Islamic Banking Development and Its Influence on Unemployment in Indonesia

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ARTICLE INFO	ABSTRACT
	Purpose: This paper aims to discover how the Islamic Bank's development affects unemployment in Indonesia. It also tries to reveal to what extent the Islamic Bank's development affects unemployment in Indonesia. **Design/Method/Approach**: This study is a quantitative research that uses the Generalized Method of Moments (GMM) in analyzing the provincial data spanning from 2010 to 2021in Indonesia. **Findings:** The findings of this research show that Islamic Bank's asset has a positive relationship with unemployment in Indonesia, whereby a 1 percent increase in Islamic Bank's asset will increase unemployment by 0.21%. Likewise, a 1 percent increase in the Third-party Fund of Islamic Bank in Indonesia contributed to a rise in unemployment by 0.09 %. On the contrary, total financing channeled by the Islamic Bank in Indonesia reduced unemployment by 0.13 %. It can be seen from the result that the impact of Islamic Bank development in Indonesia can be seen from the total funds channeled to the business. The more the funds are channeled to the business, the more it can reduce unemployment in Indonesia. **Originality/Values**: This study is the first to analyze how Islamic Bank would influence unemployment using third-party funds, total assets and total financing.

INTRODUCTION

Unemployment is a global issue in every country worldwide regardless of the level of development. In developing countries, such an issue becomes a hindrance for their people in meeting their needs, especially for countries with a large population[1]. This was usually caused by the inadequacy of job opportunities despite the abundance of the labor force. The persistence of this issue can lead to a bad image of the government's performance, political instability in society, and unsustainable growth of the economy in the long term and can even lead to a rise in the crime rate[2]. Hence, minimizing unemployment cases became one of the important concerns of the government every period.

Indonesia in this case is reluctant to this issue of unemployment since it is included in the top five countries with the highest population in the world. Concerning this case, the government of Indonesia has created an unemployment reduction movement by integrating the Ministry of Cooperation, the Ministry of Trade and Industry, the Ministry of Labor, the Ministry of Development, state-owned enterprises and financial institutions by imposing some policies, providing facilities and any other forms of stimulus[3]. Considering the huge population of Indonesia, mere government action is inadequate and thus everyone is responsible for resolving this issue.

Increasing national consumption is one of the keys to creating more jobs as it would lead to a rise in demand[4]. The government in this case spends more to increase the demand. When the demand increases, more labor and capital are needed to increase production. CNN released data from the Ministry of Small and Medium Enterprises that small and medium enterprises (SMEs) in Indonesia have a huge contribution to stabilizing the economy as they absorbed 97 percent of total workers and contributed to 60.5 percent of GDP in 2019. This implies that developing SMEs is essential in stabilizing the economy.

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[1] Rubee Singh, "The Cause of Unemployment in Current Market Scenario," *Vivechan International Journal of Research*, vol. 9, 2018.

[2] Eka Khaerandy Oktafianto, Noer Azam Achsani, and Tony Irawan, "The Determinant of Regional Unemployment in Indonesia: The Spatial Durbin Models," *Signifikan: Jurnal Ilmu Ekonomi* 8, no. 2 (2019): 179–94.

[3] Mohammad Mulyadi, "Peran Pemerintah Dalam Mengatasi Pengangguran Dan Kemiskinan Dalam Masyarakat Government's Role in Solving Unemployment and Poverty in Society," *Jurnal Kajian* 21, no. 3 (2016): 221–36.

[4] Suryani Magdalena and Rony Suhatman, "The Effect of Government Expenditures, Domestic Invesment, Foreign Invesment to the Economic Growth of Primary Sector in Central Kalimantan," *Budapest International Research and Critics Institute (BIRCI-Journal): Humanities and Social Sciences* 3, no. 3 (July 29, 2020): 1692–1703.

However, one of the issues in developing the SMEs is lack of capital[5]. This is the role of banks in supporting them through financing since they cannot hire more workers to increase production when the capital is limited. The more the bank channels funds to them, the more they hire workers and thus unemployment case and poverty can eventually be reduced[6]. The development of the banking sector would be necessary to resolve these issues.

The development Islamic Bank in this regard is more recommended than its counterpart due to the integration of social values in its system as resembled by *mudarabah* and *musharakah* contracts. These contracts are based on partnership which is suitable for financing small businesses and the needy[7]. In addition, the profit and loss sharing system minimizes the risk for the small business runner in case of loss, unlike its counterpart which required the business runner to bear all the loss in any condition[8]. Islamic Bank in Indonesia determined its vision to play an important role in creating an Islamic financial market based on real sectors and to support the realization of economic system stability and the development of a global Islamic Financial Market.

