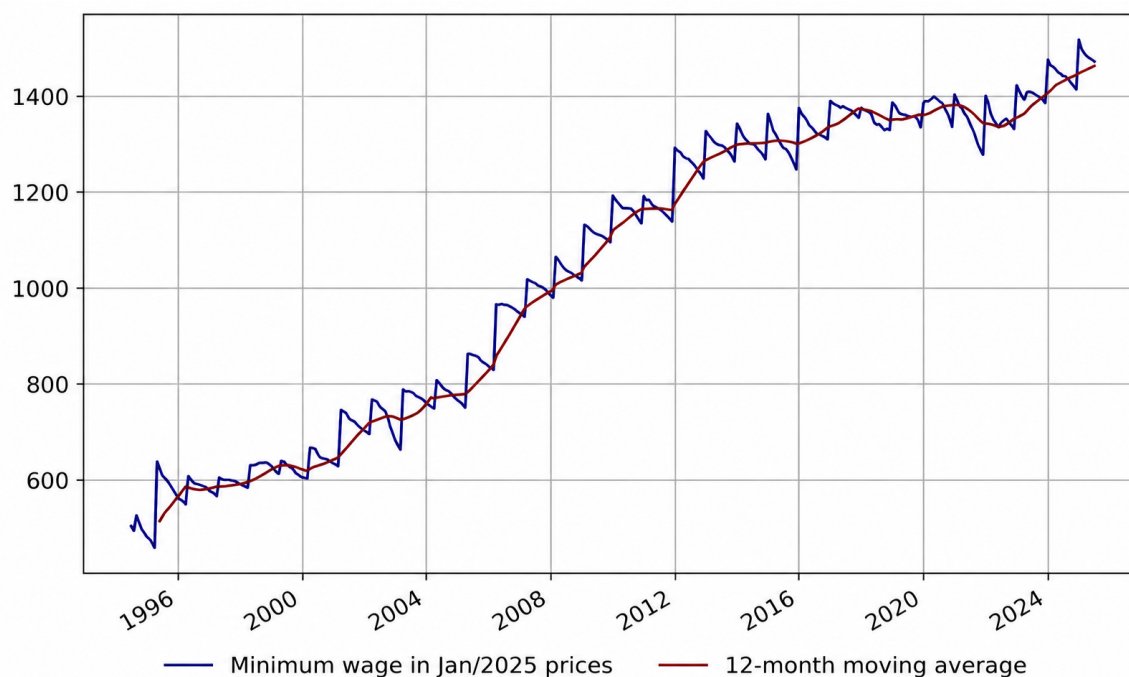
The unification of the minimum wage, that is, the establishment of a national minimum wage, took place during the Figueiredo administration through Presidential Decree No. 89,589 of April 26, 1984. Minimum wage adjustments became more frequent between 1987 and 1993 due to high inflation rates. These adjustments were implemented through provisional measures and became almost monthly.

Following the Real Plan and the subsequent stabilization of inflation in 1994, the minimum wage began to be adjusted annually. Complementary Law No. 103 of July 14, 2000, subsequently authorized the establishment of state-level wage floors for certain occupational groups. Since the enactment of this law, five of Brazil's 27 federative units have introduced state-level wage floors: Rio de Janeiro and Rio Grande do Sul (2001), Paraná (2006), São Paulo (2007), and Santa Catarina (2010). Nevertheless, the national minimum wage remains the most important wage floor for the majority of Brazilian workers.

In 2008, Chamber of Deputies Bill No. 42/2007 was approved, establishing a rule, initially intended to remain in effect until 2011, under which the real value of the national minimum wage would increase in line with national GDP growth two years earlier, provided that growth was positive. This rule was subsequently extended through 2019. Between 2020 and 2023, the federal government opted to follow the minimum constitutional requirements, adjusting the minimum wage only for inflation to preserve its purchasing power.

In early 2024, the federal government approved an adjustment to the minimum wage following the same principles as the rule established in 2008. However, this adjustment applied only to that year. A minimum wage adjustment rule for the period from 2025 to 2030 was subsequently established by Law No. 15,077 of December 27, 2024. The law maintains the aforementioned policy of real minimum wage increases but requires them to comply with the same limits on government expenditure growth established by Complementary Law No. 200 of August 30, 2023, known as the New Fiscal Framework. Accordingly, real increases in the minimum wage are restricted to a range of 0.6% to 2.5% during this period, as already occurred in 2025, when the real increase was 2.5%.

Figure 3.1. Evolution of the Real Minimum Wage (1994–2025)



Notes: Authors' calculations based on the nominal minimum wage series reported by IPEA and the historical series of the Extended National Consumer Price Index (IPCA) reported by IBGE.

Figure 3.1 presents the historical evolution of the real minimum wage, expressed in January 2025 prices, throughout the post-Real Plan period, beginning in 1994. Four main phases can be identified in the evolution of the Brazilian minimum wage: (i) 1994–1999, characterized by moderate growth in the real minimum wage, which remained around R\$600; (ii) 2000–2015, characterized by rapid growth in the real value of the minimum wage; (iii) 2016–2022, characterized by a second phase of moderate growth, with the real minimum wage remaining around R\$1,400, approximately 133% higher than in the first phase; and (iv) 2023–2025, marked by a new period of real minimum wage increases.

