Income distribution and union density: an analysis for OECD Countries, 2000-2019
Distribución del ingreso y densidad sindical: un análisis para países de la OCDE, 2000-2019

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RESUMEN

El objetivo de este trabajo es estudiar la relación entre la densidad sindical y la participación de sueldos y salarios en el ingreso nacional, para una muestra de 17 países de la OCDE en el período 2000-2019. Para ese fin se desarrolla un modelo econométrico de datos de panel PMG-ARDL a partir del cual se identifican relaciones de corto y de largo plazo. Los resultados muestran que la tasa de sindicalización tuvo un impacto positivo y significativo en la participación de los sueldos y salarios en el ingreso nacional, adicionalmente se encontró evidencia de que los salarios mínimos y las horas de trabajo también tienen un impacto positivo, mientras que la inflación, el cobro de impuestos y la productividad tienen un efecto negativo. Estos resultados confirman la relevancia del sindicalismo como mecanismo redistributivo en las economías modernas.

Palabras clave: Densidad sindical, distribución del ingreso, salarios, OCDE.

ABSTRACT

The objective of this work is to study the relationship between union density and the share of wages and salaries in national income, for a sample of 17 OECD countries over the period 20002019. To that end, a paneldata econometric model (PMGARDL) is developed, from which shortrun and longrun relationships are identified. The results show that the unionization rate had a positive and significant impact on the share of wages and salaries in national income. Additionally, evidence was found that minimum wages and working hours also have a positive impact, whereas inflation, tax collection, and productivity

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exert a negative effect. These findings confirm the relevance of trade unions as a redistributive mechanism in modern economies.

Keywords: Union density, income distribution, wages, OECD

INTRODUCTION

The decline of wage share in national income is a manifestation of structural changes in the economy resulting from a profound transformation in the power relations between capital and labor. The concentration of wealth in the hands of capital has been weakening salaried workers' ability to earn a decent income, which, in economic terms, directly affects domestic consumption and aggregate demand, thereby undermining sustained economic growth. Inequitable distribution of economic growth erodes social cohesion and political stability.

Income concentration is not uniform worldwide. In regions with high levels of labor informality —such as Latin America and Africa— the reduction of wage share has particularly severe effects. Job precarity diminishes workers' capacity to plan financially, access social security and guarantee an adequate standard of living for their families. It also limits social mobility and reinforces the intergenerational reproduction of poverty, creating a cycle of economic exclusion that is difficult to break (ILO, 2023). This situation contrasts with developed economies, where the fall in wage share has been linked to deindustrialization and labor market flexibilization, which have eroded traditional labor protection mechanisms and reduced workers' collective bargaining power (Stockhammer, 2017).

The weakening of trade unions is a central factor in the income concentration process. Since the 1970s, union density has steadily declined in most countries, significantly curtailing collective bargaining and workers' power visà-vis capital. This union retreat affects not only wages but also overall working conditions, social benefits and job security. In countries with strong unions, workers can maintain a higher wage share and a more equitable income distribution, whereas where unions have lost strength, income concentration and labor precarity tend to intensify.

Another factor that has contributed to the decline of wage share in national income is the combination of neoliberal oriented economic policies and the structural processes they entail, such as economic opening and globalization, as well as phenomena like productive automation and technological transformation. Market integration, international competition and the adoption of laborsubstituting technologies have put pressure on wages, especially in traditionally laborintensive industrial and service sectors. These changes have favored the accumulation of wealth in financial and corporate capital at the expense of salaried labor, amplifying inequality and limiting workers' ability to improve their economic situation.

The decline in wage share has farreaching social and political implications. The erosion of workers' bargaining power and the concentration of wealth contribute to rising inequality, generate social discontent and undermine community cohesion. This dynamic not only affects households' economic stability but also impacts the legitimacy of institutions and trust in democratic systems, creating a cycle of exclusion that reproduces economic and social gaps (Valletta et al., 2020; ILO, 2023).