Based on Figure 1, Indonesia hit a good record in reducing the unemployment rate despite the continuous population growth. The data shows that the unemployment rate fell from 5.61 percent in 2010 to 3.55 percent in 2022. Interestingly, this trend was associated with the increasing trend of Islamic bank development in Indonesia during the same period. Table 1 shows the development of Islamic banks in Indonesia,[9] represented by total assets, third-party funds and financing. The data illustrates the total assets of Islamic Banks increased from IDR 148.3 trillion in 2010 to IDR 1,063 trillion in 2022 accounting for a 716.5 percent increase. Third-party fund (TPF) of Islamic banks rose from IDR 77,199 billion in 2010 to IDR 607,759 billion in 2022 while Islamic Banks' financing increased from IDR 68,037 in 2010 to 490,857 billion in 2022. Based on this data, it is necessary to find out how far Islamic banks'

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[5] Hamzeh Fayez Mumani, "Islamic Finance for SMEs in Jordan," *(Master of Science in Banking and Finance), Eastern Mediterranean University (EMU)*, 2014.

[6] Ade Ananto Terminanto and Ali Rama, "Pengaruh Belanja Pemerintah dan Pembiayaan Bank Syariah terhadap Pertumbuhan Ekonomi: Studi Kasus Data Panel Provinsi di Indonesia," *IQTISHADIA: Jurnal Kajian Ekonomi dan Bisnis Islam* 10, no. 1 (2017).

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[9] Rahayu, Ika Gustin, and Hendrianto Hendrianto. "Mitigasi Risiko Pembiayaan Pada Bank Perkreditan Rakyat Syariah (BPRS) Safir Cabang Curup Kabupaten Rejang Lebong." AL-FALAH: Journal of Islamic Economics 3.2 (2018): 85-106.

development contributes to the unemployment reduction in Indonesia and whether there is a relationship between each Islamic bank's development indicators and unemployment.

Percentage of Unemployment Rate in Indonesia between 2010 and 2022
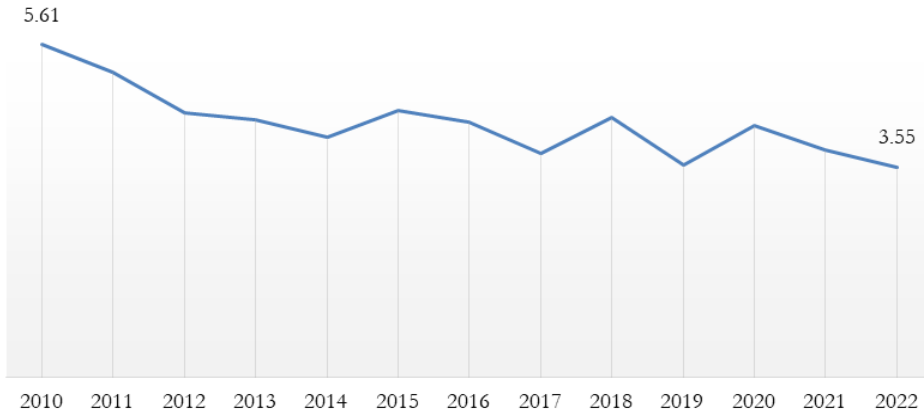
Source: WorldBank

Table 1. Total Assets, Third Party Fund (TPF) and Financing of Islamic Banks Indonesia in Billion IDR

Year	Total Asset	TPF	Financing
2010	148,374	77,199	68,037
2011	223,748	117,227	102,474
2012	289,081	149,037	147,273
2013	361,602	184,260	183,738
2014	426,785	218,193	198,980
2015	381,100	231,808	132,553
2016	472,335	280,283	247,580
2017	556,696	335,931	285,078
2018	631,192	372,679	319,517
2019	694,162	417,454	354,485
2020	785,983	423,815	383,137
2021	881,545	537,896	407,246
2022	1,063,179	607,759	490,857

The existing literature mostly investigated the determinants of unemployment in Indonesia using macroeconomic determinants. Trimurti &

Sukarsa analyzed foreign direct investment as the determinant of unemployment in seven provinces in Java and Bali islands, revealing that FDI has a positive effect on unemployment[10]. In Yogyakarta, Feriyanto found that in the period 2010-2015, wage increase significantly reduced unemployment while population has a positive relationship with unemployment[11]. Leasiwal revealed that wage in Maluku has a significantly positive impact on unemployment[12]. In addition, inflation did not influence unemployment while economic growth reduced unemployment. At the national level, Muin investigated the determinants of unemployment in 34 provinces in Indonesia between 2015 and 2018 and found that average school duration could reduce the unemployment rate in Indonesia, while economic growth and people's competence in information and technology did not significantly affect it[13]. Furthermore, Oktafianto unraveled that the level of population of the region who completed higher education has the most significant impact in minimizing unemployment in their region as well as regions around it[14]. Siregar found that a minimum wage increase significantly reduces unemployment[15]. He further revealed that female workers experience the biggest loss as a consequence of minimum wage increase while high education population and productivity had a positive and significant impact on the unemployment rate.

