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ASSESSING THE INFLUENCE OF TRADE UNIONS ON INCOME REDISTRIBUTION: A COMPARATIVE ANALYSIS WITH EVIDENCE FROM ARMENIA

This paper seeks to analyze the contribution of trade unions in tackling the issue of income inequality with special reference to trade union density and its connection with income redistribution. In the paper, we analyze the effects of trade unions on income distribution, employment, and average wages, based on the data collected from 28 countries, including Armenia, during 2009-2019.

The results highlight that enhanced trade union density harms income disparity as indicated by the Gini coefficient, and has a favorable impact on average wages. But the impact on employment is still small, comparatively speaking. International comparisons show that unions can mostly minimize income inequality in countries with a high density of trade unions. On the other hand, in nations with a low union density, the equality-reducing capability of unions decreases, and in some situations, the unions directly widen the gap.

The study also illustrates that the trade union density has been greatly reduced in Armenia to half over the period under consideration. This decline poses a great threat to the ability of unions to tackle situations where the incomes of the citizens in the country are dwindling. The paper's implications for the promotion of strong labor market institutions (LMIs) and the reduction of income inequality serve as a valuable guide for

policymakers seeking to support and enhance the effectiveness of trade unions while pursuing efforts at enhancing labor market justice.

Keywords: *trade unions, income inequality, labor market institutions, union density, Gini coefficient, Armenia*
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INTRODUCTION. As for the last years, due to the pandemic situation, income inequality has only increased globally. A new conflict that Armenia faced in 2020 – the Artsakh-Azerbaijani war, along with social and economic consequences of the war, has added to issues resulting from the COVID-19 epidemic. Thus, the analysis of factors affecting income distribution in Armenia has become more relevant.

Many factors influence income distribution, but labor market institutions play a particularly significant role. Some of the labour market institutions are established with the main purpose of dealing with income differences and poverty, like unemployment benefits and minimum wages. However, others, like trade unions, influence income inequality indirectly.

Trade unions are social and political formations that depict the relevant societies in which they exist (Betcherman, 2013). Trade unions have the potential to enhance the quality of the lives of employees or workers, productivity, and social integration. For this, several factors have given rise to this implication. First, trade unions are essentially organizational forms performing several functions. First of all, it concerns the function of recognised representatives who struggle for better wages and working conditions for workers. By negotiating with employers, unions help the workers to defend themselves and obtain, occasionally, even higher wages than elsewhere. From this perspective, the trade unions provide the chance to improve the quality of workers' lives.

The main goal of the article is to study the impact of trade unions on income inequality. For this purpose, the results of the research of various authors who have assessed the impact of trade unions on income inequality have been studied. Then, the impact of trade unions on income inequality in different countries has been studied, and by comparing the results obtained from the studied literature, conclusions have been drawn.

LITERATURE REVIEW. The origin of trade unions dates back to the 18th century, during the Industrial Revolution in Europe. As new factories were established during this period, employment opportunities for workers increased greatly, resulting in the formation of workers' representation organizations. The history of the formation of trade unions also portends a relatively late stage in the United States as compared to Europe. In Europe, trade unions developed much earlier than in the United States. The first union in the United States was founded

in 1886, known as the American Federation of Labor (AFL) (Kerrissey, Schofer, 2013). Trade unions have changed over time and are different across countries; today, they are the result of government policies and cultural values (Wachter, 2007).

The legislation on trade unions in Armenia was shaped on July 29, 1995, because Armenia ratified the Convention on Workers' Representatives adopted by the General Conference of the International Labor Organization (ILO) on June 2, 1971. Under this convention, regardless of the country, the position of workers' representatives in enterprises was protected if dismissed or prejudiced through other actions, on condition that they did not violate existing or local laws, collective agreements, or mutual terms that the worker and employer agreed to (ILO, 1971).

After the Law on Trade Unions was passed in 2000, the trade union structure was supplemented by the Confederation of Trade Unions of Armenia (CTUA) in 2002. It was initially formed of 24 branch unions, 6641 trade union organisations and 544,182 members. Currently, 587 trade union organizations with 189,479 members are part of the CTUA (CTUA, 2024).