The guiding question of this research is: How did union density, among other economic variables, affect the share of wages and salaries in national income in OECD countries during the 20002019 period? Based on this question, the study's objective is to assess the role of union density as a determinant of wage share in national income, in interaction with other relevant economic variables.

This paper is organized into three sections. In the first section a focused review is made of the seminal heterodox theories of Kalecki and Kaldor, which address income distribution and the role of trade unions. Empirical studies that preceded the present work, that examined union density in relation to income distribution, are also reviewed. In the second section the methodology employed in specifying an econometric model is described, the model is based on the PMGARDL technique, which empirically tests the link between union density and the share of wages and salaries in national income for OECD countries over the 20002019 period. The third section interprets the model's results, which confirm the influence of union density on income distribution in the selected economies during the study period. Finally, the conclusions of the paper are presented.

The article aims to contribute to the academic and policy debate on income distribution from a heterodox perspective. Beyond the empirical analysis, it calls for a rethinking of labor and fiscal public policies that affect distributive justice and the strengthening of trade unionism as a fundamental tool for ensuring inclusive and sustainable economic growth.

INCOME DISTRIBUTION AND UNION DENSITY

Political economy and Marxist theory examined functional income distribution, identifying internal contradictions in the capitalist system that created a tendency toward concentration. In contrast, the neoclassical perspective held that functional income distribution was determined by the marginal productivity of factors, which —under the assumption of competition and no government intervention— produced a fair income distribution, free of internal contradictions.

Unlike the marginalist view, the heterodox perspective argues that functional income distribution is shaped by power relations, labor institutions and historical dynamics. In this sense, the contributions of Kalecki and Kaldor are

essential for understanding the determinants of wage share and the role of trade unions in income distribution.

Kalecki (1954) revisits and updates elements of the Marxist tradition to analyze income distribution, emphasizing that it is determined by the degree of monopoly and the power relations between capital and labor. Moreover, the degree of monopoly is shaped by the strength of trade unions, because when unions are powerful the profit margins tend to fall to levels that can be considered reasonable given the prevailing price level.

Kalecki's assumption that the maximum level of profit is determined by union power endogenously sets profits and treats wages as exogenous, but this holds only as long as union power is sufficiently strong to impose the income distribution. If unions are weak, then firms' pricesetting policies will determine the distribution of income in the economy.

In Kalecki's model, workers tend to spend their income on consumption, while capitalists decide how much to consume and invest, thus conditioning the macroeconomic dynamics. From this perspective, wages are not merely a production cost but also a key component of effective demand. Accordingly, Kalecki argues that capitalists' investment decisions and workers' consumption shape the share of wages in national income (Laos, 2000).

Kalecki demonstrates that strengthening wages —through collective bargaining or redistributive policies— not only improves labor conditions but also promotes macroeconomic stability. A reduction in wage share implies lower aggregate consumption capacity, weakening economic growth and widening inequality gaps (Dussel, 2014).

Kaldor (1956) states that the Kaleckian explanation of the wage share in national income, determined by the degree of monopoly, captures something of reality, but it lacks precision because it attributes profits solely to the forces of competition between workers and capital, without providing a sufficient explanation of how they are actually determined.

Kaldor (1957) argues that the determination of profits in national income is defined by investment and its effects on demand. An increase in investment spending influences demand, which raises the general price level. Higher prices boost the profits of the capitalist class while simultaneously reducing real consumption, allowing investment spending to expand further. In other words, if the profitincome ratio falls below the planned level of investment, prices will rise relative to costs until the discrepancy is eliminated by a consequent rise in profits.