4. DATA AND METHODOLOGY

This section describes the data sources, sample restrictions, and procedures used to construct the measures of the relative minimum wage employed in this report. The main objective is to measure, for Brazil and its federative units, how close the national minimum wage is to the wage structure observed in local labor markets.

To this end, we organize the data to calculate the Kaitz index for Brazil over time and for its federative units in the most recent period. The measures are based on the Kaitz index, defined as the ratio of the real minimum wage to a reference wage measure. Our main measure uses the median wage, as it better represents typical earnings in the local labor market. We also construct a complementary measure based on the average wage, which is more sensitive to the upper tail of the earnings distribution.

The Kaitz index is widely used in the economic literature and by international organizations, such as the Organisation for Economic Co-operation and Development (OECD) and the International Labour Organization (ILO), in comparative analyses of minimum wages. In the empirical literature, this measure frequently appears in studies examining the relative position of the minimum wage in the wage distribution and its effects on inequality, employment, and poverty, such as Dube (2019a), Dube and Lindner (2024), Engbom and Moser (2022), Lee (1999), and Sotomayor (2021). Its main advantage is that it expresses the absolute value of the legal wage floor relative to the earnings distribution. Thus, the same national minimum wage may have different economic intensities depending on the typical wage level in each local labor market. This property is particularly relevant in Brazil, where the minimum wage is set nationally but applies to highly heterogeneous state labor markets.

4.1 Data Sources

The construction of the Kaitz index relies on household survey microdata produced by the Brazilian Institute of Geography and Statistics (IBGE). For the period from 1996 to 2011, we use the National Household Sample Survey (Pesquisa Nacional por Amostra de Domicílios, PNAD). For the period from 2012 to 2025, we use the Continuous National Household Sample Survey (Pesquisa Nacional por Amostra de Domicílios Contínua, PNAD Contínua). Combining these two surveys allows us to examine the national evolution of the relative minimum wage since the mid-1990s.

The PNAD and PNAD Contínua provide information on labor force status, employment, employment status, labor earnings, working hours, educational attainment, demographic characteristics, and receipt of social benefits. This information is used to construct the reference wages employed in the Kaitz index: the average and median wages of employed individuals.

The sample is restricted to the working-age population, defined as individuals aged 15 to 64. To construct wage statistics, we include only employed individuals with reported positive labor earnings, excluding observations with missing, zero, or undefined earnings. We also restrict the sample to workers whose usual working hours are at least 30 hours per week, reducing distortions associated with comparing monthly earnings across jobs with very short working hours.

For the PNAD Contínua, we use the first interview in the available years. In 2020 and 2021, due to changes in data collection associated with the COVID-19 pandemic, we use the fifth interview. All statistics are calculated using the survey sampling weights. Labor earnings are expressed in real terms to allow comparisons over time and between the two surveys. In both datasets, inflation adjustments are based on the Extended National Consumer Price Index (Índice Nacional de Preços ao Consumidor Amplo, IPCA). The nominal minimum wage in effect each year is incorporated into the datasets and expressed in the same price base as observed earnings.

Based on these procedures, the report conducts two complementary analyses. The first examines the national evolution of the relative minimum wage between 1996 and 2025. The second investigates the heterogeneity of the Kaitz index across federative units in the most recent period.

4.2 Construction of the Kaitz Index

The first step is to define real labor earnings. Let $y_{i,u,t}$ denote the nominal labor earnings of individual i , residing in federative unit u , in year t , and let D_t denote the corresponding deflator. Real labor earnings are defined as:

$$y_{i,u,t}^{real} = \frac{y_{i,u,t}}{D_t}. \quad (4.1)$$

Similarly, let SM_t denote the nominal minimum wage in effect in year t . The real minimum wage is defined as:

$$SM_t^{real} = \frac{SM_t}{D_t}. \quad (4.2)$$

In practice, the nominal minimum wage is expressed in the same price base as observed earnings, ensuring that comparisons between the legal wage floor and reference wages are made in comparable monetary terms.

Using individual real labor earnings, we calculate two reference wage measures for each federative unit–year cell: the weighted mean and the weighted median. The real average wage is given by:

$$\bar{y}_{u,t}^{real} = \frac{\sum_{i \in S_{u,t}} w_{i,u,t} y_{i,u,t}^{real}}{\sum_{i \in S_{u,t}} w_{i,u,t}}, \quad (4.3)$$

where $w_{i,u,t}$ denotes the sampling weight and $S_{u,t}$ represents the set of workers included in the federative unit–year cell.

The weighted median real wage is defined as the smallest real wage value for which the cumulative sum of weights reaches at least half of the total weight in the cell:

$$\tilde{y}_{u,t}^{real} = \inf \left\{ y : \frac{\sum_{i \in S_{u,t}} w_{i,u,t} \mathbf{1}(y_{i,u,t}^{real} \leq y)}{\sum_{i \in S_{u,t}} w_{i,u,t}} \geq 0.5 \right\}. \quad (4.4)$$

The main measure of the relative minimum wage used in the report is the minimum wage as a proportion of the median wage, that is, the median-based Kaitz index:

$$Kaitz_{u,t}^{median} = \frac{SM_t^{real}}{\tilde{y}_{u,t}^{real}}. \quad (4.5)$$

We also construct a complementary measure based on the average wage:

$$Kaitz_{u,t}^{mean} = \frac{SM_t^{real}}{\bar{y}_{u,t}^{real}}. \quad (4.6)$$

The median-based measure is adopted as the main reference because it is less sensitive to extreme values and better represents typical earnings in the local labor market. The mean-based measure is used as a complement, as it allows us to assess the position of the minimum wage relative to average earnings, although this statistic is more strongly influenced by high earnings at the top of the distribution.