Unions influence various economic aspects, including wage levels, employment, and worker productivity. However, income inequality can also be one of the important factors through which trade unions act. Specifically, some papers study the effects of unions on income distribution. One such analysis is Card, Lemieux, and Riddell; the authors of this paper conducted their analysis on data from the US, Canada, and the UK for the years 1970 to 2000. The authors of the article also proved their hypothesis that unions regulate the effects on the wage gap and, therefore, lessen income inequality. The authors found that this is especially the case for male employees, but the impact of unionization for female employees remains uncertain (Card, Lemieux, Riddell, 2017). In another study by Lemieux based on the US data from the 1980s and 1990s, he found that the US wage dispersion indeed rose during the period under study, and according to the author, the reason is labor market institutions. Such institutions include trade unions and state wage-setting institutions (Lemieux, 2008). DiNardo examined the effects of unions on wage dispersion in the United States by employing data over the years 1973-1992. His results show that union density accounts for a fifth of the rise in male wage differentials in the eighties (DiNardo, Fortin, Lemieux, 1996). In this study, Levy pays much attention to the impact exerted by unions on income inequality in the United States from World War II to the end of the 20th century. The pre-1980s were defined by demands of strong unions, high minimum wages, and high taxes compared to the scenario after 1980s, where there were weak unions and low taxes. Levy's research revealed that robust labor market institutions during the post-war period facilitated evenly distributed economic growth. However, following the 1980s, changes in these institutions led to a significant rise in income inequality (Levy, Temin, 2007). The impact of

unions on income inequality in the United States has also been addressed by Farber et al., who provide new empirical evidence on the role of unions in the equal distribution of income in the United States in the 20th century. According to them, unions played a significant role in regulating income inequality in the years when the density of unions in the country was high, and the decrease in union density over the last decade has contributed to the increase in income inequality (Farber et al., 2021). In another research, Herzer provided data from 20 countries where he checked if unions influenced income distribution and if this impact differed from one region to another. The study concluded that the influence of unions on income inequality is not constant across countries. That is, unions negatively relate to income inequality in countries with high union density, implying that higher union density improves their ability to decrease inequality. On the other hand, in countries with a low density of union membership, unions can lead to augmented income dispersion (Herzer, 2016). One of the most recent studies is the paper by Montebello, Spiteri, and Von Brockdorff, who examined data from 26 European countries between 2005 and 2018. The paper once again proves that high union density significantly reduces income inequality (Montebello, Spiteri, and Von Brockdorff, 2023).

Analyses have also been conducted in EU member states to evaluate the impact of trade unions on income inequality. Tober's study assessed this impact in the context of European integration. According to the study, unions decrease income inequality while European integration has the opposite impact on this issue. This weakening is blamed on the heightened competition, which reduces union control over the labour supply (Tober, 2022).

They have also used a cross-sectional data set to analyse how trade unions have influenced the income distribution across the member countries in the OECD. Chechi's study, which spanned from 1969 to 2004, compared different institutions in the labor market, including the trade unions. The study also indicated that results of stronger unions slightly reduce wage inequality, though their impact on income inequality remains inconclusive (Checchi, García-Peñalosa, 2008). Fortuna analyzed data from 1993 to 2017 across 35 OECD countries. His findings indicated that a 1% increase in union density reduces income inequality by 0.3% (Fortuna, Neto, 2021). Ma and Komatsu examined the impact of unions on wage inequality in China. The authors found that unions significantly reduce wage inequality, proving that unions play an important role in income distribution in both developing and developed countries (Ma and Komatsu, 2024).

Russian authors Simonin, Bogacheva, Lustina, and Podsevalova examined the influence of trade unions on income inequality in Russia. Based on their study, they suggested that Russian trade unions fail to execute their roles in full measure, thus they bear little influence on wages and income levels (Симонин, Богачева, Лустина, Подсевалова, 2022). Simonin, Povorina, and Larionova also explored this topic, noting that strong trade unions and active social dialogue between

employers and employees can improve working conditions and raise wages, thereby reducing income inequality(Симонин, Поворина, Ларионова, 2021).

Generalizing the study of papers on the effect of unions on income inequality, we can conclude that unions reduce income inequality in countries with high union density, and that the effect of unions on income inequality is reduced in countries with lower union density. This paper uses panel data to study the relationships found by the above-mentioned authors regarding union density alongside income inequality when analyzing employment and wages in a wider international framework. The research design allows an analysis of whether findings observed in earlier studies apply to Armenia as well as other nations.

METHODOLOGY. The existing literature showed that unions have the ability to cut down the income disparities in countries that have a high density of unions but relatively less ability in countries that have a low density of unions. The International Labor Organization defines trade union density as the ratio of the number of union members to the total number of workers. For this study, the trade union density index introduced by the ILO was chosen as the measure that characterizes trade unions. The Gini coefficient was selected as an indicator characterizing inequality in income because this indicator is most widely used to measure this characteristic, and information about it is available for most states. Since it is widely assumed by many economists that trade unions have effects on employment and wages, employment levels and the average monthly wage were also examined.