Kaldor's (1957) thesis holds that inflation is not a monetary phenomenon but is generated by a distributive conflict between labor and capital. From his perspective, prices are formed by the struggle between the wages demanded by workers and the profits sought by entrepreneurs. Thus, inflation arises when these two groups try to appropriate a larger share of national income, creating a spiral of wage increases and profit margin adjustments. In this sense, long-run

stability in the shares of labor and capital in national income does not eliminate the conflict; rather, it reveals it as structural, since the distributive struggle is permanent and repeatedly manifests itself as inflationary pressure. Under this approach, combating inflation requires addressing the social and political causes of the dispute over income.

From the sociology of work, authors such as Standing (2011) introduce the concept of the "precariat" to describe workers with insecure jobs, low wages and scant social protection, a product of the erosion of collective bargaining and labor flexibilization. In this framework, union density serves as an indicator of workers' bargaining power. A high level of unionization allows salaried employees to capture a larger share of national income, whereas its decline is associated with labor precariousness and widening inequalities (Ebbinghaus & Visser, 1999).

Recent empirical studies have shown that there is no structural stability in the functional distribution of income. Stockhammer (2017) observes that there has been a decreasing trend in wage share relative to national income over recent decades in OECD economies. Bengtsson (2014) finds that, in the European context, unions have played a key role in redistributing income from capital to labor. Kristal (2010), for his part, shows that, in the United States, digitization and productive restructuring have contributed to a sharp decline in unionization, with negative impacts on wage share. These empirical investigations suggest that union density is a structural factor shaping income distribution.

Recent evidence indicates that the relationship between union density and wage share is not purely direct; it is also mediated by institutional and political factors. For example, the existence of centralized collectivebargaining systems, a robust laborlaw framework and public policies protecting the minimum wage amplify the effect of unions on income distribution. Conversely, in contexts dominated by labor decentralization, contractual flexibilization and the absence of effective protective mechanisms, even relatively strong unions struggle to influence wage share (Visser, 2019). This suggests that, in order to understand how union strength influences the economy and social cohesion, it must be analyzed together with the institutional environment.

Moreover, capital concentration and the financialization of the economy have limited workers' ability to negotiate wage increases proportional to economic growth. The expansion of the financial sector, with a focus on maximizing shareholder value, has generated pressures to reduce labor costs and prioritize capital profitability over salaried workers' welfare (Stockhammer, 2017). Combined with globalization and employment subcontracting, this process has contributed to income polarization, where a concentrated minority of capital owners captures most economic benefits while wages stagnate or decline in relative terms.

A historical perspective is also essential to grasp the trajectory of wage share. During the postwar period, the expansion of unions and the institutionalization

of collective bargaining in many European and Latin American countries allowed a sustained increase in wages relative to national income. However, since the 1970s, neoliberal policies —characterized by the socalled Washington Consensus— have reversed these gains, weakened unions and caused a relative decline in wages (Bengtsson, 2014; Kristal, 2010). This historical pattern shows that functional income distribution is not a neutral phenomenon nor defined by economic laws alone; it results from social struggles, economic policies and workers' organizational capacity.

In the Latin American context, the relationship between union density and wage share exhibits notable particularities. Despite having strong union movements in some countries, labor informality and market segmentation have limited unions' ability to influence income distribution. Recent studies indicate that in Mexico, Brazil and Argentina wage share has tended to fall over the past two decades, especially in highly informal sectors where unions have little coverage and workers lack effective collective bargaining mechanisms (ILO, 2023). This situation has deepened inequality and labor precariousness, demonstrating that union density alone does not guarantee income improvements unless accompanied by a solid institutional framework.

In contrast, OECD countries present a heterogeneous picture. Those with a tradition of centralized collective bargaining and consolidated welfare systems —such as Sweden and Germany— have maintained a more stable wage share in national income, even amid globalization and digitization (Stockhammer, 2017). However, in the United States and the United Kingdom, labor flexibilization, declining unionization and increasing financialization have produced a marked drop in wage share, directly affecting inequality and social cohesion (Kristal, 2010). These contrasts show that union density, combined with effective labor and social policies, is a structural determinant of income distribution.

