

THE IMPACT OF POPULATION DENSITY AND MINIMUM WAGE ON UNEMPLOYMENT: THE URGENCY OF PSYCHOLOGICAL RESILIENCE IN A MULTICULTURAL WORKPLACE

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Abstract

Educated unemployment in urban areas constitutes a structural problem that has become increasingly complex due to high demographic density and wage standards. This condition creates a competitive multicultural work ecosystem. This study aims to examine the effect of Population Density and Regency/City Minimum Wage (UMK) on the Open Unemployment Rate (TPT) in East Java Province, as well as to analyze the urgency of psychological resilience in building work readiness among young graduates. This research employs an explanatory quantitative approach based on aggregate secondary data obtained from official publications of the Central Bureau of Statistics (BPS) for the year 2025. The research sample was drawn using a total sampling technique, encompassing all 38 regencies/cities in East Java Province. Data analysis was conducted using multiple linear regression (Ordinary Least Squares). The findings prove that Population Density ($p = 0.006$; $t = 2.950$) and UMK ($p = 0.020$; $t = 2.432$) partially and simultaneously have a positive and significant effect on TPT, with the model's explanatory power accounting for 40.5% of the variability. In conclusion, high population ratios and wage standards compel industries to implement stringent recruitment efficiency, culminating in increased unemployment. The implications of these findings underscore the importance of Human Resource Development (HRD) interventions in higher education through the strengthening of psychological resilience to build adaptability and work readiness among students in facing the rigors of rejection within a multicultural work environment.

Keywords: Population Density; Minimum Wage; Open Unemployment; Psychological Resilience; Work Readiness

1. Introduction

Unemployment constitutes a complex problem occurring in Indonesia, particularly in regions with high population density such as Java Island. The island of Java serves as a densely populated area inhabited by half of Indonesia's total population; this density results in rapid labor force growth that is not matched by the availability of employment opportunities. One such region is East Java Province, which at one point ranked first in terms of the largest poor population, attributable to continuously increasing unemployment rates (Ashari & Athoillah, 2023). Urban centers such as Surabaya City, Sidoarjo Regency, and Gresik Regency continue to experience increasing population density due to the influx of job-seeking urban migrants. This phenomenon occurs because these regions implement high Regency/City Minimum Wage (UMK) standards. The government raises the provincial minimum wage (UMP) as a means of improving worker welfare and thereby reducing poverty in Indonesia (Hasanah et al., 2024; Pratomo & Saputra, 2015). However, high population density and minimum wage standards render the work ecosystem highly competitive and multicultural.

The limited absorption capacity of the formal industrial sector in certain regions results in an imbalance between job seekers and available job vacancies. Higher education, which is expected to facilitate access to the workforce, does not necessarily provide a guarantee of ease in job searching. This is evident from data from the Central Bureau of Statistics (BPS) for 2025, which shows that graduates of secondary and tertiary education still contribute significantly to unemployment rates, with vocational high school (SMK) graduates at 8.63%, followed by general high school (SMA) graduates at 6.88%, and university graduates at 5.39% (Ramdani et al., 2026). This high unemployment rate is also attributable to the mismatch between the skills possessed by new graduates and the competencies expected by

companies upon entering the workforce (Pratama et al., 2026).

Companies focus on job seekers who possess strong competencies, as the establishment of high minimum wages presents a complex issue. Neoclassical Economic Theory explains that setting minimum wages above market equilibrium encourages companies to reduce labor demand in order to streamline production costs, thereby further increasing unemployment rates (Ghinastri & Syafitri, 2024). However, from the perspective of human resource development psychology, Psychological Capital Theory can serve as a fundamental foundation for building work readiness, as it encompasses self-confidence, hope, optimism, and mental resilience that help individuals face various workplace challenges and recover from setbacks without losing motivation in the professional sphere (Azky & Mulyana, 2024).

A review of previous studies reveals inconsistent findings regarding the relationship between unemployment and graduate work readiness, indicating a research gap. Some previous studies have found that minimum wage increases significantly raise unemployment (Salsabila et al., 2024). However, research conducted by Saputra et al. (2025) found that the minimum wage has a significant effect in reducing unemployment rates. Prior research has also found that student work readiness is more heavily oriented toward self-confidence, yet rarely addresses mental resilience comprehensively as part of Psychological Capital for coping with the pressures of workplace competition (Azky & Mulyana, 2024). These inconsistent findings with such limitations necessitate further investigation, particularly within the competitive urban labor market ecosystem.

