

Analyzing the impact of population size, regional minimum wage, and economic growth on unemployment

Ika Sepdianty*

Faculty of Economics and Business, Palangka Raya University

Sunaryo N Tuah

Faculty of Economics and Business, Palangka Raya University

*corresponding author

email : ikasdianty87@gmail.com

address : Palangka Raya, Central Kalimantan

©2024

Growth All rights reserved

pp. 111 - 118

ABSTRACT

The problem of unemployment is indeed very complex to discuss, because it can be related to several economic indicators that have a relationship with the open unemployment rate. The role of the government is needed to overcome the problem of unemployment in the region. Uncontrolled population numbers can result in not achieving economic development goals. The success of economic development can be seen from economic growth and the smaller inequality in an area, with the increasing economic development of a region, it is expected to be able to reduce the existing unemployment rate where welfare will be achieved properly. This study has a purpose: to analyze the effect of population, regional minimum wages, and economic growth on the open unemployment rate in Central Kalimantan. This study uses secondary data which is time series data from 2013-2019. Analysis of the data used is panel data with the help of the eviews program. The result of this study is that the variables of population, regional minimum wage, and economic growth have a positive effect on the open unemployment rate in Central Kalimantan. When the population increases and when real wages increase, companies will reduce the demand for labor, while the supply of labor is higher than the demand for labor, then this causes the unemployment rate to increase.

Keywords: Labor, UMR, Economic Growth, Open Unemployment

I. INTRODUCTION

Indonesia, a growing nation, is renowned for its copious natural resources and sizable population, which contribute to its reputation as a resource-rich country. Indonesia possesses abundant natural resources, including mineral richness, mining resources, oil, gas, as well as underwater resources and fisheries. This potential is further bolstered by Indonesia's abundant people resources, as it ranks fourth in terms of population size globally. If natural resources and human resources are effectively managed, this has the potential to yield significant economic benefits for Indonesia, fostering development and growth (Kurniawan & Managi, 2018).

Attainment of regional development outcomes is a significant concern for society. Improved conditions resulting from regional development foster more community recognition of the regional administration, hence promoting heightened community engagement in the development process (Mutiarani & Siswantoro, 2020). Regarding regional macroeconomic development, three variables might serve as benchmarks for measuring success: economic growth, employment, and inflation. An inherent issue frequently encountered by a nation is the predicament of employment manifested as unemployment. Unemployment is a prevalent occurrence in developing nations, Indonesia included

(Olilingo & Putra, 2020).

The issue of unemployment in Indonesia is a grave concern due to its potential to give rise to various social problems (Zakiah et al., 2023). High unemployment poses significant economic and social challenges. Individuals who are unemployed may experience a decline in self-assurance, potentially resulting in criminal behavior and conflicts with society. Unemployment is a pressing economic and social issue that requires resolution. Unemployment refers to the condition in which an individual who is actively seeking employment within the labor force is unable to secure a job (Suhatman et al., 2022).

Unemployment is a pervasive issue encountered by all nations, including rich countries, with particular prevalence in emerging countries like Indonesia (Beatris & Zakiah, 2022). Every country, regardless of its classification as developed or developing, consistently encounters the issue of unemployment. The distinction lies in the fact that emerging nations lack the capacity to offer welfare payments to their unemployed populace, but established nations possess the ability to ensure this assurance. Unemployment typically arises when the supply of workers or job seekers exceeds the demand for available jobs that can accommodate them (Giovanni & Ekobelawati, 2021).

The issue of unemployment demands significant attention due to its propensity to engender susceptibility to diverse crimes, social and political unrest, and poverty (Giovanni & Fadli, 2020). Additionally, unemployment represents a squandered resource. Unemployment is a significant issue that hinders economic development in the province of Central Kalimantan (Tuah, 2023). In order to address unemployment, it is imperative to achieve a harmonious equilibrium between the quantity of job opportunities and the size of the available labor force (Pambudi & Harjanto, 2020).