Empirical evidence underscores the importance of collective bargaining in redistributing income within countries. In sectors with strong unionization —such as manufacturing and public services— workers have managed to keep wages proportional to economic growth and secure complementary benefits, contributing to lower functional income inequality. Conversely, in sectors with low unionization or temporary employment, wage share has consistently declined, widening the income gap between capital and labor. This reinforces the idea that union density functions as an institutional mechanism capable of counteracting structural trends toward wealth concentration.

Furthermore, the combination of technological change, globalization and weakened unions has cumulative effects on income concentration. Automation and digitization have reshaped production structures, displaced traditional jobs and shrunk the pool of workers with collective bargaining power. This transformation has caused wage share to fall even in economies with relatively strong unions, unless complementary policies protect incomes and promote labor skill development (Stockhammer, 2017; Kristal, 2010). In this sense,

the evidence suggests that restoring wage share requires not only strengthening unionization but also implementing active public policies that counteract labor precariousness and foster equity in income distribution.

Recent studies agree that union density and wage share are fundamental indicators for assessing a country's socioeconomic health. Their analysis makes it possible to understand functional income distribution as well as workers' ability to influence the economic decisions that affect their lives. The sustained decline of wage share in Latin America and in several OECD economies reflects the interaction of structural, institutional and political processes, highlighting the need to rethink strategies for union strengthening, social protection and labor regulation to promote a more inclusive and equitable economy (ILO, 2023; Stockhammer, 2017).

ECONOMETRIC MODEL

This section presents the empirical results of the study based on estimating a paneldata model using information from 17 OECD countries for the period 2000-2019. The research includes the following countries: Australia, Belgium, Brazil, Slovenia, Spain, the United States, Estonia, the United Kingdom, Ireland, Japan, Malta, Mexico, the Netherlands, Poland, the Czech Republic, South Korea, and Costa Rica. The model's purpose is to examine the effects of union density and other macroeconomic and institutional variables on the share of wages and salaries in national income. The econometric model is expected to provide broad conclusions about the economic and social relationships in the studied context.

Working with multiple countries yields a paneldata structure, which was analyzed using the Pooled Mean Group (PMG) Autoregressive Distributed Lag (ARDL) technique proposed by Pesaran et al. (1999). This method delivers identical, consistent, and efficient longrun coefficients without imposing homogeneous shortrun parameters. By incorporating lag structures for both the regressors and the dependent variable, the approach reduces bias and ensures that regression residuals are not serially autocorrelated, thereby addressing concerns of endogeneity.

The methodological process began with testing crosssectional independence for both the dependent and explanatory variables, using Pesaran's CD test (2004). Next, the integration order of the series was examined with unit root tests: Im, Pesaran and Shin (2003) (IPS) and Pesaran (2007) (CIPS), representing first and second-generation panel unit root tests, respectively. After establishing the integration properties of the series, the final PMGARDL specification was estimated and its underlying assumptions were verified.

The dependent variable of the model is the proportion of wages and salaries in national income (w/y). The explanatory variable, union density (unions), is represented by the percentage of unionized workers relative to the

total economically active population. As control variables we include: a) the unemployment rate (unemp), the minimumwage level (minw), the average individual hours worked per year (hh), labor productivity per worker (prod), the proportion of taxes in national income (tax) and inflation levels (cpi). All indicators were transformed to logarithms to harmonize their scales and obtain coefficients that reflect elasticities.

The unemployment rate is included to weight its effect on bargaining power, because as the unemployment rate rises, employers' bargaining power increases while workers' bargaining power decreases. Minimum wages are incorporated to analyze the impact of a public policy of wage increases on the proportion of wages and salaries. Additionally, labor productivity per worker is added to control for reductions in wage share due to increased labor intensity in production. The proportion of taxes in national income is included with the aim of analyzing the impact of a public tax policy on the increase of the wagesalary share. The inflation variable seeks to give the model coherence by accounting for its distributive effects. Finally, the average number of hours worked per year per individual is used to address proposals concerning reductions in the working day —a topic on the public agenda of most of the countries studied. Information on the indicators and the data source used in the model is presented in Table 1.