To evaluate the impact of trade unions on income inequality, employment levels, and average monthly wages in Armenia and other studied countries[1], three-panel models were constructed. Fixed effects estimators were included in the models, allowing the removal of unobserved factors that may affect the dependent variable before deriving the final results. The first model calculates the effect of trade union density on income inequality. The equation is as follows:

$$G = \beta_0 + \beta_1 * UD + u$$

Where "G" is the Gini coefficient, “UD” is the union density index, and “u” is the fixed effect of the model.

The second model evaluates the effect of trade union density on income inequality. The equation is as follows:

$$Employ = \beta_0 + \beta_1 * UD + u$$

Where “Employ” is the employment rate, “UD” is the union density, and “u” is the fixed effect of the model.

[1] The data from the following countries were studied: Armenia, Austria, Belgium, Bolivia, Brazil, Botswana, Canada, Colombia, Costa Rica, Germany, Denmark, Dominican Republic, Spain, Estonia, Ethiopia, Finland, United Kingdom of Great Britain and Northern Ireland, Georgia, Ghana, Guatemala, Hungary, Indonesia, Ireland, Iceland, Italy, Japan, Kenya, Republic of Korea, Sri Lanka, Lesotho, Lithuania, Luxembourg, Latvia, Morocco, Republic of Moldova, Mexico, North Macedonia, Malta, Mongolia, Netherlands, Norway, New Zealand, Panama, Philippines, Paraguay, Rwanda, Senegal, Singapore, Somalia, Slovakia, Sweden, Togo, Thailand, Tunisia, Türkiye, Ukraine, United States of America, South Africa, Zambia.

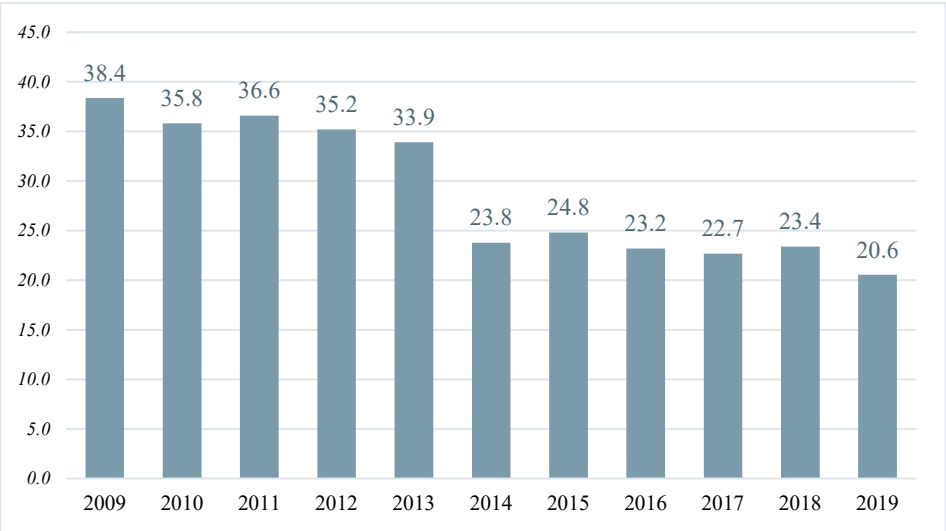
The third model estimates the effect of union density on average monthly wages. The equation is as follows:

$$AW = \beta_0 + \beta_1 * UD + u$$

where "AW" is the average monthly wage level, "UD" is the union density, and "u" is the fixed effect of the model.

All three models were estimated using the least squares method. The analysis was conducted using data from 2009 to 2019, selected for its availability and comparability across countries. The main purpose of this article is to examine the structural relationship between trade union density rates and income inequality rather than providing an assessment of their current state.

FINDINGS. To assess the impact of trade unions on income inequality, it is essential to first examine the state of trade unions in a given country. Figure 1 illustrates the trade union density index for Armenia during 2009–2019.



Source: *(ILO, 2009-2019)*

Figure 1. ***Trade union density index in Armenia, 2009-2019 (percentage)***

When using the trade union density index to measure the level of the working population that is unionized in Armenia during the implementation of the study period, it was observed that it has come down in recent years. Over the period 2009-2019, the index fell by almost half and was 20.6% down from 38.4%. When using the trade union density index to measure the level of the working population that is unionized in Armenia during the implementation of the study period, it was observed that it has come down in recent years. Over the period 2009-2019, the index fell by almost half and was 20.6% down from 38.4%. The sharp decrease in trade union presence in the labor market shows their weakening influence, which affects income inequality and the overall labor market.