If the growth in population and workforce is not accompanied by a corresponding increase in job opportunities, the number of unemployed individuals will rise. The data requested pertains to the labor force count, labor force participation rate, and open unemployment rate of districts/cities within the province of Central Kalimantan.

Table 1. Number of Unemployed in Central Kalimantan

Tahun	Jumlah Pengangguran (%)
2015	4,54
2016	4,82
2017	4,23
2018	4,01
2019	4,10

Table 1 demonstrates the varying unemployment rate in Central Kalimantan throughout several years. Over the course of five years of research, the data reveals that the peak unemployment rate was observed in 2016, reaching 4.82%, and the lowest unemployment rate happened in 2018, specifically at 4.01%. The level of unemployment in Central Kalimantan remains significantly elevated, with an average annual unemployment rate of 4.20% between 2015 and 2019. The unemployment rate is influenced by population growth since it leads to an increase in the number of workers and the labor force .

In developing countries, there is a higher rate of population expansion, which includes the labor force, compared to the pace of employment growth. Consequently, there is a demand for more work opportunities to accommodate the expanding labor force. Consequently, a portion of the labor force is unable to secure employment and consequently becomes unemployed. Here is the population data for Central Kalimantan from 2015 to 2019 (Tuah, 2022). Economic growth is a significant factor that affects the unemployment rate. When there is economic growth, it can lead to a decrease in unemployment by generating economic opportunities in various places. Economic growth refers to the expansion of economic activities that result in an increase in the production of products and services, leading to an improvement in society's overall wealth. Economic growth refers to the improvement or development in the economic state of a country over a specific period, as measured by various indices (Kurniawan & Managi, 2018). The indicators include a rise in both national income and per capita income, a higher number of employed individuals compared to the unemployed, and a decrease in poverty rates. The

government can formulate state revenues and development goals by assessing the amount of economic growth (Nuraini & Hariyani, 2019). Insufficient economic growth might serve as a foundation for obtaining financial aid from international entities, such as the World Bank or other nations. For businesses, the degree of economic growth serves as a foundation for devising strategies to enhance the development of their products and resources. Rather than encountering economic expansion, there is a downturn in the economy.

II. LITERATURE REVIEW

Malthusian School (led by Thomas Robert Malthus). Malthus was the first individual to introduce the concept of population. In his work "Essay on Population," Malthus posited that sustenance played a crucial role in survival, asserting that human appetite could not be curbed and that population expansion outpaced food production at a significantly accelerated rate (Kelly, 2021). Malthus's hypothesis posits that population expansion adheres to a geometric progression, but the increase in food availability adheres to an arithmetic sequence. In this scenario, there is an issue of rapid population growth in urban areas that is not being offset by a decrease in food supply. This imbalance is undesirable, particularly when considering Malthus' hypothesis (Montano & García-López, 2020).

Marxist ideology (Karl Marx & Friedrich Engels). This school disagrees with Malthus' theory that if the population is not constrained, there will be a scarcity of food. Marxists argue that population pressure in a society does not primarily refer to pressure on food supply, but rather to the strain on employment prospects, particularly in capitalist nations (Holdren & Tucker, 2020). Marxists contend that an increase in population leads to a corresponding increase in production, hence negating the necessity for population control. Countries that endorse the Malthusian theory often consist of capitalist economies, including the United States, England, France, Australia, Canada, and others. Conversely, countries that endorse Marxist ideology are typically characterized by socialist economies, such as Eastern European nations, China, Korea, Russia, and Vietnam (Jiang, 2023). The fundamental tenet of Marxism is rooted in the notion that humans possess the capacity to acclimate to societal advancements throughout the course of history. The disparity between the Marxist and Malthusian perspectives is in the contention that "Natural Resources" are unable of being harnessed or sustained at a pace commensurate with population expansion. Marxists argue that population pressure in a society does not primarily refer to demand on food resources, but rather to the strain on employment prospects, particularly in capitalist nations. Marxists contend that an increase in population leads to a corresponding increase in production, hence negating the necessity for population control Blum.