Despite the high number of research on the determinants of unemployment. There are limited studies that included the Islamic Bank as the determinant of unemployment. Benbhekti et al. adopted a Vector Autoregressive model (VAR) and Granger causality test using monthly data (2009M4-2017M12)[16]. Based on IRF and Granger causality results, they found

[10] Christimulia Purnama Trimurti and Made Sukarsa, "Determinants And The Impact Foreign Investment To Economic Growth And Unemployment In Java-Bali Region," *IOSR Journal of Economics and Finance* 6, no. 5 (2015): 69–74.

[11] Nur Feriyanto, "Determinants of Unemployment in Regency/ City in Special Province Yogyakarta," *European Research Studies Journal* 21, no. 3 (2018): 367–80.

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[13] Muhamad Fathul Muin, "Analysis of Determinants of Unemployment Rate in Indonesia," *JURNAL PERSPEKTIF EKONOMI DARUSSALAM* 6, no. 2 (September 18, 2020): 145–62.

[14] Oktafianto, Achsani, and Irawan, "The Determinant of Regional Unemployment in Indonesia: The Spatial Durbin Models."

[15] Tifani Husna Siregar, "Impacts of Minimum Wages on Employment and Unemployment in Indonesia," *Journal of the Asia Pacific Economy* 25, no. 1 (January 2, 2020): 62–78.

[16] Seyf Eddine Benbekhti, Hadjer Boulila, and Abdelnacer Bouteldja, "Islamic Finance, Small and Medium Enterprises and Job Creation in Turkey: An Empirical Evidence (2009-

that there is relative feasibility and effectiveness in the Islamic banking services for SMEs in Turkey, which means that when Islamic bank financing improves, it will promote the SMEs' performance through the enhancement of the SMEs' ability to provide capital. This capital contributes to justice in the distribution of wealth, the elimination of unemployment and the creation of employment opportunities and the eradication of poverty. Syarief et al. analyzed the relationship between Financing in the Islamic Bank and labor absorption in real sectors in Indonesia[17]. As a developing country, the real sectors in Indonesia are dominated by MSMEs. They used Islamic Bank institutional variables and path analysis techniques and found that third-party funds through profit and loss-sharing financing had a significantly positive impact on labor absorption in real sectors. They asserted that the more the Islamic Bank collects the third party's fund, the more they support labor absorption in real sectors thus reducing unemployment.

These two former studies use Islamic Bank financing only as the determinant of unemployment excluding TPF and total assets in their analysis which are important measures in Islamic bank development. This study is the first to analyze the impact of Islamic bank development. Based on this background, this study is conducted based on the following research questions:

a. How do Islamic banks' total assets influence unemployment in Indonesia?

b. How do Islamic banks' third-party funds influence unemployment in Indonesia?

c. How does Islamic banks' financing influence unemployment in Indonesia?

Islamic Bank and Unemployment

Islamic Bank is different from Conventional Bank since the former carries out the socio-economic development model in its operation synthesizing between economic growth objective and social justice objective which complement one another[18]. To successfully achieve these objectives, the development of this institution and stable growth in its financing activity are firmly required. According to Chapra, the money and bank system in Islam is aimed to contribute to the realization of economic well-being by achieving full

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2017)," *International Journal of Islamic Economics and Finance (IJIEF)* 4, no. SI (March 18, 2021), https://doi.org/10.18196/ijief.v4i0.10490.

[17] Moch. Edman Syarief, Setiawan Setiawan, and Nabila Nur Khairina, "Peran Perbankan Syariah dalam Penyerapan Tenaga Kerja pada Sketor Riil," *HUMAN FALAH: Jurnal Studi Ekonomi dan Bisnis Islam* 7, no. 1 (June 19, 2020).

[18] Masudul Alam Choudhury and Mostaque Hussain, "A Paradigm of Islamic Money and Banking," *International Journal of Social Economics* 32, no. 3 (March 1, 2005): 203–17.

employment[19]. By achieving full employment, people would increase their quality of life and remove all economic hardship which then incurs the dignity of fulfilling their duties as vicegerents of God.