Table 1
Variables, indicators and data sources

Variable	Indicator	Source
Proportion of wages and salaries in national income, w/y	(Wages and Salaries / GDP)*100	OECD.Stat
Union density, $unions$	(Number of unionized workers / Economically active population)*100	ILOSTAT
Minimum wage, $minw$	Monthly minimum wage expressed in PPPadjusted private consumption dollars.	ILOSTAT
Inflation, cpi	National Consumer Price Index	World Bank Open Data
Average annual hours worked by persons engaged, hh	Total number of hours actually worked in a year/ Total number of employed and self-employed persons	Penn World Table 11.0
Proportion of taxes in national income, tax	(Taxes / GDP)*100	OECD.Stat,
Unemployment rate, $unemp$	(Number of unemployed / Economically active population) ×100	World Bank Open Data
Labor productivity, $prod$	Value added / Total worked hours.	ILOSTAT

Source: Own preparation.

Table 2 presents the results of the crosssection dependence tests applied to the variables, both in levels and in first differences, to avoid possible spurious correlations. The Pesaran (2004) CD test defines the null hypothesis as the absence of dependence across crosssections. The results indicate that, with the exception of the uniondensity variable, the remaining variables show evidence of crosssection dependence. This suggests that the structural interdependence among the economies under analysis is not eliminated by transforming the series, so the econometric model must employ methods that are robust to crosssection dependence.

| | **Tabla 2** | |
| | Crosssection dependence tests, Pesaran CD | |
Variable	**Level**	**First difference**
w/y	3.557335***	8.480505***
union	27.00136***	1.953599***
tax	2.487498***	3.012045***
minw	28.36712***	2.296182**
ipc	19.98801***	12.84246***
hh	28.53916***	5.326464***
unemp	9.071327***	20.62363***
prod	38.05161***	11.40236***

Note: *, ** and *** indicate significance at the 90%,95%, and 99% levels, respectively

Source: Own preparation based on results from EViews 12.

Unit root tests help to ensure the validity and correct interpretation of regression results. They allow to determine the stationarity of timeseries, identifing longrun relationships among variables and avoiding spurious findings in empirical research. However, the presence of crosssection correlation, observed in the previous step, requires the use of second-generation methods that incorporate this characteristic of the series.

Table 3 shows the results of the IPS (Im, Pesaran, and Shin, 2003) and CIPS (Pesaran, 2007) unitroot tests, first and second generation, respectively, for the research variables. The null hypothesis of these tests is that the series have a unit root, i.e., they are nonstationary.

	Tabla 3			
			Unit root test, IPS and CIPS	
Variable	IPS		CIPS	
	Level	First difference	Level	First difference
w/y	-0.56831	-8.10805***	-2.38844	-2.83709**
union	-0.33084	-6.50392***	-1.46484	-3.89595***
tax	1.53841	-5.85129***	-1.79313	-3.20664***
minw	4.08874	-2.27593***	-1.855499	-2.05256
ipc	-3.64299	-15.6254***	-1.846221	-2.50673***
hh	0.96022	-8.78473***	-1.960774	-3.73621***
unemp	3.18499	-5.39613***	-0.67606	-3.12092***
prod	1.56791	-6.83561***	-1.37173	-3.05816***

Note: *, ** and *** indicate significance at the 90%,95%, and 99% levels, respectively

Source: Own preparation based on results from EViews 12.

The results in Table 3 indicate that, regardless of the test applied, all variables are integrated of order 1, I(1), with a 95 % confidence level.