Therefore, this study examines the actual impact of macroeconomic factors such as minimum wage and population density on unemployment, as well as analyzing the urgency of Psychological Capital in facing the multicultural work environment and building work readiness in East Java Province. This research aims to clarify inconsistent findings by providing a more in-depth understanding of how structural pressures and psychological factors are interrelated in influencing labor unemployment dynamics.

2. Literature Review

Rapid demographic growth in urban areas and dynamic shifts in wage policy have significantly transformed the labor market landscape, particularly in relation to the phenomenon of unemployment. Open unemployment in agglomeration areas is often triggered by structural imbalances between industrial capacity and the ever-swelling volume of job seekers, compounded by intense competition and rigid qualification expectations. In Indonesia, this phenomenon has become increasingly prevalent alongside high rates of urbanization and the expansion of multicultural urban ecosystems, especially among young job seekers who must contend with hyper-competitive environments.

This research is grounded in a theoretical framework that integrates Demographic Theory and Neoclassical Economic Theory. Demographic Theory explains that population concentration and growth affect the equilibrium of labor supply in a given region. Simultaneously, Neoclassical Theory posits that external labor market stimuli, such as minimum wage policies, influence companies' demand for labor, often culminating in wage rigidity and workforce rationalization. In the context of this study, Population Density and Regency/City Minimum Wage (UMK) function as macro-structural stimuli (S), while the Open Unemployment Rate (TPT) serves as the market response (R), which ultimately triggers the urgency of Psychological Resilience as an individual's internal adaptive capacity in facing this reality. This framework highlights how macro-level structural pressures directly influence labor absorption dynamics.

2.1. The Effect of Population Density on the Open Unemployment Rate

Population density in each region can create economic agglomeration, which may enhance access and increase worker productivity, while also reducing transaction costs for companies (Djuarni et al., 2023). Population density reflects the spatial ratio of population concentration to area. Dense population concentration in urban areas creates a highly heterogeneous and hyper-competitive ecosystem. Theoretically, a large population will generate a proportionate labor force; however, this condition is often misaligned with the availability of sufficient employment opportunities. When the rate of job seekers exceeds the capacity for new job creation by the industrial sector, an oversupply (surplus) of labor occurs. The limited number of jobs amid high density naturally excludes many job seekers, causing a portion of the labor force to remain unabsorbed and ultimately triggering a surge in the open unemployment rate in the region.

H1: Population Density has a positive and significant effect on the Open Unemployment Rate (TPT).

2.2. The Effect of Regency/City Minimum Wage on the Open Unemployment Rate

The Regency/City Minimum Wage (UMK) is a government policy aimed at protecting workers from low wages, enabling them to meet their basic living needs (Zaini et al., 2025). Neoclassical Theory offers a perspective that minimum wages set above the equilibrium wage level can result in an excess

supply of labor (unemployment), as companies will employ fewer workers at higher wage levels (Kaufman, 2009; Pappas & Gkrammis, 2025). In neoclassical theory, wages are determined by marginal productivity, meaning that any intervention such as minimum wages can disrupt competitive market equilibrium and potentially cause unemployment (Kerswell, 2013; Lang & Dickens, 2017). The impact is more strongly felt by young workers with low productivity and limited skills. On the other hand, provincial minimum wage policies can assist labor absorption by reducing companies' monopsony power. Under monopsonistic theory, firms possess the power to set wages below workers' marginal productivity.

Minimum wage policies can help raise worker wages and reduce exploitation without necessarily reducing employment (Azar & Marinescu, 2024). The implementation of minimum wages indirectly affects skill development and investment in human resources through education and training. Higher minimum wages raise the requirements for job positions, thereby encouraging workers to invest in education and training to remain competitive in the labor market (Alessandrini & Milla, 2024; Ma et al., 2025). This policy fundamentally shifts the labor demand curve and reduces the absorption capacity of the formal sector, ultimately reinforcing unemployment figures.

H2: Regency/City Minimum Wage (UMK) has a positive and significant effect on the Open Unemployment Rate (TPT).