The interpretation of both measures is straightforward. Higher values indicate that the minimum wage is closer to the reference wage observed in a federative unit, suggesting greater relative intensity of the national wage floor in that local labor market. Lower values indicate that the minimum wage is further from the corresponding reference wage. Because the minimum wage is set nationally, territorial variation in the Kaitz index mainly reflects differences in the distribution of labor earnings across federative units.

An important methodological caveat concerns not the use of the Kaitz index itself, which is widely employed in the literature as a descriptive measure of the relative incidence of the minimum wage, but its use in causal identification strategies. Haanwinckel (2026) shows that empirical designs exploiting regional differences between the national wage floor and local wages may be sensitive to model specification, wage dispersion, and unobserved regional factors that simultaneously affect wages and other labor market outcomes. Moreover, because minimum wage policy itself may alter the wage distribution used to calculate the index, regional variation in the indicator does not, by itself, constitute an exogenous source of variation. In this report, therefore, the Kaitz index is used to describe the proximity between the legal wage floor and the wage structure of each local labor market and to identify where the minimum wage is relatively more or less binding.



5. RESULTS

5.1 Brazil in Comparative Perspective: Wage Compression in an International Context

The first dimension of the analysis places Brazil in the international debate on the minimum wage. For this exercise, we use the Kaitz index, defined as the ratio of the minimum wage to a reference wage measure, usually the average or median wage. This metric is particularly useful because it expresses the absolute value of the wage floor relative to the wage structure of each economy, allowing comparisons across countries with different income levels, productivity, and currencies.

In international comparisons, the Kaitz index should be understood as a measure of the proximity between the minimum wage and prevailing wages in the economy. The higher the index, the closer the legal wage floor is to the reference wage. Thus, a country may have a high nominal minimum wage but a low Kaitz index if its overall wage levels are also high. Conversely, countries with lower income levels may have a relatively high minimum wage when the wage floor is close to typical earnings.

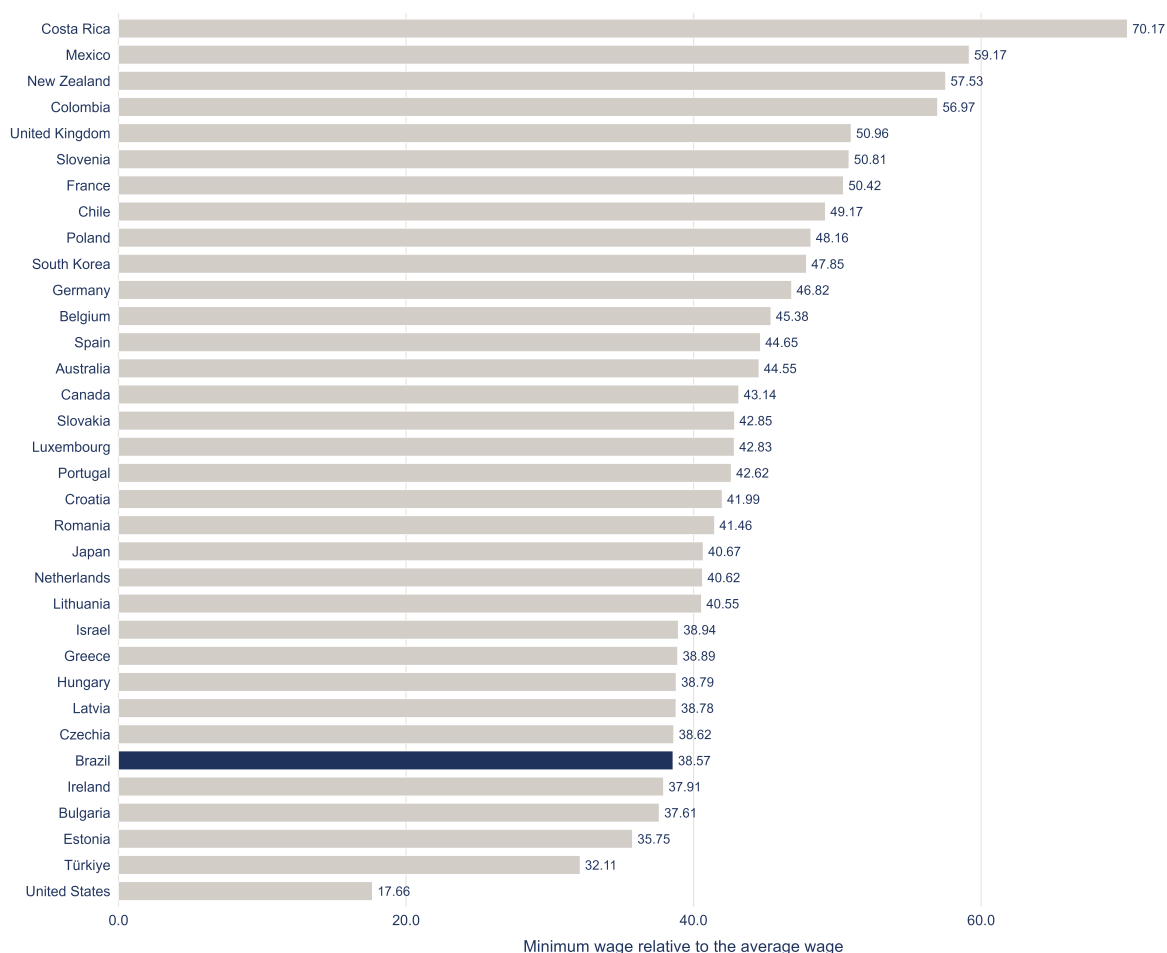
Figure 5.1 presents the Kaitz index calculated using the average wage. According to this measure, Brazil records a value of 38.57%, below most economies in the international comparison. The country is well below the highest values observed in the sample, such as Costa Rica, Mexico, New Zealand, and Colombia, where the minimum wage exceeds 55% of the average wage, but above the United States, where the index stands at 17.66%. This result reflects the fact that the average wage is influenced by higher earnings, particularly in more unequal economies. In countries with substantial wage dispersion, the average can be considerably higher than the earnings of the typical worker, reducing the value of the index.