The Neo-Malthusian School is a perspective that follows the ideas of Thomas Malthus, who believed that population growth will eventually outpace the availability of resources, leading to social and environmental problems (Michel, 2021). Garreth Hardin and Paul Ehrlich In the 20th century, there was a resurgence of controversy surrounding Malthus's idea. This group aligns with the Malthusian school of thought, but takes a more extreme stance. The Malthusian school advocates for population reduction through the implementation of "Preventive Check" measures, specifically the use of contraception. During the 1960s and 1970s, pictures captured from orbit depicted the Earth resembling a vessel navigating with restricted reserves of fuel and sustenance. Eventually, this vessel will exhaust its fuel and food supplies, leading to a catastrophic event on board (Locher, 2020).

Economic growth is a quantitative indicator that measures the progress of an economy in a specific year relative to the preceding year. Economic growth is the expansion of a country's Gross Domestic Product (GDP) or Gross National Product (GNP), irrespective of whether the increase surpasses or falls short of the population growth rate, and regardless of any alterations in the economic structure or enhancements in the institutional framework (Yemelyanov et al., 2021). Economic growth refers to a substantial rise in a nation's income, specifically through an increase in per capita income, over a specific period of time. GDP is frequently regarded as the most accurate gauge of economic performance. The primary objective of GDP is to encapsulate the magnitude of economic transactions

inside a specific monetary value during a designated timeframe. There are two perspectives when considering the magnitude of GDP. The first method is to see GDP as the aggregate income of all individuals in the economy. Gross Domestic Product (GDP) can be alternatively understood as the overall amount of money spent on the production of goods and services within an economy. From the aforementioned descriptions, it can be inferred that economic growth refers to the expansion of economic activities within an economy, resulting in a long-term increase in Gross Domestic Product (GDP) or Gross National Income (GNI), irrespective of population growth or changes in the economic structure (Mankiw, 2022).

Unemployment refers to the condition in which an individual who is actively seeking employment within the labor force is unable to secure a job. An individual who is not engaged in employment and is not actively seeking employment is not categorized as unemployed. Unemployment can arise as a result of disparities in the labor market (Kiley, 2022). This indicates an imbalance when the quantity of available workers surpasses the quantity of workers required. As per the Central Statistics Agency (BPS), unemployment refers to individuals who are actively seeking employment or preparing to start a new business, as well as those who have been offered a job but have not yet commenced working. Unemployment is a significant macroeconomic issue that directly impacts individuals and is of utmost gravity. For the majority of individuals, the loss of employment results in a decrease in their level of life and causes psychological anguish (Wahyuningsih et al., 2020).

III. METHODS

This study seeks to elucidate the correlation between population dynamics, regional minimum wages, and economic growth with the extent of open unemployment in Central Kalimantan Province. The data utilized is secondary data sourced from the Central Statistics Agency (BPS) and other pertinent sources. The data utilized consists of annual time series data collected from the period of 2015 to 2019. The author obtained the data for this research using the library research method, which involves utilizing library materials such as scientific publications, articles, journals, magazines, and scientific research reports that are relevant to the research themes. The data collection method employed in this research involves direct recording of time series data received from the Indonesian Central Statistics Agency (BPS) and other relevant sources.

The research hypothesis is proven using an analytical model that examines the impact of population, regional minimum wage, and economic growth on open unemployment in Central Kalimantan from 2015 to 2019. The examination of this data can be utilized to ascertain the elements that impact open unemployment by examining the influence of the independent variable on the dependent variable during that specific period. The analysis of the link and influence between variables is conducted through the utilization of economic theory, statistical theory, and econometric theory. The employed methodology entails the utilization of multiple linear regression analysis to elucidate the correlation between population, inflation, regional minimum wages, and economic growth with regards to open unemployment in Central Kalimantan.