Over the past few decades, Armenia has experienced a notable decline in union membership, leaving fewer employees under the umbrella of collective bargaining. Historically, trade unions have played a critical role by negotiating for better wages and ensuring safer working environments. As membership levels drop, these organizations inevitably lose much of their influence to address wage gaps and mitigate income inequality.

Several factors appear to be driving this trend. Shifts in industry structures, modifications to labor regulations, and changing public perceptions about the value of unions have all contributed to the loss of union density. In addition, workers are increasingly entering informal sectors where labor protections are weaker or less enforceable. On top of these external pressures, many trade unions themselves face internal challenges such as resource constraints, organizational capacity issues, and a decline in public trust. Together, these elements weaken the unions' ability to effectively safeguard workers' interests and champion fair labor practices.

The continuing decline in union density matches research that shows trade unions need strong membership numbers to fight income inequality. The data proves Armenia's unions lost much of their capacity to ease income inequality during the past decade.

Before examining the results of the models estimating the effect of unions on employment levels and average wages, we first examined union density indicators and employment and average wage levels in different countries. Figure 2 depicts employment levels corresponding to trade union density across different countries.

Source: *(ILO, 2009-2019)*

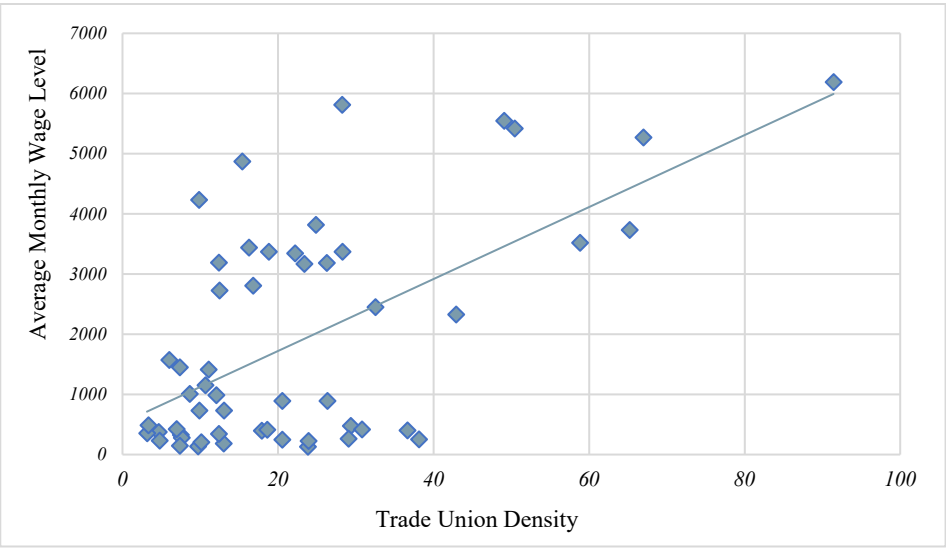
Figure 2. ***Employment levels by trade union density indicators in different countries, 2019***

This method enables a test to be made of the relationship between unemployment and a single factor, that is, union density, to give a general picture of its effect on employment. According to the data we have analyzed, countries that have a high trade union density show higher employment rates. Therefore, the main finding is that with an increase in the trade union density, there is an increase in employment level despite the low correlation coefficient. Countries with strong trade union presence, such as those in Northern and Western Europe, achieve higher employment levels when trade unions maintain their strength.

The increase in union density happens because of several factors. When unions have strong representation, they can get employers to agree to better work security rules that help businesses avoid change while looking after employees. Unionized workplaces offer workers additional training programs, plus staff training, making workers more productive while boosting their interest in staying in their roles and boosting total job numbers.

Additional economic and policy parameters exist beyond union density rates that significantly influence employment results. The combination of industrial make-up with educational norms and overall labor market policies determines employment results significantly. Countries with minimal union representation can maintain decent employment levels if they establish strong social protection programs and supportive labor instructions.

Similarly, Figure 3 illustrates the relationship between trade union density and average monthly wages.