Figure 5.2, in turn, presents the Kaitz index calculated using the median wage. In this comparison, Brazil ranks considerably higher: the minimum wage corresponds to 65.23% of the median wage, placing the country among the highest values in the sample, behind only Colombia, Costa Rica, Chile, Mexico, and New Zealand. The difference between the two figures is substantial. When the denominator is the average wage, Brazil ranks below most countries in the international comparison; when the denominator is the median wage, the country occupies a higher position, revealing greater proximity between the legal wage floor and the center of the wage distribution.

This difference reinforces the importance of using the median-based Kaitz index as the main measure. To assess the economic relevance of the minimum wage, it is important to determine how close the wage floor is to the earnings of the typical worker. The median provides a more direct reference because it is less sensitive to very high earnings at the top of the distribution.



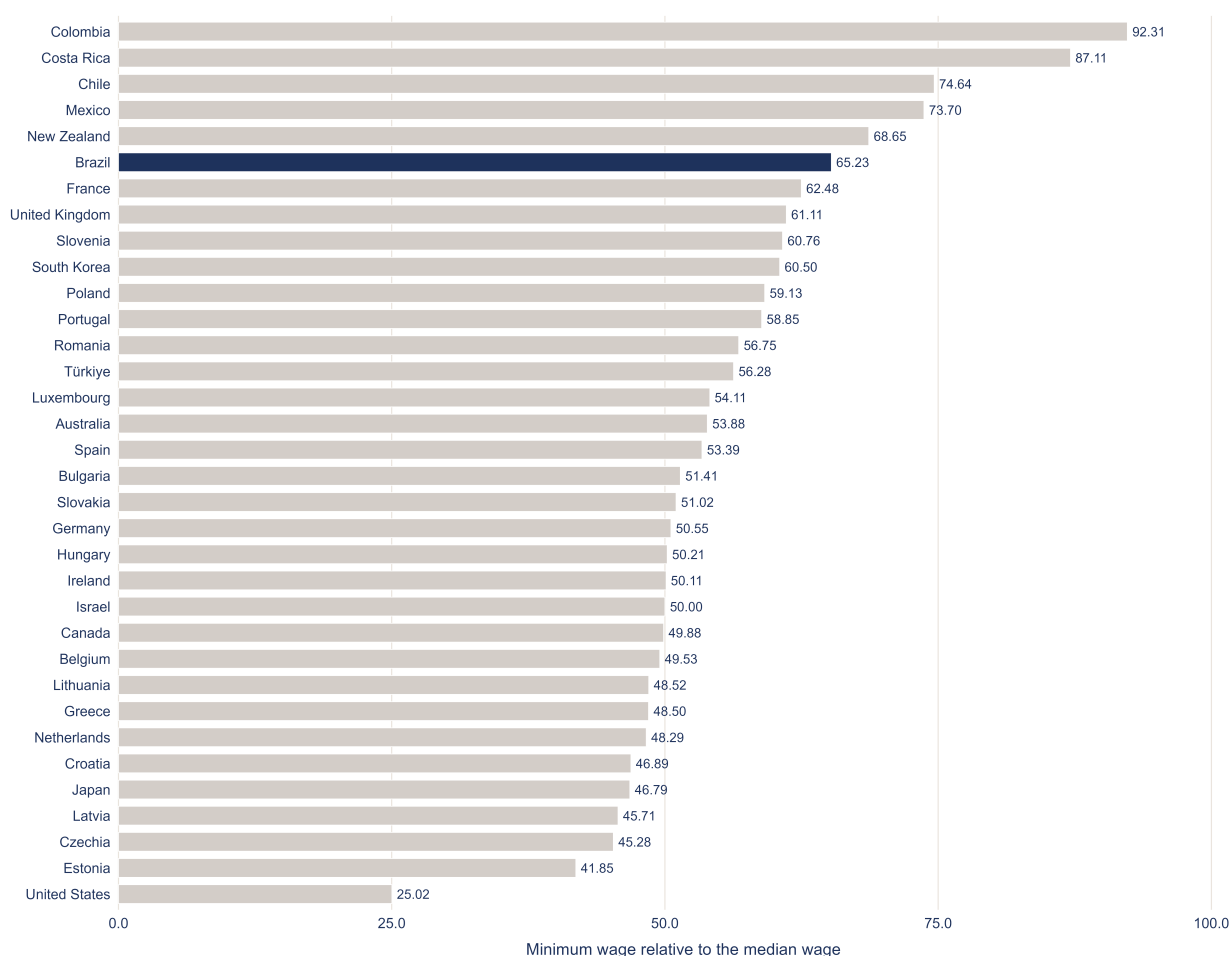
Figure 5.1. Kaitz Index in International Perspective: Minimum Wage Relative to the Average Wage (2024)