This study employs panel data regression analysis techniques and data manipulation tools utilizing the Eviews 9 software. Panel data refers to a dataset that combines information from both time series and cross-sectional data (Hadi Ismanto & Pebruary, 2021). Time series data refers to observational data collected on a single research subject over a specific time period, such as the years 2014 to 2019. Meanwhile, cross-sectional data refers to observational data collected from multiple research subjects simultaneously, such as within a single year. The cross-sectional data include 13 districts and 1 city within the Central Kalimantan Province. Panel data refers to the analysis of observations collected over time on several participants.

IV. RESULTS AND DISCUSSION

Central Kalimantan Province was originally included within the territorial jurisdiction of the South

Kalimantan residency area. The formation of the Autonomous Province of Central Kalimantan was founded on the desires of the people of Central Kalimantan and was established in accordance with Emergency Law no. 10 of 1957, which took effect on 23 May 1957. The President of the First Republic of Indonesia, Ir. Soekarno, conducted the inauguration of the first pole for the building of Palangka Raya City on July 17, 1957. The date of birth or creation of Central Kalimantan Province was subsequently established as May 23, 1957.

Economic growth, refers to the expansion of a nation's income within a specific timeframe, indicating a rise in both production capacity and services. Gross Domestic Product (GDP) refers to the total value of all final goods and services produced within a specific region (such as a province or district/city) during a given period of time (often one calendar year). The economic activities encompass a wide range of sectors, including agriculture, mining, processing industry, and services (Batrancea et al., 2022). The Gross Regional Domestic Product (GRDP) is a metric used to assess the economic expansion of a certain region (Statistik, 2021).

Table 2. GRDP and Economic Growth of Central Kalimantan Province Based on Constant Prices 2016-2020 (Rp Million)

No	Kabupaten/ Kota	Tahun									
		2016		2017		2018		2019		2020	
		PDRB	(%)	PDRB	(%)	PDRB	(%)	PDRB	(%)	PDRB	(%)
1	Kotawaringin Barat	10.704.711	5.85	11.432.688	6.80	12.171.160	6.46	12.875.812	5.79	13.004.133	0.98
2	Kotawaringin Timur	14.932.757	7.93	16.118.192	7.94	17.234.264	6.93	18.468.087	7.16	17.892.282	-3.09
3	Kapuas	8.842.069	7.29	9.515.602	7.62	10.182.288	7.01	10.910.917	7.16	10.798.257	-1.04
4	Barito Selatan	3.754.054	5.63	3.958.245	5.44	4.160.875	5.12	4.365.953	4.93	4.240.166	-2.91
5	Barito Utara	6.008.577	5.48	6.369.617	6.01	6.748.596	5.95	7.114.495	5.42	6.955.410	-2.24
6	Sukamara	2.381.089	6.12	2.530.336	6.27	2.686.337	6.17	2.848.949	6.05	2.905.498	1.98
7	Lamandau	3.074.911	6.69	3.280.863	6.70	3.505.911	6.86	3.747.248	6.88	3.815.647	1.85
8	Seruyan	5.196.334	5.12	5.465.511	5.18	5.750.252	5.21	6.048.859	5.19	5.908.284	-2.23
9	Katingan	4.251.997	6.54	4.531.079	6.56	4.829.628	6.59	5.110.045	5.81	4.943.731	-3.25
10	Pulang Pisau	2.845.265	6.06	3.011.275	5.83	3.190.169	5.94	3.393.327	6.37	3.484.581	2.69
11	Gunung Mas	2.866.190	7.00	3.056.181	6.63	3.266.129	6.87	3.504.388	7.29	3.619.286	3.36
12	Barito Timur	4.509.974	5.50	4.779.685	5.98	5.052.798	5.71	5.327.941	5.45	5.182.503	-2.73
13	Murung Raya	4.953.891	5.76	5.244.659	5.87	5.538.869	5.61	5.867.650	5.94	5.722.378	-2.48
14	Palangka Raya	8.859.548	6.92	9.479.165	6.99	10.154.119	7.12	10.881.804	7.17	10.594.467	-2.67
	Kalimantan Tengah	83.181.367	6.35	88.773.098	6.73	94.471.395	5.61	100.465.475	6.12	99.066.623	-1.40