Source: *(ILO, 2009-2019)*

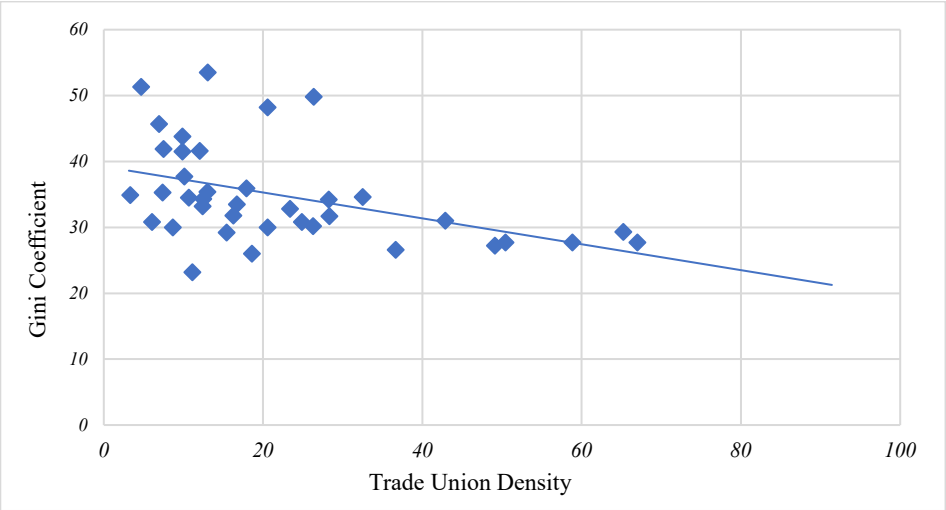
Figure 3. ***Average monthly wage levels by trade union density across countries, 2019***

Union membership demonstrates a much tighter connection to average wages than union density shows to employment totals. Higher trade union density

leads to increased average monthly salaries across many nations since unions act as fundamental advocates for fair wages, which reduces wage disparities.

Researchers have long documented the mechanisms behind this phenomenon. Unions that unite bargaining power secure superior compensation rates for their members, which creates benchmark payments across their specific sector. Through collective labor agreements, unions advance multiple benefits that include medical services, pension systems, and additional remuneration for overtime work to cultivate better welfare for their members.

Figure 4 depicts the relationship between trade union density and the Gini coefficient.



Source: *(ILO, 2009-2019)*

Figure 4. ***Gini coefficients by trade union density across countries, 2019***

The analysis of the data confirms that the coefficient of variation in trade union density is inversely related to the Gini coefficient. This suggests that the greater the density of the unions, the lower the income inequality in countries. This finding aligns with the opinion of different economists.

An engaged union membership allows unions to negotiate strong collective bargaining agreements to reduce gaps in salaries between diverse wage groups. Through collective bargaining, many unions establish wage structures that give larger pay increases to workers who earn less money. Unions exert influence on broader labor market policies through their efforts to set minimum wages and push for social welfare programs.

When unions are scarce, it becomes difficult to resolve income differences. When employers have no external checks on their wage-setting powers, they tend to push earned income toward their top earners while leaving behind a substantial share of unbalanced income. Numerous nations demonstrate a declining influence of unions as they monitor their unions' limited power while simultaneously experiencing growing wage inequalities.

Table 1 summarizes the effect of union density on income inequality, employment rates, and average monthly wages, as calculated using the three panel models described in the methodology section.

Table 1

The effect of union density on income inequality, employment rates, and average wage rates

Method: Panel Least Squares				
Sample: 2009 2019				
Periods included: 11				
Cross-sections included: 28				
Total panel observations: 289				
Variable	**Coefficient**	**Std. Error**	**t-Statistic**	**Prob.**
Union density on Gini	-0.083654	0.028723	-2.912398	0.0039
C	36.23095	0.849273	42.66114	0.0000
Union density on Employment	0.019493	0.006925	2.814970	0.0052
C	3.222322	0.200459	16.07474	0.0000
Union density on Average wage	31.61643	11.20428	2.821817	0.0052
C	2563.919	374.8939	6.839052	0.0000

According to the model results, increasing the trade union density index by one unit leads to a 0.083-point decrease in the Gini coefficient, demonstrating a significant negative correlation between union density and income inequality. This finding aligns with economists' arguments that nations with stronger trade union membership often experience lower levels of inequality.

Another component of the analysis reveals that each one-unit increase in union density raises employment by 0.019 units. Likewise, a separate model examining the impact of union density on average monthly wages shows that adding a single point to the density index increases wages by 31.6 units. Overall, these outcomes confirm that higher trade union density can promote both employment growth and higher average wages.

