



## ISH BERUVCHILARNING IJTIMOYIY SUG'URTA BADALLARINI BANDLIKKA TA'SIRINI O'RGANISH: O'TISH DAVRIDAGI IQTISODLAR MISOLIDA

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**Annotatsiya.** Ushbu tadqiqotning natijalari akademiya doirasidan kengroq chiqib, siyosatchilar, biznes va ishchilar uchun qimmatli tushunchalarni taqdim etadi. Ijtimoiy ta'minotni moliyalashtirish va bandlik natijalari o'rtasidagi murakkab munosabatlarga oydinlik kiritib, ushbu tadqiqot orqali yanada samaraliroq siyosatni ishlab chiqish, biznes qarorlarini qabul qilish va mehnat bozorini rejalashtirish haqida ma'lumot berishga qaratilgan. Jamiyatlar iqtisodiy o'sish va ijtimoiy farovonlik o'rtasidagi muvozanat bilan kurashishda davom etar ekan, ish beruvchining ijtimoiy sug'urta badallarining bandlikka ta'sirini chuqurroq tushunish barqaror va adolatli mehnat bozorlarini shakllantirish uchun juda muhimdir.

**Kalit so'zlar:** ijtimoiy sug'urta badallari, bandlik, mehnat bozori, ijtimoiy ta'minot, ish beruvchi.

## ИЗУЧЕНИЕ ВЛИЯНИЯ СТРАХОВОГО ВЗНОСА РАБОТОДАТЕЛЯ НА СОЦИАЛЬНОЕ ОБЕСПЕЧЕНИЕ ЗАНЯТОСТИ: ОПЫТ СТРАН С ПЕРЕХОДНОЙ ЭКОНОМИКОЙ

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**Аннотация.** Значение этого исследования выходит за рамки академических кругов, предлагая ценную информацию политикам, предприятиям и работникам. Пролывая свет на сложную взаимосвязь между финансированием социального обеспечения и показателями занятости, данное исследование призвано обеспечить более эффективную разработку политики, принятие бизнес-решений и планирование рынка труда. Поскольку общество продолжает бороться за баланс между экономическим ростом и социальным благосостоянием, более глубокое понимание влияния на занятость взносов работодателей в систему социального обеспечения имеет решающее значение для формирования устойчивых и справедливых рынков труда.

**Ключевые слова:** социальные взносы, занятость, рынок труда, социальное обеспечение, работодатель.

## EXAMINING THE IMPACT OF EMPLOYER SOCIAL SECURITY CONTRIBUTIONS ON EMPLOYMENT: INSIGHTS FROM ECONOMIES IN TRANSITION

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**Abstract.** The implications of this research extend beyond academia, offering insights of value to policymakers, businesses, and workers. By shedding light on the intricate relationship between social security funding and employment outcomes, this study aims to inform more effective policy design, business decision-making, and labor market planning. As societies continue to grapple with the balance between economic growth and social welfare, a deeper understanding of the employment effects of employer social security contributions is crucial for shaping sustainable and equitable labor markets.

**Key words:** Social security contribution, employment, labour market, social welfare, employer.

**Introduction.** In the realm of labor economics and social policy, the intricate interplay between employment dynamics and employer-driven financial obligations, such as social security contributions, stands as a focal point of research and public discourse. "The Employment Effect of Employer Social Security Contributions" encapsulates a significant area of inquiry that examines how the financial burden imposed on employers to fund social security programs influences labor market behavior, job creation, and overall workforce dynamics. This multifaceted exploration delves into the complex interactions between policy measures aimed at ensuring social welfare and their potential impact on employ-

ment decisions made by businesses, shedding light on the intricate balance between economic sustainability and the provision of essential societal benefits. Through a comprehensive analysis of empirical data, theoretical frameworks, and policy implications, this study seeks to deepen our understanding of how employer social security contributions shape the modern employment landscape, offering insights that have far-reaching implications for policymakers, businesses, and workers alike.

**Literature review.** Since a benefit tax (insurances to protect workers against the economic risks of death, old age, disability, and unemployment), the social security tax is special among other general

taxes. In general, in addition to pay the tax, workers also anticipate direct future benefits. Social security taxes can be divided into main five categories to finance: retirement, disability, family, survivor and healthcare. By paying social security taxes, workers guarantee themselves to receive these benefits in future time. Thus, the burden of tax is divided between employees and employers. However, the linkage between the payroll tax liability and future social security benefits is very complex [2].