There are five districts that consistently observe an annual growth, specifically West Kotawaringin, Sukamara, Lamandau, Pulang Pisau, and Gunung Mas. Among the five regencies, West Kotawaringin exhibits the most significant growth rate in Gross Regional Domestic Product. Based on the data from 2016, the Gross Regional Domestic Product (GRDP) of West Kotawaringin was IDR 10,704,711. In 2018, it increased to Rp. 12,171,160, and it is projected to reach IDR 13,004,133 in 2020. This is attributed to the several industries that contribute to the economy, including plantations, agriculture, hotels, shopping malls, and commodities and services. There are a total of 8 regencies and 1 city that exhibit volatile or variable Gross Regional Domestic Product (GDP) growth rates. These regions include East Kotawaringin, Kapuas, South Barito, North Barito, Seruyan, Katingan, East Barito, Murung Raya, and Palangka Raya. Upon examining the data, it is evident that East Kotawaringin Regency underwent a significant and rapid reduction in value. In 2016, the decline amounted to Rp. 14,932,757, which further increased to IDR 17,234,264 in 2018. However, there was a subsequent increase of IDR 18,468,087 in 2019, followed by a decrease of IDR 17,892,282 in 2020.

According to Agustina (2020), population plays a crucial role in the process of development.

The presence of population issues in a region can exert a significant influence. There has been a significant increase in global population during the past few decades. The population increase in a country primarily depends on three factors: fertility, death, and migration.

The Chow test is a statistical test employed to determine the superior model between the Common Effect Model and the Fixed Effect Model. If the probability value for the cross-section F in the Fixed Effect Model approach regression test is less than $\alpha = 5\%$, the null hypothesis (HO) is rejected and the alternative hypothesis (H1) is accepted. In this case, the accepted model is the Fixed Effect Model. Alternatively, if the probability value for the cross section F exceeds $\alpha = 5\%$, the null hypothesis (HO) is accepted and the alternative hypothesis (H1) is rejected, indicating that the Common Effect Model is the preferred model. The Chow test is based on the following hypothesis:

- HO: employs estimation based on the Common Effect Model
- H1: employing the estimation method of Fixed Effect Model

Table 3. Chow test results

Effects Test	Statistic	d.f.	Prob.
Cross-section F	80.656778	(13,52)	0.0000
Cross-section Chi-square	213.661757	13	0.0000

The Hausman test is employed to evaluate and select a superior model between the Fixed Effect Model and the Random Effect Model. If the probability value for chi-square in the Random Effect Model approach regression test is less than $\alpha = 5\%$, the null hypothesis (HO) is rejected and the alternative hypothesis (H1) is accepted. In this case, the acceptable model is the Fixed Effect Model. Conversely, if the probability value for chi-square exceeds $\alpha = 5\%$, the null hypothesis (HO) is accepted and the alternative hypothesis (H1) is rejected, indicating that the Random Effect Model is the chosen model. Subsequently, the Lagrange Multiplier Test is conducted. The test is designed based on the following hypothesis:

- HO: employs estimation using the Random Effect Model
- H1: using Fixed Effect Model estimation

According to the test results conducted by this study, it is evident that the size of the population has an impact on the level of open unemployment in Central Kalimantan Province. The impact of population on open unemployment is demonstrated by a probability value of 0.826, which is greater than the significance level of 0.05. Furthermore, there is a positive correlation between population and the coefficient value, which is measured at 1.630. Population is the determinant of open unemployment.