Notes: Authors' calculations. For Brazil, the index was calculated using data from the PNAD Contínua. For the other countries, data are from the OECD, considering the minimum wage as a proportion of the average wage. Brazil is highlighted in blue.



Figure 5.2. Kaitz Index in International Perspective: Minimum Wage Relative to the Median Wage (2024)



Notes: Authors' calculations. For Brazil, the index was calculated using data from the PNAD Contínua. For the other countries, data are from the OECD, considering the minimum wage as a proportion of the median wage. Brazil is highlighted in blue.

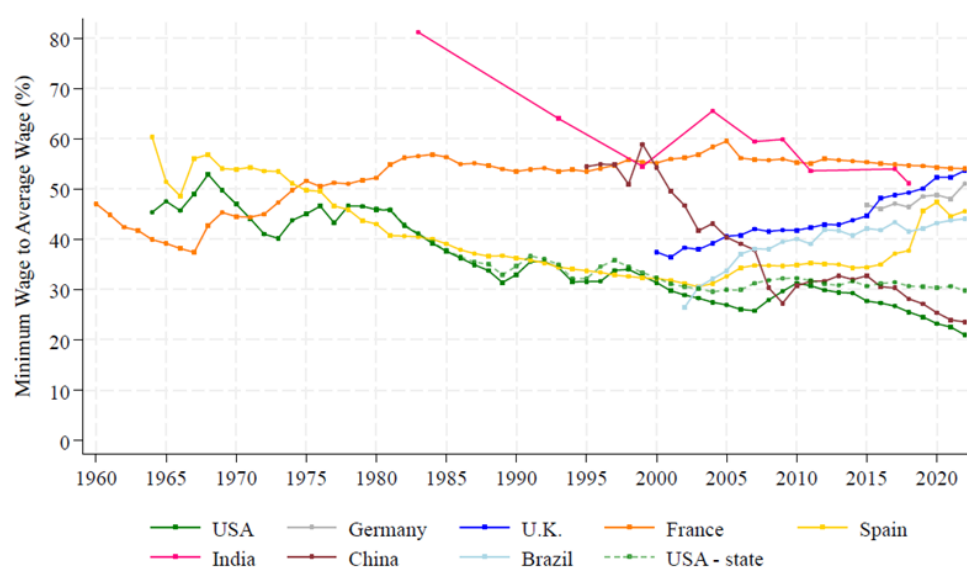


The preceding analyses therefore show that Brazil should not be characterized solely by the real value of its minimum wage, but also by its relative position in the earnings distribution. The country's higher ranking when the denominator is the median wage suggests that the national wage floor is economically relevant for a substantial share of workers. This finding is central to the domestic analysis, as the same relative comparison can be applied across Brazil's federative units.

Furthermore, the historical comparison presented in Figure 5.3 reinforces that Brazil's recent experience is part of a broader trend toward an increasing relative importance of the minimum wage in several economies, although trajectories differ considerably across countries. The figure shows the evolution of the ratio between the minimum wage and the average wage for a selected group of countries. In the most recent period, Brazil occupies a relatively high intermediate position, with the minimum wage representing approximately 45% of the average wage, close to the level observed in Spain and below countries such as France, the United Kingdom, Germany, and India, where the ratio ranges from approximately 50% to 55%. By contrast, China and the United States exhibit substantially lower relative levels, around 20% to 30% of the average wage.

Brazil's trajectory is also notable for its upward trend throughout the 2000s and 2010s, consistent with the real increases in the minimum wage observed during this period. This trend contrasts with the long-term decline in the relative minimum wage in the United States and China, but resembles the experience of some European economies, which have also seen an increase in the relative importance of the wage floor in recent decades. Thus, Brazil combines a minimum wage that is highly relevant to its wage structure, a highly unequal earnings distribution, and a relatively rapid change in its comparative position over recent decades. This recent increase in the minimum wage relative to the average wage reinforces the importance of complementing the analysis with median-based measures, which more directly capture the proximity between the legal wage floor and typical workers' earnings.

Figure 5.3. Evolution of the Kaitz Index in Selected Countries (1960–2022)



Notes: Figure reproduced from Dube and Lindner (2024). The chart shows the ratio of the minimum wage to the average wage, that is, the Kaitz index, for selected countries.