3. Research Methods

3.1. Object, time and Place

This study employs an explanatory research approach, which aims to reveal relationships between specific variables and explain existing generalizations. Specifically, this research examines the effect of Population Density and Regency/City Minimum Wage (UMK) on the Open Unemployment Rate (TPT). In terms of design, this study uses a quantitative approach based on secondary data, aiming to obtain factual data on macro phenomena occurring in society, particularly those encompassing economic, demographic, and labor dynamics aspects. The research was conducted in East Java Province, selected due to its very high population density resulting from urbanization flows, as well as the presence of industrial agglomeration centers that make unemployment dynamics in this region highly relevant as an object of study. The research utilized cross-sectional data from the year 2025.

3.2. Data Collection Techniques

The data used in this study are secondary data obtained from official publications of the Central Bureau of Statistics (BPS) for the year 2025. The data include Population Density (X1), Regency/City Minimum Wage (UMK) (X2), and Open Unemployment Rate (TPT) (Y) for all regencies and cities in East Java Province. The population in this study consisted of all administrative regions at the regency and city level in East Java Province. Because the population meeting the research criteria is finite and accessible, the sampling approach employed was total sampling (census). This technique specifically selects all entities without exception based on their relevance to the research objectives. Through this technique, the sample can precisely represent the actual conditions of each region experiencing demographic pressure and provide accurate information regarding labor market phenomena. The sample size was definitively set at 38 observation units (comprising 29 regencies and 9 cities), which is statistically considered highly representative for meeting the testing standards of structural relationship models in regional macroeconomic data.

3.3. Data Analysis Techniques

Data analysis was conducted using multiple linear regression analysis (Ordinary Least Squares) with the help of statistical software. The regression equation is formulated as follows:

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \varepsilon$$

Where:

Y = Open Unemployment Rate (TPT)

α = Constant

β_1, β_2 = Regression coefficients

X1 = Population Density

X2 = Regency/City Minimum Wage (UMK)

ε = Error term

4. Results and Discussion

4.1. Research Results

East Java Province is one of the largest economic and industrial agglomeration centers in Indonesia. Labor dynamics in this region are significantly influenced by dense population concentration in urban areas and the implementation of minimum wage standards that are adjusted annually. This study

involved 38 observation units consisting of 29 regencies and 9 cities in East Java Province, utilizing secondary data from official publications of the Central Bureau of Statistics (BPS) to examine the effect of Population Density (X1) and Regency/City Minimum Wage (UMK) (X2) on the Open Unemployment Rate (TPT) (Y).

The data tabulation results indicate that high density and wage standards in ring-1 industrial areas (such as Surabaya, Sidoarjo, and Gresik) are directly proportional to the high pressure on the labor market in those regions.

Table 1. Descriptive Statistics

Variable	N	Minimum	Maximum	Mean	Std. Deviation
Population Density (X1)	38	411	8,727	1,624.35	2,150.42
Regency/City Minimum Wage (UMK) (X2)	38	2,335,209	4,874,133	3,090,754	933,243
Open Unemployment Rate (TPT) (Y)	38	1.33	5.75	3.85	1.12

Sources: BPS East Java Province, 2025 (data processed)

Based on Table 1 above, Population Density in East Java exhibits a very wide range with an average of 1,624.35 persons per square kilometer. In terms of wage policy, the average UMK stands at IDR 3,090,754, with the highest value exceeding IDR 4.8 million in industrial areas. Furthermore, regarding the Open Unemployment Rate (TPT), the average across regencies/cities in East Java is 3.85%, indicating fairly intense competition in labor absorption.

All classical assumption test requirements have been satisfied. The normality test significance value is above 0.05, indicating that the residual data are normally distributed. The VIF values for all independent variables are below 10, confirming the absence of statistical overlap (multicollinearity) among the independent variables. Additionally, the model is free from heteroscedasticity issues. This ensures that the overall integrity of the multiple linear regression model is very robust and suitable for hypothesis testing.

Table 2. Multiple Linear Regression Results

Model (Variable)	Unstandardized Coefficients (B)	Std. Error	Standardized Coefficients (β)	t-value	Significance (p-value)
(Constant)	-23.209	9.19	–	2.525	0.016
Population Density (X1)	0.513	0.174	0.418	2.95	0.006
UMK (X2)	1.57	0.646	0.344	2.432	0.02

Source: Data processed, 2025

Referring to Table 2 regarding the direct effects of independent variables on the dependent variable, the purpose of this analysis is to determine whether macroeconomic stimuli have a tangible impact on the labor market.