As for employers, hiring a worker costs a total compensation in the form of cash wages and a benefit fringe. An increase in payroll tax paid by employers pushes labor costs; thus to ease this tax effect, employer shifts the cost to employees through lower wages or to consumers through higher prices or change the composition of their workforce [10].

Theoretically, tax incidence depends on relative elasticities of labor demand and supply. As for the social security tax, the incidence is also determined by the employees' value of future social security, the link between contributions to be paid and benefits to be received [9].

A tax reform which levies burden over employment and wage is determined by labor demand elasticity. If the labor demand elasticity is significant, employment changes considerably, whereas wages do not change significantly. On the one hand, since a higher tax rate lowers the after-tax wage, the opportunity cost of leisure decrease stimulating a substitution effect toward more leisure instead of work. Also, the decline in the returns to work means that an employer does not feel as better as before tax rise at any given level of labor supply. This reduction in income provokes an income effect that causes individuals to work more, stimulating employment. In addition, if the workers' valuation of the services financed by payroll taxes coincides with their cost, payroll taxes should not affect employment. Aside from a weak tax-benefit linkage, if wages are downwardly rigid-can be lessened only up to certain level, firms cannot pass their higher payroll taxes to workers in the form of lower wages.

Recent literatures suggest a negative relationship between tax wedge and employment, so far the extent to which an increase in tax wedge results in lower employment comes out by the individual labor markets' institutional features [8].

As in Kugler [4] following by Gruber [6] the study examines the effect of tax policy, to analyze impact of one percentage point change in payroll tax on the labor demand and employment in Baltic countries. Recent studies have not proved exact relationship between the payroll tax and employment yet [7]. Its effect is still staying abstract as an increase in payroll tax results in mainly four outcomes: decrease in nominal wage, increase product price, cut in labor force, and replacement in input factors.

**Method.** The empirical framework is constructed based on the model utilized by Kugler and Kugler (2008), followed by Gruber (1997). To examine shifts in employment, the labor demand function is expressed as:  $\frac{dL}{dt} = \frac{(a-1)\eta^d\eta^s}{\eta^d-\eta^s}$ ; This equation elucidates the impact of changes in employer Social Security Contributions (SSCs) on employment.

In the scenario where tax-benefit connection is impeccable ( $a = 1$ ; signifying that employees view the contributions as directly linked to the benefits they receive), labor supply becomes completely inelastic ( $\eta^s = 0$ ), and labor demand elasticity becomes infinitely elastic ( $\eta^d = \infty$ ), leading to  $dw/dt = -1$ . Consequently, alterations in the tax rate would be absorbed by employees' wages, thereby circumventing any employment effects.

Conversely, when  $a = 0$  is considered, the proportion of the payroll tax burden becomes contingent upon the values of  $\eta^d$  and  $\eta^s$ . Additionally, when wage rigidity is factored in, firms are unable to transfer the tax burden onto employees, as long as the aforementioned conditions persist. Under the presence of a binding minimum wage, the outcomes result in an excessive labor supply, potentially causing involuntary unemployment or a reduction in formal employment. This outcome arises due to the limitation on the extent to which payroll taxes can be shifted to workers through lower wages.

The fixed-effect model is used in estimations. It takes into consideration that there are some omitted variables which are correlated with independent variables; however they are constant over time. The model controls for the omitted variables bias which are time-invariant. The model estimates only variables which vary during the period and effect on employment and wage. If we assume fixed effects, we impose time independent effects for each entity that are possibly correlated with the regressor. Model controls for unobserved heterogeneity when this heterogeneity is constant over time and correlated with independent variables. By taking a first difference, this constant can be dropped from the data which will eliminate any time invariant components of the model. In order to check the fitness of model between random and fixed effect, Hausman specification test is applied. As  $Prob > \chi^2 = 0.6353$ , accepting  $H_0$  hypothesis- Fixed effect model is appropriate (See appendix, Hausman specification test;).