5.2 Kaitz Index in Brazil

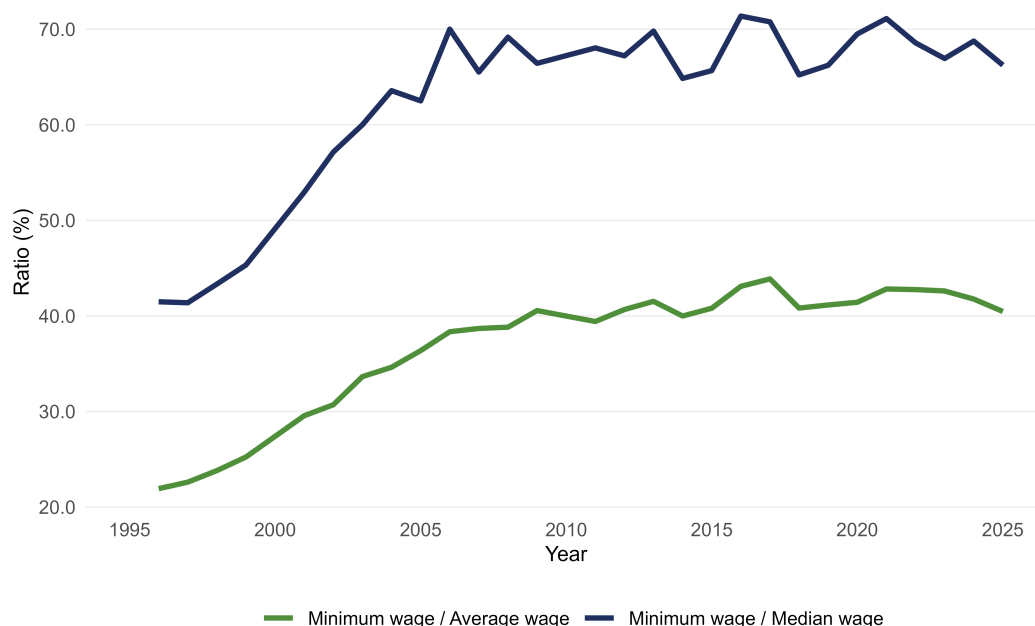
The international analysis shows that the Brazilian minimum wage ranks relatively high when compared with the median wage. However, this comparison still treats the country as a single unit. In Brazil, this is only the starting point. Because the minimum wage is set nationally, the same legal wage floor applies to state labor markets that differ substantially in productivity, sectoral composition, occupational structure, formalization, and earnings distribution.

For this reason, the domestic analysis requires examining not only the aggregate level of the Kaitz index but also its evolution over time and its territorial heterogeneity. The Kaitz index measures the relative intensity of the minimum wage in each local labor market: the higher its value, the closer the national wage floor is to the reference wage in a given federative unit. As discussed in Chapter 4, our main measure is the minimum wage as a proportion of the median wage, while the ratio to the average wage is used as a complementary indicator.

The remainder of this section follows this approach. First, we present the evolution of both versions of the Kaitz index in Brazil. We then examine its territorial distribution, showing how the relative intensity of the minimum wage varies across federative units.

A. Evolution of the Kaitz Index in Brazil. Figure 5.4 presents the evolution of the two versions of the Kaitz index used in the report: the minimum wage as a proportion of the average wage and the minimum wage as a proportion of the median wage. Examining these series together allows us to compare the position of the wage floor relative to average earnings in the economy and the earnings of the typical worker.

Figure 5.4. Evolution of the Kaitz Index in Brazil (1996–2025)



Notes: Authors' calculations based on PNAD microdata from 1996 to 2011 and PNAD Contínua microdata from 2012 to 2025. The figure shows the evolution of the minimum wage relative to the average wage and the median wage.

The median-based Kaitz index consistently remains above the average-wage-based series. This



pattern is expected in an asymmetric wage distribution, where the mean is pulled upward by higher earnings. In substantive terms, this means that the minimum wage is closer to the earnings of the typical worker than a comparison with the average wage would suggest.

The evolution of the index over time also reveals the substantial transformation that occurred during the 1990s and 2000s. During this period, real increases in the minimum wage brought the national wage floor significantly closer to the Brazilian wage structure, raising both the ratio to the average wage and the ratio to the median wage. In approximate terms, the median-based Kaitz index rose from around 40% in the mid-1990s to approximately 70% by the end of the 2000s, while the ratio to the average wage increased from roughly 20% to 40% over the same period. This development is particularly relevant because it shows that the growing relative importance of the minimum wage reflected not only changes in its nominal value but also its increasing proximity to earnings actually observed in the labor market.

Following this period of more rapid increases, both series exhibit greater relative stability. Despite fluctuations over time, the wage floor remains persistently close to the median wage. This persistence reinforces the interpretation of the minimum wage as an important reference for earnings at the bottom and in the lower-middle part of the distribution.

At the same time, the national series should be interpreted with caution. The Brazilian aggregate combines highly heterogeneous state labor markets. In some states, the minimum wage is relatively far from typical earnings, while in others it is very close to the median wage. Therefore, the analysis of national trends must be complemented by a territorial examination of the Kaitz index.

B. Territorial Heterogeneity of the Kaitz Index. Figure 5.5 presents the territorial distribution of the Kaitz index in 2025, measured as the minimum wage relative to the average and median wages in each federative unit. Because the minimum wage is set nationally, differences across states reflect local wage distributions. In other words, the maps show where the same legal wage floor is closer to or further from prevailing labor market earnings.