The fact that the series exhibit crosssection correlation, are nonstationary and are integrated of order 1, justifies a cointegration analysis, which must be carried out using the PMGARDL method, whose results are consistent with the characteristics of the data. The PMGARDL model allows estimation of short and long-run relationships in dynamic panels with variables integrated of different orders (I(0) and I(1)). Moreover, by permitting heterogeneity in the short-run parameters across crosssection units, the PMG model is especially useful for capturing differentiated dynamics among the 17 countries analyzed while maintaining homogeneity in the longrun cointegration vector. Therefore, the adopted econometric framework is consistent with the statistical properties of the series and with the objectives of the analysis.

Table 4 presents the estimated PMGARDL model results, which allow identification of the short and longrun relationships among the variables considered in the analysis. This estimation provides empirical evidence of the effects exerted by factors such as unionization, unemployment, labor productivity, the minimum wage, hours worked, inflation, and taxes on wageshare participation in national income.

Subsequently, the results will be interpreted in light of the information gathered throughout the research so that the analysis is not isolated in the econometric realm. Contrasting the the theoretical framework, prior empirical evidence and the reviewed statistical data, will provide coherence and robustness to the conclusions, ensuring that the estimates are not reduced to mere numbers

but instead contribute to a comprehensive understanding of the factors that affect wage share in national income.

	Table 4	
PMGARDL Model of the Share of Wages and Salaries in National Income for OECD Countries, 20002019.		
Dependent variable w/y		
Variable	Long-run coefficient	Short-run coefficient
union	0.1368***	-0.0564*
tax	-0.1065***	0.0422
minw	0.2519***	-0.0213
ipc	-0.0072***	0.0020***
hh	0.8530***	-0.0114
unemp	-0.0338***	-0.0029
prod	-0.2896***	-0.5249***
ecm	-	-0.4509***
Assumptions validation		
Jaque-Bera (Prob)		0.1910
CD Pesaran (Prob)		0.9627
Note: *, ** and *** indicate significance at the 90%,95%, and 99% levels, respectively		

Source: Own preparation based on results from EViews 12.

The econometric model is valid as long as the coefficients are statistically significant, at least the longrun ones, all at a 99 % confidence level. Not all shortrun coefficients are significantly different from zero. The error correction mechanism, which is negative and less than one, confirms the existence of a longrun equilibrium and indicates that a deviation from it is corrected in roughly two years. Finally, the normality assumption for the residuals has been validated using the JarqueBera test and crosssectional independence of the residuals has been confirmed with the Pesaran's CD test.

RESULT ANALYSES

The uniondensity variable shows a positive and statistically significant long-run coefficient (0.1368), while its shortrun impact is negative (0.0564), albeit at a 90 % confidence level. This dual relationship reflects the complexity of union action and its influence on the share of wages and salaries in national income. The sign reversal between the longrun and shortrun suggests that an increase in union density could initially create tensions in the labor market. Wage bargaining outcomes raise labor costs, prompting firms to cut hiring, shift employment to informal or subcontracted arrangements and thereby reduce the proportion

of wages in income in the immediate period. It may also be related to the time unions need to embed their demands within institutional frameworks; in early stages the effects are diluted or even offset by firms' defensive strategies.

In the long-run the impact reverses clearly and forcefully, as the coefficient is larger and more significant. A higher level of union density translates into an improvement in the proportion of wages and salaries in national income. This occurs because sustained unionization strengthens collective bargaining power, raises real wages, promotes more stable working conditions and pushes for a more balanced distribution of economic surplus. Over time, unions institutionalize benefits that no longer depend on cyclical negotiations but become structurally embedded in collective agreements and firms' wage policies.

The difference between the two horizons is crucial: in the short-run, firms' reactions to union pressure may reduce wage participation, whereas in the long-run the accumulation of union strength generates structural transformations in income distribution. The fact that the longrun coefficient is positive and larger in magnitude than the shortrun coefficient reinforces the idea that unionization acts as a progressive redistributive mechanism, whose true impact is only felt once it is institutionally consolidated.