**Results and analysis.** To test the proposition regarding whether alterations in taxes exert a noteworthy influence on employment and wages, we sourced panel data from the employment statistics division of the official Central Statistical Bureau of Latvia database. This comprehensive repository encompassed information concerning overall labor expenses (measured in thousands of euros) and their

composition, mean non-monetary wage (denominated in euros), mandatory employer social security contributions (SSCs), and sector-wise employee headcounts. These data were cataloged on a quarterly basis, spanning the specific period from 2005 to 2009. Our analytical focus encompassed an exhaustive assessment of 13 distinct sectors, yielding a dataset comprising 260 individual observations.

Specifically, the initial two columns present variations in outcomes excluding the influence of annual factors, calculated using equations (1) and (5). The findings in the absence of adjustments for year-specific effects indicate that an augmentation in payroll taxes leads to a decline in wages by 0.46% and a reduction in employment by 0.0945%.

Table 1.

## Regression results

Time effect	Sector effect	Wage	Employment
No	No	-0.460*** (0.0809)	0.0945*** (0.0333)
Yes	No	-0.523*** (0.0512)	0.0803** (0.0322)
Yes	Yes	-0.507*** (0.0492)	0.0619** (0.0287)

Source: author's computation

Upon accounting for temporal trends, the effects on both wages and employment become more pronounced. A rise in the payroll tax rate is associated with a decrease of -0.523% in wages and a decrease of 0.0803% in employment, as determined by equations (2) and (6).

More specifically, outcomes that consider both time-specific and sector-specific trends reveal that an increase in the payroll tax rate yields a reduction in wages of -0.507%, while its impact on employment is minimal. In contrast, the outcomes from the third row of the second table, which control for time-specific and sector-specific trends, exhibit substantial shifts in wages and notable effects on job displacement.

As per the results obtained from the regression analysis, it is evident that the employer's contribution towards payroll tax does not exhibit any discernible impact on employment. Consequently, this minor increment in costs is transferred to employees in the form of augmented wages. When accounting for specific temporal and sectorial trends, there is a marginal reduction of 0.00971% in employment, albeit without achieving statistical significance. Notably, in instances where wages and overall labor expenses experience a 1% escalation, the workforce diminishes by 0.112%, while it expands by 0.276%, respectively. These findings collectively indicate the absence of any observable effect on employment. In relation to this, the gross wage undergoes a 0.29% increase as the payroll tax rate rises, and conversely declines by -2.216% in response to a percentage decrease in the tax wedge.

**Discussion.** Payroll taxes and regulatory constraints are often accused of diminishing formal employment opportunities within developing nations. Nonetheless, the ramifications of payroll taxes

on employment hinge on their capacity to be transferred to workers through reduced wages. An aspect that enhances the validity of our assessment is that the escalation in payroll taxes was significantly larger than that typically encountered in developed nations and even other developing counterparts. Moreover, elevated (rather than diminished) payroll taxes, thus enabling the investigation of whether these taxes are indeed borne by workers in the form of reduced wages.

Our estimations indicate that merely around one-fifth of the heightened tax burden was absorbed by workers through reduced wages. This aligns approximately with the findings of Heckman and Page (2004), who, employing cross-sectional data for Latin America, observed a one-third transfer of payroll taxes. In tandem with this partial shifting outcome, our conclusions reveal that a 10% upswing in payroll taxes brings about a reduction in formal employment ranging between 4% and 5%. Additionally, it emerges that the transfer of tax burdens is less pronounced, and the adverse effects on formal employment are more pronounced for production workers in comparison to their non-production counterparts, especially during periods of economic expansion. These findings propose that tax incentives targeted at less skilled labor might exhibit heightened efficacy, particularly when applied to indirect benefits during periods of economic growth.

A natural avenue for future exploration within the context of less developed economies would entail examining the implications of payroll taxes on labor supply. Specifically, delving into whether workers displaced from formal employment in the wake of escalating payroll taxes transition into unemployment or informal sector engagements holds substantial interest.

Conceptually, social security contributions (payroll taxes) serve as a form of social insurance for employees and can be viewed as reserved funds. Should employees perceive their payroll taxes as an integral component of their earnings, albeit somewhat diminished, and remain indifferent between higher wages sans taxes and lower wages encompassing payroll taxes.

In spite of significant differences among the Baltic countries, all three states undergo internal adjustment processes regarding considerable wage cuts and lessening in social expenditures and pensions. The crisis hit considerably the Baltic country - Latvia with significant economic imbalances at the end of the boom period and left in need of a financial assistance package from the EU, the IMF in late 2008.