According to the test results conducted in this study, it has been determined that the UMR (Minimum Regional Wage) has a good and considerable impact on the economic growth in Central Kalimantan Province. The study demonstrates that the UMR has a substantial impact on economic growth, as indicated by a probability value of 0.036, which is greater than the significance level of 0.05. Additionally, the coefficient value of 1.500 shows a negative relationship with the UMR.

According to the test results conducted by this study, it is evident that economic expansion affects the level of open unemployment in Central Kalimantan Province. The relationship between economic growth and open unemployment is statistically significant, as evidenced by a probability value of 0.900 < 0.05. Furthermore, the coefficient value of 0.038 indicates a positive correlation between the two variables. The economic expansion in Central Kalimantan Province has a direct impact on the level of open unemployment.

This outcome aligns with Malthus' viewpoint. Malthus contended that the magnitude of the population has a bearing on the occurrence of unemployment (Lindhiarta, 2014). As the population and real earnings rise, employers will decrease their demand for workers, resulting in an increase in the unemployment rate due to an excess supply of labor. This research finding aligns with the study conducted before, which examined the correlation between the minimum wage and unemployment rate in the city of East Java (Affandi et al., 2023). Both studies yielded similar results, indicating a negative association between the minimum wage and unemployment. This suggests that due to the inflexibility

of salaries, it is necessary for the government to enhance wage legislation in order to address this inflexibility. According to Adam Smith's view, the efficient distribution of human resources is the catalyst for economic expansion. Rising population can stimulate economic growth, leading to market expansion and an increase in economic specialization. The obtained coefficient value is 0.038. The economic expansion in Central Kalimantan Province directly impacts the level of open unemployment.

V. CONCLUSION

The research findings indicate that the population size, regional minimum wage, and economic growth in Central Kalimantan Province throughout the period of 2013-2019 have a significant impact on the open unemployment rate. The population in Central Kalimantan Province has a direct and substantial impact on the rate of open unemployment. The Regional Minimum Wage in Central Kalimantan Province has a notable and meaningful impact on the level of Open Unemployment. Economic growth exerts a favorable and substantial impact on the level of open unemployment in the province of Central Kalimantan.

BIBLIOGRAPHY

- Affandi, H. D., Syafitri, W., & Bintoro, N. S. (2023). The Relationship Between Minimum Wage and Education Index with Unemployment in the Regencies and Cities of East Java. *Journal of International Conference Proceedings*, 6(2), 82–95.
- Batrancea, L., Rathnaswamy, M. K., & Batrancea, I. (2022). A panel data analysis on determinants of economic growth in seven non-BCBS Countries. *Journal of the Knowledge Economy*, 13(2), 1651–1665.
- Beatris, D., & Zakiah, W. (2022). Peranan Sektor Industri, Penanaman Modal, Tenaga Kerja dan Perdagangan Luar Negeri terhadap Pertumbuhan Ekonomi di Provinsi Kalimantan Tengah. *Jurnal Ekonomi Integra*, 12(1), 123–142.
- Giovanni, J., & Ekobelawati, F. (2021). Analisis rekrutmen pegawai dan dampaknya pada tingkat pengangguran di kota pontianak. *Jurnal Ekonomi Integra*, 11(1), 71–80.
- Giovanni, J., & Fadli, M. F. (2020). Pengaruh Pertumbuhan Ekonomi Terhadap Kesempatan Kerja Di Kota Pontianak. *Referensi: Jurnal Ilmu Manajemen Dan Akuntansi*, 8(1), 10–17.
- Hadi Ismanto, S. E., & Pebruary, S. (2021). *Aplikasi SPSS dan Eviews dalam analisis data penelitian*. Deepublish.
- Holdren, N., & Tucker, E. (2020). Marxist theories of Law past and present: A meditation occasioned by the 25th anniversary of Law, labor, and ideology. *Law & Social Inquiry*, 45(4), 1142–1169.
- Jiang, L. (2023). Integration of Marxist ideology education in the education of ideologic and politic system of colleges and universities. *Applied Mathematics and Nonlinear Sciences*.
- Kelly, M. T. (2021). Populate the Internationalist Movement: An Anti-imperialist Critique of Malthus and Neo-Malthusianism. *Ecology*.
- Kiley, M. T. (2022). Unemployment risk. *Journal of Money, Credit and Banking*, 54(5), 1407–1424.
- Kurniawan, R., & Managi, S. (2018). Economic growth and sustainable development in Indonesia: an assessment. *Bulletin of Indonesian Economic Studies*, 54(3), 339–361.
- Locher, F. (2020). Neo-malthusian environmentalism, world fisheries crisis, and the global commons, 1950s–1970s. *The Historical Journal*, 63(1), 187–207.
- Mankiw, N. G. (2022). *Government debt and capital accumulation in an era of low interest rates*. National Bureau of Economic Research.
- Michel, P. (2021). Model of neo-Malthusian population anticipating future changes in resources. *Theoretical Population Biology*, 140, 16–31.
- Montano, B., & García-López, M. (2020). Malthusianism of the 21st century. *Environmental and Sustainability Indicators*, 6, 100032.
- Mutiarani, N. D., & Siswanto, D. (2020). The impact of local government characteristics on the