CONCLUSION. The review of studies on the impacts of Unions on income inequality indicates that Unions have a positive income inequality in countries where Union density is high. In this paper, both the relationship between trade union density and income inequality across countries and the impact of union density on income inequality were analyzed using a panel model. Research results confirm that greater union membership corresponds to diminished wage disparities, which independently supports economists' belief in distributional equity made possible by robust union participation.

Because some economists suggest that unions influence both employment and wage outcomes, this study also examines the correlation between union

density, employment levels, and average wages. The panel models show a statistically significant positive relationship between union density and both employment rates and average monthly pay. Although the effect on employment is relatively small, the impact on wages is considerably larger.

In summary, we can say that trade unions play an important role in income inequality and the economy as a whole, but only when their density is high. Armenia exhibits a declining trend in trade union density, which has reached its lowest levels in recent years. With a trade union density index below the average of the studied countries, the influence of unions on income inequality in Armenia is minimal or negligible. For this reason, it is necessary to take steps to increase the density of trade unions. Such steps could include the introduction of sectoral agreements in Armenia, which would increase the bargaining power of trade unions and oblige trade unions by law to act more transparently and accountably, which would increase interest in trade unions among workers.

References

1. Betcherman, G. (2013). *Labor market institutions: A review of the literature.* World Bank Policy Research Working Paper, (6276), pp. 27-34.
2. Card, D., Lemieux, T., & Riddell, W. C., (2017). Unions and wage inequality. In *What do unions do?,* Routledge, pp. 114-159.
3. Checchi, D., García-Peñalosa, C., (2008). Labour market institutions and income inequality. *Economic Policy,* 23(56), pp. 602-649.
4. Confederation of Trade Unions of Armenia, *From the History of the Trade Unions of Armenia*, https://hamk.am/story
5. DiNardo, J., Fortin, N., & Lemieux, T., (1996). Labor market institutions and the distribution of wages, 1973-1992: A semiparametric approach, pp. 1029-1035.
6. Farber, H. S., Herbst, D., Kuziemko, I., Naidu, S., Unions and Inequality over the Twentieth Century: New Evidence from Survey Data, *The Quarterly Journal of Economics,* Vol. 136, Issue 3, pp. 1325-1385, https://doi.org/10.1093/qje/qjab012
7. Fortuna, N., & Neto, A., (2021). The impact of labour market institutions on income inequality: evidence from OECD countries. *Applied Economics Letters,* 28(13), pp. 1110-1113.
8. Herzer, D., (2016). Unions and income inequality: A Heterogeneous panel co-integration and causality analysis. *Labour,* 30(3), pp. 318-346.
9. ILO, Industrial Relations Data (IRdata), Trade union density rate, Annual, 2009-2019, https://rshiny.ilo.org/dataexplorer15/?lang=en&id=ILR_TUMT_NOC_RT_A
10. ILO, (1971). *Workers' representatives convention,* C135, June 2.
11. Kerrissey, J. and Schofer, E., (2018). Labor unions and political participation in comparative perspective. *Social Forces,* 97(1), pp. 427-464.

12. Lemieux, T., (2008). The changing nature of wage inequality. *Journal of Population Economics, 21,* pp. 21-48.
13. Levy, F., Temin, P., (2007). Inequality and institutions in 20th century America, pp. 15-40.
14. Ma, X., Komatsu, S., (2024). Trade unions and the wage gap between rural migrants and local urban workers in China, *China Economic Quarterly International,* Vol. 4, Issue 3, pp. 133-150 - https://doi.org/10.1016/j.ceqi.2024.08.001
15. Montebello, R., Spiteri J., Von Brockdorff, P., (2023). Trade unions and income inequality: Evidence from a panel of European countries, *International Labour Review,* International Labour Organization, vol. 162(3), pp. 481-503.
16. Simonin P.V., Bogacheva T.V., Lustina T.N., Podsevalova E.N., (2022). Minimum wage: problems of inequality and social justice, *The Eurasian Scientific Journal,* N2, Vol. 14, pp. 3-11.
17. Simonin P.V., Povorina E.V., Larionova A.A., (2021). The minimum wage institute and the problems of wage labor poverty, *The Eurasian Scientific Journal*, N6, Vol. 13, pp. 3-10.
18. Tober, T., (2022). European institutional integration, trade unions, and income inequality. *Socio-Economic Review, 20*(1), pp. 351-371.
19. Wachter, M. L., (2007). Labor Unions: A Corporatist Institution in a Competitive World, *All Faculty Scholarship*, 95, pp. 610-613.