The unemployment rate shows a negative and statistically significant coefficient in the long-run (0.0338), while it is not significant in the short-run. This result is consistent with economic theory since an increase in unemployment tends to weaken workers' bargaining power. In a labor market with high joblessness, the threat of unemployment reduces the ability to demand wage hikes or better conditions, causing the share of wages and salaries in national income to decline.

In other words, higher unemployment concentrates income in favor of capital, since the surplus generated does not translate into higher labor compensation but into corporate profits. This finding reinforces the idea that active employment policies and a reduction in the unemployment rate are essential conditions for maintaining a more equitable distribution of national income.

Regarding the minimum wage, the longrun coefficient is positive and statistically significant (0.2519), although it is not significant in the short-run. This result shows that increases in the minimum wage, when they become entrenched over time, raise the proportion of wages and salaries within national income. The explanation lies in the minimum wage acting as an anchor in the wage structure: when it rises, it not only benefits those earning around the threshold but also pushes up the middle and middlelow wage scales, thereby expanding the overall wage mass.

The positive impact also suggests that minimum wage hikes do not necessarily produce the adverse employment effects warned by orthodox neoclassical theory. Instead, their consolidation strengthens workers' relative position in income distribution, especially when the labor market is linked to collective bargaining institutions or public policies promoting labor formalization.

Annual average hours worked has a positive and significant coefficient in the long-run (0.8530), but it is not significant in the short-run. This indicates that an increase in hours worked per employed person contributes to raising the share of wages in national income. This result can be interpreted in several ways.

On the one hand, more aggregated work time raises the total wage bill, which increases its weight in national income. Moreover, a rise in hours worked may reflect an expansionary phase of the economy, where labor demand grows and, consequently, total remuneration increases. However, this finding also sparks theoretical debate: a higher number of work hours does not necessarily mean improved worker wellbeing, as it may imply greater labor intensity and human fatigue. Still, from a functional distribution perspective, the variable shows that a larger amount of paid work positively impacts the wage share relative to capital.

Inflation shows a negative and significant effect in the long-run (0.0072), while in the short-run the coefficient is positive (0.0020). This dual behavior reflects the ambivalence of inflation in the distributional arena.

In the short-run, moderate inflation increases are associated with economic dynamism in which nominal wages grow in tandem with, or even slightly faster than, prices, thereby raising the wage mass in relative terms. In the long run, persistent inflation tends to erode the purchasing power of wages, transferring income from labor to capital. This finding reinforces the view of inflation as a phenomenon driven by distributive struggle rather than purely monetary, suggesting that price stability policies, especially those targeting inflation rates, should be reassessed. The use of interest rates as a monetary policy tool often controls prices at the expense of economic activity and employment, which, as shown, has adverse effects on the functional distribution of income.

The proportion of taxes in national income shows a negative and statistically significant coefficient in the long run (0.1065). This suggests that a higher tax burden in the economy tends to reduce the share of wages in national income. Regressive taxes such as VAT mainly affect workers, who have the highest consumption propensities, eroding their purchasing power. Conversely, progressive taxes such as income tax impact corporate profits more heavily and firms can transfer part of the tax burden onto wages through wage restraint, especially in markets with high industrial concentration.

Finally, labor productivity yields a negative coefficient both in the long-run (0.2896) and in the short-run (0.5249). Although paradoxical, this finding is also crucial because it contradicts the orthodox narrative that productivity gains must necessarily precede wage increases.

This result shows a link between productivity and wages that differs from the orthodox version of economics. Increases in productivity tend to be appropriated by capital in the form of higher profits, while labor compensation remains stagnant or grows at a much slower pace. This finding highlights the

importance of collective bargaining, union action and redistributive policies to ensure that improvements in productive efficiency are shared with workers.