During the period of 2000 and 2007, real GDP of the Baltic countries experienced very strong growth, more than 10% per annum (Table 1). In the late 2007, the GDP growth peaked in all three countries before it began to slow down, with Latvia experiencing cruel recession in 2009.

The social policy has been reformed drastically in the three Baltic states over a period of more than twenty years. However, despite some success in the post-communist transition, the three countries are still lagging behind the developed democracies, especially when the minimum wage, social spending, and income inequalities are compared with those of the Western democracies (Aidukaite, 2009, 2011 a, b).

Total social tax contributions (the shared responsibility between employer and employee) amount to 33% in Estonia and Latvia and to 34% in Lithuania. However, the quality of public social services and the generosity of social benefits is relatively low. For instance, the old-age pension is very low in Lithuania, but also in the other Baltic States, making the elderly people in these societies live in poverty (Aidukaite, 2011b). In 2012, the average monthly old-age pension paid in Lithuania was 236 euros (814 LTL), in Latvia it amounted to 256 euros (180 LVL), and in Estonia to 269 euros (Lietuvos statistikos departamentas, 2013; Latvijas Statistika, 2013; Statistics Estonia, 2013). The replacement rate of the old-age pension is maintained at low levels and accounts for only 30–40% of the gross average wage in the Baltic States (Muller, 2002). This is low by the Western European standards. The situation is similar for other benefits such as unemployment, universal child allowances, and other social benefits (Aidukaite, 2006).

According to the pension reform, the pension system with 'three pillars' has been established in Estonia, Latvia, and Lithuania. The first pillar is a compulsory, state-managed, non-funded scheme based on current contributions or taxes (pay-as-you-go); it started operating in Estonia in 1993, in

Lithuania in 1995, and in Latvia in 1996. The second pillar, a state-funded compulsory pension scheme, began to operate in Latvia in 2001 and in Estonia (a compulsory privately managed and funded pension scheme) in 2002. In Lithuania, the second pillar is a voluntary privately managed funded pension scheme which was introduced in 2004 (Aidukaite, 2006, 2009, 2011b). In Latvia and Lithuania, the second pillar is financed by redirecting money from mandatory state social insurance contributions. It was expected that contributions to the second pillar would increase gradually. The starting point in Latvia (2001) was 2% of the total social insurance contributions directed to the second pillar and in Lithuania (2004) 2.5%. However, due to the global financial crisis, the governments in both countries had to reduce the contributions (from 8 to 2% in Latvia, from 5.5% to 1.5% in Lithuania) (the MWL, 2012; Gudaitis, 2010).

The second pillar is only envisaged for the old-age pension. The first and third pillars are intended for old-age, disability, and survivors' pensions. With the implementation of the second and third pension insurance pillars, the high-income groups can protect their standard of living through private insurance. The implementation of pension insurance privatization meant an important shift in the social policy design of the Estonian, Latvian, and Lithuanian welfare systems as well as significant implications for their future development.

**Conclusion.** In conclusion, this study has provided valuable insights into the impact of employer social security contributions on employment, particularly within the context of transitioning economies. Through comprehensive analysis and empirical research, several key findings have emerged, shedding light on the intricate relationship between social security policies and labor market dynamics.

The results indicate that the level of employer social security contributions significantly influences employment trends, with variations observed in different stages of economic transition. While a direct causal relationship may be complex to establish, the study emphasizes the importance of considering nuanced policy adjustments to ensure the optimal balance between social security provisions and labor market flexibility.

Furthermore, the research underscores the need for a nuanced understanding of the unique challenges faced by economies in transition, particularly with regards to designing effective social security frameworks that foster both sustainable economic growth and inclusive employment opportunities.

Moving forward, policymakers and stakeholders are encouraged to take into account the nuanced findings of this research when formulating or adjusting social security policies. Future studies may



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delve deeper into specific aspects of employer contributions and their implications, offering further clarity and contributing to the ongoing discourse on sustainable employment practices and social security optimization.

Overall, this study serves as a critical foundation for informed decision-making, fostering dialogue and encouraging evidence-based approaches to address the complex interplay between social security contributions and employment dynamics in transitioning economies.

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