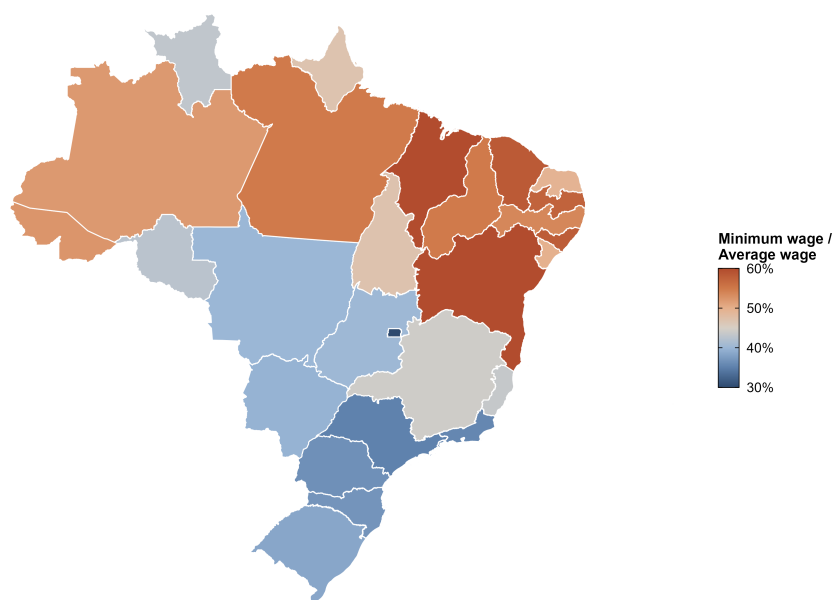
The territorial pattern is clear. States in the North and Northeast tend to exhibit higher Kaitz index values, while states in the South, Southeast, and parts of the Central-West have lower values. This pattern indicates that the national minimum wage is relatively closer to prevailing wages in the country's lower-wage regions. Thus, although the legal wage floor is uniform nationwide, its economic intensity varies substantially across the country.

The median-based measure highlights this heterogeneity more directly. In several states in the North and Northeast, the minimum wage represents a large share of the median wage, suggesting that the wage floor is close to the earnings of the typical worker. By contrast, in states with higher median wages, the same minimum wage represents a smaller share of typical earnings, reducing its relative intensity.

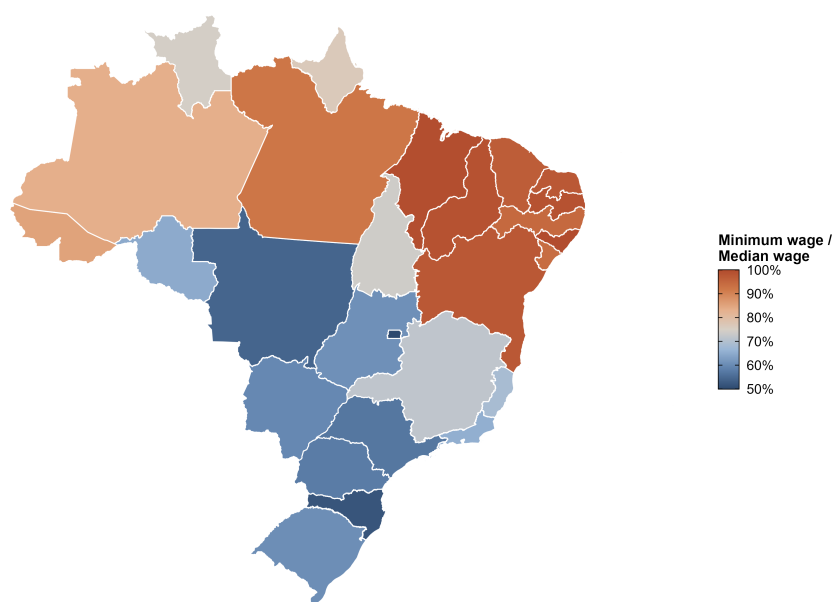
The values reported in Annex A help quantify this heterogeneity. In 2025, the median-based Kaitz index reaches 100% in Alagoas and Maranhão and is very close to this level in Paraíba and Piauí, both at 99%, Rio Grande do Norte and Bahia, both at 98%, and Ceará, at 97%. These values indicate that the minimum wage is very close to the local median wage in these states. At the opposite extreme, the Federal District, at 49%, Santa Catarina, at 52%, Mato Grosso, at 54%, São Paulo, at 57%, and Paraná, at 58%, have the lowest values of the index, suggesting that the national wage



Figure 5.5. Territorial Heterogeneity of the Kaitz Index (2025)



(a) Minimum Wage Relative to the Average Wage



(b) Minimum Wage Relative to the Median Wage

Notes: Authors' calculations based on microdata from the 2025 PNAD Contínua. Panel (a) presents the minimum wage as a proportion of the average wage in each federative unit. Panel (b) presents the minimum wage as a proportion of the median wage in each federative unit. The corresponding values for each federative unit are reported in Table A.1, in Annex A.



floor is further from typical earnings in these labor markets.