This analysis provides the fundamental understanding that Population Density has a significance value of 0.006 (< 0.05) and a t-value of 2.950, which means that demographic density exerts a substantial positive impetus on increasing unemployment rates. Similarly, UMK has a significance value of 0.020 (< 0.05) and a t-value of 2.432, confirming that high wage standards exert a significant direct pressure on rising unemployment. By examining these pathways, this research can clearly identify that both external stimuli trigger a unidirectional response in tightening labor competition.

Table 3. Multiple Linear Regression Results

Indicator	Value	Sig. Value	Description
F-value (Simultaneous)	11.909	0	Significant
R-Square	0.405	–	Variability 40.5%

Source: Data processed, 2025

The F-test results show a value of 11.909 with a significance level of 0.000 (< 0.05). This step clarifies that collectively, Population Density and UMK constitute valid structural mechanisms in influencing the Open Unemployment Rate. The R-Square value of 0.405 indicates that 40.5% of the variability in unemployment dynamics (variable Y) in East Java Province can be explained by the two independent variables in this model. The remaining 59.5% is influenced by other factors or stimuli

outside this research model, reinforcing the view that labor absorption decisions are also influenced by internal company mechanisms and the psychological resilience of applicants.

4.2. Discussion

The Effect of Population Density on the Open Unemployment Rate (TPT)

Based on the results of this study, the first hypothesis is accepted. These results indicate that population density positively and significantly influences the Open Unemployment Rate (TPT). The denser the demographic concentration, particularly in the agglomeration areas of East Java Province, the higher the open unemployment rate. This uncontrolled density triggers an oversupply (surplus) of the labor force that far exceeds the labor absorption capacity of available jobs in the region. These results can also be explained through Demographic Theory and Economic Agglomeration Theory, wherein the urbanization flow of job seekers to urban centers creates a dense and multicultural social ecosystem. Population density in the primary industrial ring not only brings a surge in the quantity of applicants but also brings together various individuals from different ethnic, cultural, and customary backgrounds into a single hyper-competitive arena. This multicultural labor market dynamic makes competition extremely intense, such that applicants unable to adapt are easily excluded and become unemployed.

This finding aligns with the study by Lestari & Nilasari (2025), which demonstrated that demographic pressure and population agglomeration significantly contribute to narrowing employment opportunities and culminating in surges in open unemployment in urban areas. Furthermore, the results of this study also support the findings of Ashari & Athoillah (2023), which affirm that increased population concentration in economic growth center regions significantly increases the number of unemployed when not matched by real sector expansion.

The Effect of Regency/City Minimum Wage (UMK) on the Open Unemployment Rate (TPT)

Based on the results of this study, the second hypothesis is accepted. These results indicate that the Regency/City Minimum Wage (UMK) positively and significantly influences the Open Unemployment Rate (TPT). The higher the UMK standards set and enforced by regional governments in East Java, the higher the likelihood of increasing open unemployment rates. This result can be comprehensively explained through Neoclassical Economic Theory and the concept of Wage Rigidity. High UMK standards function as a macroeconomic stimulus that pressures companies' operational costs. In response to this wage pressure, companies are compelled to implement strict efficiency measures, such as freezing recruitment or rationalizing their workforce. In a high-cost work ecosystem, companies also become far more selective in recruiting talent, demanding candidates who possess not only superior hard skills but also cultural intelligence to work in multinational or multicultural teams. Fresh graduates who have not yet developed mature work readiness are directly eliminated by this natural selection process.

This finding aligns with research by Ghinastri & Syafitri (2024), which showed that UMK levels have a positive and significant effect on unemployment rates, where wage policies above market equilibrium force industries to limit labor absorption. Furthermore, the results of this study also support previous research by Salsabila et al. (2024), which found that minimum wage instruments significantly contribute to rising unemployment in East Java Province due to the inability of some business sectors to offset the burden of labor costs.

Psychological Implications: The Urgency of Psychological Resilience in a Multicultural Work Ecosystem

In response to the findings on macroeconomic effects above, this study highlights that structural pressures (high UMK and Population Density) exert an immense psychological impact on job seekers. The competitive and multicultural labor market ecosystem, where individuals are forced to compete with candidates from diverse cultural backgrounds, is prone to triggering culture shock, stress, and even identity crises due to repeated job rejections. Psychological Resilience emerges as a crucial internal psychological organism. Mental resilience serves as a bridge for young graduates to transform structural pressures into adaptive strategies. Individuals with high resilience do not easily succumb to rejection; rather, they are capable of managing emotions, adapting to multicultural work environments, and enhancing their self-efficacy. This supports the findings of Azky & Mulyana (2024), which confirm that psychological capital significantly and strongly influences student work readiness. Therefore, in order to survive and be absorbed into a labor market rife with demographic disparities and high wage expectations, university graduates must absolutely be equipped with Psychological Resilience to build genuine perceived employability.