- accomplishment of Sustainable Development Goals (SDGs). *Cogent Business & Management*, 7(1), 1847751.
- Nuraini, I., & Hariyani, H. F. (2019). Quality economic growth as an indicator of economic development. *Jurnal Ekonomi Pembangunan: Kajian Masalah Ekonomi Dan Pembangunan*, 20(1), 80–86.
- Olilingo, F. Z., & Putra, A. H. P. K. (2020). How Indonesia economics works: Correlation analysis of macroeconomics in 2010–2019. *The Journal of Asian Finance, Economics and Business (JAFEB)*, 7(8), 117–130.
- Pambudi, N. A., & Harjanto, B. (2020). Vocational education in Indonesia: History, development, opportunities, and challenges. *Children and Youth Services Review*, 115, 105092.
- Statistik, B. P. (2021). Berita resmi statistik. *Bps. Go. Id*, 27, 1–52.
- Suhatman, R., Hukom, A., & Zakiah, W. (2022). Financial Policy Analysis of Infrastructure Development During the Covid-19 Pandemic in Palangka Raya City. *Budapest International Research and Critics Institute-Journal (BIRCI-Journal)*, 5(2).
- Tuah, S. N. (2022). Tingkat pertumbuhan ekonomi dan kemiskinan masyarakat kabupaten kotawaringin barat sebagai dampak dari penerapan kemandirian keuangan daerah. *Jurnal Ekonomi Integra*, 12(2), 316–322.
- Tuah, S. N. (2023). Analisis pengaruh ketimpangan pembangunan, pertumbuhan ekonomi dan ipm terhadap kemiskinan di regional kalimantan. *Jurnal Ekonomi Integra*, 13(1), 182–193.
- Wahyuningsih, D., Yunaningsih, A., Priadana, M. S., Darma, D. C., & Purwadi, P. (2020). Why are unemployment and poverty still happening in Borneo Island, Indonesia? *International Journal of Economics and Financial Issues*, 10(2), 235.
- Yemelyanov, O., Symak, A., Petrushka, T., Vovk, O., Ivanytska, O., Symak, D., Havryliak, A., Danylovyh, T., & Lesyk, L. (2021). Criteria, indicators, and factors of the sustainable energy-saving economic development: the case of natural gas consumption. *Energies*, 14(18), 5999.
- Zakiah, W., Rizani, A., Subianto, P., & Pungan, Y. (2023). Identifikasi potensi unggulan provinsi kalimantan tengah sebagai dasar perencanaan pembangunan di masa depan. *Jurnal Ekonomi Integra*, 13(1), 201–216.