The average-wage-based measure reveals a similar pattern, but with systematically lower percentages. In 2025, the highest values are observed in Maranhão, at 63%, Bahia, at 60%, Alagoas and Ceará, both at 58%, and Paraíba, at 57%. The lowest values are found in the Federal District, at 23%, São Paulo, at 35%, Paraná and Rio de Janeiro, both at 36%, and Santa Catarina, at 37%. The difference between the two measures reinforces the importance of the median: because the average wage is more influenced by high earnings, particularly in more unequal labor markets, the resulting Kaitz index tends to be lower than its median-based counterpart.

Comparing the two maps is also informative. The ratio of the minimum wage to the average wage tends to be lower than the ratio of the minimum wage to the median wage, because the average wage is more sensitive to high earnings. In more unequal labor markets, this difference may be particularly pronounced. For this reason, the median-based Kaitz index is especially useful for capturing the proximity between the wage floor and typical earnings, while the mean-based index serves as a complementary indicator.

These results show that the Kaitz index exhibits substantial geographic heterogeneity in Brazil. A uniform national minimum wage coexists with highly diverse local labor markets. In states where typical wages are lower, the national wage floor occupies a higher relative position and tends to be a more important reference for wage determination. In states where typical earnings are higher, the same wage floor has lower relative intensity.

This territorial heterogeneity is one of the main descriptive contributions of the indicator. The Kaitz index shows that a uniform national policy may have different economic intensities across federative units. A higher index value should not, by itself, be interpreted as evidence of the effects of the minimum wage on the local labor market, but rather as an indication that the national wage floor is closer to the wage structure observed in that territory.



6. CONCLUSION

This report synthesized the main Brazilian and international evidence on the effects of the minimum wage and examined its implications for Brazil. The literature shows that the wage floor can play an important role in raising the earnings of low-wage workers and reducing wage inequality, with positive effects on poverty in certain contexts. These benefits, however, are neither automatic nor independent of economic conditions. The effects on employment, informality, productivity, prices, and profitability depend on the relative level of the wage floor, the productive structure, the degree of employer market power, and the different adjustment margins available.

In Brazil, this assessment is particularly complex. In addition to serving as a wage floor in the formal labor market, the minimum wage influences informal earnings and serves as a reference for social security and social assistance benefits. At the same time, a single national minimum wage applies to labor markets with very different levels of wages, productivity, and informality. Thus, the policy combines broad distributional reach with potentially heterogeneous effects on formalization, employment, firm dynamics, and public finances. The analysis of the Brazilian minimum wage must therefore jointly consider its social benefits, its effects on the functioning of the labor market, and its fiscal consequences.

The results reinforce the importance of assessing the minimum wage not only in terms of its absolute value but also its position in the wage distribution. The historical series shows that real increases in the minimum wage brought the wage floor closer to the typical earnings of Brazilian workers. In the international comparison based on the median wage, Brazil has the sixth-highest Kaitz index among the countries analyzed. The subnational analysis reveals even greater heterogeneity: in 2025, the minimum wage was equal to the median wage in some federative units, while in others it represented a considerably smaller proportion. These findings show that the same national wage floor has substantially different economic intensities across local labor markets.

In this context, the Kaitz index is a useful tool for monitoring the evolution and relative incidence of the minimum wage in Brazil. Incorporating this indicator into the public debate can help ensure that future minimum wage adjustments are assessed in light of wage distributions, productivity, informality, and the capacity of different labor markets to adjust. Policies aimed at increasing the real minimum wage should be accompanied by complementary measures that promote productivity, skills development, formalization, and targeted protection for low-income households, while also accounting for their implications for fiscal sustainability. Rather than relying solely on a rule based on changes in the real value of the wage floor, the challenge is to preserve its distributional gains while recognizing the substantial regional and productivity heterogeneity of the Brazilian economy.



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APPENDIX A. KAITZ INDEX BY FEDERATIVE UNIT

Table A.1. Kaitz Index by Federative Unit, 2025

Region	Federative Unit	MW / Median Wage	MW / Average Wage
NE	Alagoas	100%	58%
NE	Maranhão	100%	63%
NE	Paraíba	99%	57%
NE	Piauí	99%	55%
NE	Bahia	98%	60%
NE	Rio Grande do Norte	98%	49%
NE	Ceará	97%	58%
NE	Pernambuco	95%	54%
NE	Sergipe	94%	50%
N	Pará	92%	55%
N	Acre	85%	52%
N	Amazonas	83%	52%
N	Amapá	77%	47%
N	Roraima	74%	43%
N	Tocantins	74%	47%
SE	Minas Gerais	72%	44%
SE	Espírito Santo	69%	43%
SE	Rio de Janeiro	66%	36%
N	Rondônia	65%	43%
CO	Goiás	61%	40%
CO	Mato Grosso do Sul	60%	40%
S	Rio Grande do Sul	60%	39%
S	Paraná	58%	36%
SE	São Paulo	57%	35%
CO	Mato Grosso	54%	40%
S	Santa Catarina	52%	37%
CO	Federal District	49%	23%

Notes: Authors' calculations based on microdata from the 2025 PNAD Contínua. The table reports the minimum wage as a proportion of the median and average wages in each federative unit. Values are rounded to the nearest whole percentage point. MW denotes minimum wage.