Taken together, the results indicate that structural variables, such as union density, minimum wages and the unemployment rate, are key determinants of the share of wages and salaries in national income because they directly affect how the wealth generated in the economy is distributed. These variables are not merely economic indicators; they embody power relations among workers, employers and the state. Union density, in particular, confirms its role as a positive redistributive force in the long-run, meaning that when worker affiliation and organization increase, collective bargaining sustainably improves the participation of wages in national income. However, its effects are contradictory in the short-run: union pressure can generate initial tensions with the employer sector or the productive apparatus, leading to adjustments that temporarily reduce wage participation. This suggests that the benefits of union organization require institutional maturation and temporal stability to become consolidated.

On the other hand, productivity aligns with the contemporary trend of concentrating benefits in capital, showing that gains in labor efficiency do not automatically translate into higher wages. Under current conditions, where capital possesses greater appropriation power, productivity tends to reinforce inequality. This finding makes clear that economic growth, understood as increased productive capacity, does not guarantee an equitable distribution between labor and capital. Rather, the wage share depends on how labor institutions are structured, the degree of worker organization and the design of public policies regulating the labor market and wage negotiation.

In this sense, the results strengthen the argument that functional income distribution is not an automatic or neutral outcome of economic growth but rather the reflection of interactions between social and economic forces. Labor institutions (such as strong unions, effective minimum wages and inclusive regulatory frameworks) act as counterweights to capital's concentrating tendency. Thus, the evidence presented by the econometric model supports the thesis that the evolution of wage participation is ultimately a political and social contest played out in the rules of work, the strength of collective organization and the state's willingness to implement redistributive policies. Consequently, the study not only reveals statistical correlations but also exposes the political nature of the economy, where national income is allocated according to the balance of power between labor and capital.

Conclusions

The results obtained confirm that union density is a key determinant of wage share participation in national income. Higher unionization gives workers greater capacity to negotiate better wages and working conditions, which translates into a more equitable distribution of wealth. In contrast, factors such as inflation and unemployment erode purchasing power and reduce labor's share of income, deepening inequality.

From a theoretical standpoint, the evidence supports the heterodox view of income distribution, particularly Kaleckian arguments about the centrality of power relations, income distribution and effective demand. However, it refutes the Kaldorian hypothesis of longrun distributive stability. It also confirms the findings of the sociology of work regarding the link between weakened unions, labor precariousness and rising inequality.

In terms of public policy, the findings suggest three priority strategic lines:

Strengthening union organization. Models such as the Ghent system exemplify how to incentivize affiliation through the provision of social benefits, ensuring high levels of unionization and wage stability.

Labor and wage policy reforms. Policies that promote gradual, sustained increases in the minimum wage, together with regulatory frameworks guaranteeing collective bargaining, are essential for improving wageshare participation.

Progressive fiscal policy. A tax structure that reduces regressive burdens on wage earners and raises the contribution of capital income can help balance functional income distribution.

In summary, this study shows that unionization is not only a tool for labor defense but also a macroeconomic mechanism that fosters inclusive growth and social cohesion. In a context of growing global inequality, strengthening unions emerges as a necessary, though not sufficient, condition for moving toward more just and sustainable societies.

Although this research provides solid evidence of the positive impact of union density on wageshare participation, several limitations should be acknowledged. First, the analysis focused on 17 OECD countries over the 20002019 period. While this temporal and geographic scope allows comparison of advanced and emerging economies within the organization, it excludes regions with different labor dynamics, such as Asia or Africa, where labor informality and union structures differ markedly.

The availability of homogeneous and comparable data limited the inclusion of other potentially relevant variables, such as collective bargaining coverage, changes in labor legislation or unionization rates in strategic sectors. These factors could enrich the analysis by capturing more precisely the institutional mechanisms that mediate the relationship between unions and income distribution.

Looking ahead, it would be valuable to extend the analysis to nonOECD countries and to examine the role of unions in highly digitalized, remote work,

and artificial intelligence driven contexts, where collective organization faces unprecedented challenges.

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