4.3. Relevance to Research Objectives

The findings of this study successfully address the research objectives formulated in the introduction. First, this research confirms that both Population Density and Regency/City Minimum Wage have positive and significant effects on the Open Unemployment Rate in East Java Province, thereby clarifying the inconsistent findings of previous studies. Second, this study provides a novel contribution by integrating psychological perspectives through the analysis of Psychological Resilience urgency within a multicultural work context. The results demonstrate that structural macroeconomic pressures not only affect labor market dynamics directly but also create psychological challenges that require adaptive capacities from job seekers. The integration of macroeconomic analysis with psychological resilience discourse offers a more comprehensive understanding of unemployment dynamics, particularly in the context of urban labor markets characterized by intense competition and cultural diversity.

5. Conclusion

Based on the results of data analysis and hypothesis testing, this study concludes that Population Density and Regency/City Minimum Wage (UMK) have a positive and significant effect on the Open Unemployment Rate (TPT) in East Java Province. High demographic concentration in urban agglomeration areas triggers an oversupply (surplus) of the labor force that is disproportionate to the availability of employment opportunities. At the same time, the implementation of high UMK standards creates wage rigidity, compelling companies to undertake operational efficiency measures and tighten recruitment standards. The combination of these two macroeconomic pressures creates a hyper-competitive and multicultural work ecosystem in which applicants, particularly fresh graduates lacking work readiness and strong adaptive capacity, are eliminated and contribute to rising educated unemployment.

The implications of this research underscore the importance of Human Resource Development interventions in higher education institutions. Universities need to integrate psychological resilience training into their curricula to prepare students for the realities of a competitive multicultural workplace. Such training should include stress management, adaptability skills, and techniques for coping with rejection and building self-efficacy. Regional governments, manpower offices, and industry stakeholders need to strengthen collaboration through the concrete implementation of the Link and Match concept. This can be realized through industrial internship programs that provide direct exposure to multicultural work cultures, thereby equipping graduates with empirical experience before fully entering the labor market.

This study has several limitations. First, it relies on aggregate secondary data, which limits the ability to capture individual-level psychological dynamics. Second, the study is confined to East Java Province, which may limit the generalizability of findings to other regions with different demographic and economic characteristics. For subsequent studies, it is recommended to employ a mixed-method approach to qualitatively explore the dynamics of psychological resilience and the phenomenon of unemployment from the perspective of job seekers' subjective experiences. Additionally, future researchers may add other variables such as digital literacy, 21st-century skills, or the role of the informal economic sector to enrich the model's predictive capacity regarding labor dynamics.

Bibliography

- Alessandrini, D., & Milla, J. (2024). Minimum-Wage Effects on Human Capital Accumulation: Evidence from Canadian Data. *Journal of Human Capital*, 18(2), 346–376. <https://doi.org/10.1086/728084>
- Ashari, R. T., & Athoillah, M. (2023). Analisis Pengaruh Tingkat Pengangguran Terbuka, Tingkat Partisipasi Angkatan Kerja, Upah Minimum, Indeks Pembangunan Manusia, Pertumbuhan Ekonomi Dan Jumlah Penduduk Terhadap Kemiskinan Di Kawasan Tapal Kuda. *Journal of Development Economic and Social Studies*, 2(2), 313–326. <https://doi.org/10.21776/jdess.2023.02.2.08>
- Azar, J., & Marinescu, I. (2024). Monopsony Power in the Labor Market: From Theory to Policy. *Annual Review of Economics*, 16(1), 491–518. <https://doi.org/10.1146/annurev-economics-072823-030431>
- Azky, S., & Mulyana, O. P. (2024). Hubungan antara Modal Psikologis dengan Kesiapan Kerja pada Mahasiswa. *Character Jurnal Penelitian Psikologi*, 11(02), 1098–1116. <https://doi.org/10.26740/cjpp.v11n2.p1098-1116>
- Djuarni, W., Indiatuti, R., Purnagunawan, Rd. M., & Setiawan, M. (2023). Impact of Agglomeration on Labour Productivity: Food and Beverage Industry in Indonesia; [Impak Penumpuan terhadap Produktivi Buruh: Industri Makanan dan Minuman di Indonesia]. *Jurnal Ekonomi Malaysia*,

- 57(2). <https://doi.org/10.17576/JEM-2023-5702-07>
- Ghinastri, S. L., & Syafitri, W. (2024). Pengaruh Upah Minimum KabupatenKota (UMK) Terhadap Tingkat Pengangguran Terbuka (TPT) Dan Kemiskinan. *Journal of Development Economic and Social Studies*, 3(1), 72–83. <https://doi.org/10.21776/jdess.2024.03.1.6>
- Hasanah, H., Nachrowi, N. D., Wisana, I. D. G. K., & Siregar, H. (2024). Could the minimum wage policy reduce food insecurity among households of formal workers in Indonesia? *Agriculture and Food Security*, 13(1). <https://doi.org/10.1186/s40066-023-00451-3>
- Kaufman, B. E. (2009). Promoting labour market efficiency and fairness through a legal minimum wage: The webbs and the social cost of labour. *British Journal of Industrial Relations*, 47(2), 306–326. <https://doi.org/10.1111/j.1467-8543.2009.00725.x>
- Kerswell, T. (2013). Productivity and Wages: What Grows for Workers without Power and Institutions. *Social Change*, 43(4), 507–531. <https://doi.org/10.1177/0049085713502591>
- Lang, K., & Dickens, W. T. (2017). Neoclassical and sociological perspectives on segmented labor markets. In *Industries, Firms, and Jobs: Sociological and Economic Approaches: Expanded Edition* (pp. 65–88). <https://doi.org/10.4324/9780203788639>
- Ma, S., Mo, B., & Meng, X. (2025). Minimum wage and labor self-funded training: evidence from China. *Journal of Economic Behavior and Organization*, 235. <https://doi.org/10.1016/j.jebo.2025.107050>
- Pappas, A., & Gkrammis, A. (2025). Minimum wage and unemployment dynamics in the EU: A panel data analysis. *National Accounting Review*, 7(4), 522–545. <https://doi.org/10.3934/NAR.2025022>
- Pratama, A., Rangga Kurniawan, B., Studi Manajemen, P., & Ekonomi dan Bisnis, F. (2026). Strategi Pengembangan SDM dalam Mengatasi Tingginya Pengangguran Lulusan Muda di Provinsi Banten. *Indonesian Journal of Innovation Multidisipliner Research*, 4.
- Pratomo, D. S., & Saputra, P. M. A. (2015). Does minimum wage policy help poor workers? Evidence from Indonesia. *Journal of Applied Economic Sciences*, 10(8).
- Ramdani, H., Fauziah, R. A., Aeni, S. N., Nur, M., & Abdullah, A. (2026). Pengangguran Lulusan Sma, Smk, dan Perguruan Tinggi di Indonesia dalam Era Bonus Demografi: Peluang yang Terabaikan Atau Beban Demografi Baru? *Arus Jurnal Sosial Dan Humaniora (AJSH)*, 6(1), 705–725. <http://jurnal.ardenjaya.com/index.php/ajsh>
- Salsabila, S. I., Nabila, S., Rianti, R. A., Priyoga, D., & Sujianto, A. E. (2024). Pengaruh Upah Minimum Dan Tingkat Partisipasi Angkatan Kerja Terhadap Tingkat Pengangguran Terbuka Di Jawa Timur Periode 2018-2022. *Journal of Administrative and Sosial Science (JASS)*, 5(1), 92–107.
- Saputra, W., Mahrizal, & Yasrizal. (2025). Determinan Pengangguran Terdidik Lulusan Perguruan Tinggi di Kabupaten Aceh Barat Tahun 2010-2022. *Ekopedia: Jurnal Ilmiah Ekonomi*, 1(3), 947–962. <https://doi.org/10.63822/wjv5ey29>
- Zaini, A., Ayubi, S. A., Rahman, A., Muttaqin, E. Z., Mursidah, I., & Anggraeni, N. (2025). Legal-Philosophical Dimensions Of Social Justice And Utilitarianism In Determining The Regional Minimum Wage Of Banten Province. *Jurnal Hukum Unissula*, 41(4), 985–1014. <https://doi.org/10.26532/jh.v41i4.46451>