Islamic bank plays the role conventional bank play in the monetary system of a country. It has the main role in channeling funds from people with surplus income to those with deficit income[20]. This way the bank would minimize asymmetric information between the former who acts as a lender and the latter that acts as a borrower and channels the funds and manages them in productive ways to increase economic stability and improve social well-being[21].

Financing allocated by Islamic banks increases business escalation in real sectors, promotes economic growth, decreases the unemployment rate through increasing labor demand, increases income and then decreases the poverty rate. This overall transmission mechanism just occurred through the presence of bank financing by increasing money supplied to the real sectors of the economy, and promoting both economic growth and social welfare[22].

The effect of bank financing on increasing economic growth which decreases unemployment and poverty is based on the standard IS-LM theory of macroeconomics (Blanchard and Johnson, 2013). Based on IS-LM model, ceteris paribus interest rate, expansion in fiscal policy will stimulate banks' credit to increase. Banking institutions will respond positively to fiscal expansion policy by increasing credit allocated to the real sectors, particularly to the economic sectors where the fiscal policy was expanded. Increase in banks credit furthermore increased money supplied and shifted both the IS and LM curves up. The shifting of both IS and LM curves simultaneously will cause an increase in output. This mechanism also occurred in the AD-AS model. Based on the AD-AS model, ceteris paribus price, fiscal expansion will be responded by banks' credit to increase money supplied by financing the real sectors. Bank credit promotes the expansion of business in real sectors due to the enhancement of capital and liquidity and let both the AD and AS curve shift to

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[19] M. Umer Chapra, "Money and Banking in an Islamic Economy," *Monetary and Fiscal Economics of Islam, Jeddah: International Centre for Research in Islamic Economics*, 1982, 145–86.

[20] Mangasa Augustinus Sipahutar, "Effects of Credit on Economic Growth, Unemployment and Poverty," *Jurnal Ekonomi Pembangunan: Kajian Masalah Ekonomi Dan Pembangunan* 17, no. 1 (June 28, 2016): 37.

[21] Felix Rioja and Neven Valev, "Stock Markets, Banks and the Sources of Economic Growth in Low- and High-Income Countries," *Journal of Economics and Finance* 38, no. 2 (April 2014): 302–20.

[22] Jess Benhabib and Mark M. Spiegel, "The Role of Financial Development in Growth and Investment," *Journal of Economic Growth* 5, no. 4 (2000): 341–60; Gabriel Chodorow-Reich, "The Employment Effects of Credit Market Disruptions: Firm-Level Evidence from the 2008–9 Financial Crisis*," *The Quarterly Journal of Economics* 129, no. 1 (February 1, 2014): 1–59.

the right and causing an increase in output.

RESEARCH METHOD

This paper used panel data from 33 provinces in Indonesia spanning from 2010 to 2021. The data consists of one dependent variable namely unemployment (*UNEMPLOY*) and six independent variables namely Islamic banks assets (*iBASSET*), Islamic Bank Financing (iBFIN), Islamic Banking Third-party Fund (iBTPF), Inflation (*INF*), Economic Growth (*GDP*) and foreign direct investment *(FDI)*. The data for Islamic bank assets, financing and third-party funds were obtained from financial service authorities while the data for other variables was generated from the statistical agency in Indonesia.

$$UNEMPLOY_{it} = \alpha + \beta_1 iBASSET_{it} + \beta_2 iBFIN_{it} + \beta_3 iBTPF_{it} + \beta_4 INF_{it} + \beta_5 FDI_{it} + \beta_6 RGDP_{it} + \mu_{it}$$

Variable definition:

UNEMPLOY	= Number of unemployed people in each province.
iBASSET	= Asset's value of Islamic Banks, measured in billion rupiah.
iBFIN	= The amount of financing channeled by Islamic Banks to the business, measured in billion rupiah
iBTPF	= The amount of third-party funds deposited in Islamic Banks, measured in billion rupiah.
INF	= Inflation, measured with consumer price index.
FDI	= Foreign Direct Investment, measured in billion rupiah.
RGDP	= Regional economic growth of the province, measured in million rupiahs
μ	= Error term

Based on the data collected, it can be seen that this paper uses data of cross-sectional unit (*N*) = 33 and period (*T*) = 10. Since the *N* is greater than the *T*, the Generalized Moment of Method (GMM) estimator which was first developed by Arellano & Bond[23] is the appropriate technique for analysis[24]. Moreover, this technique has advantages over the other dynamic panel analysis techniques when dealing with the problems of biasedness, heavy heteroskedasticity, measurement error, simultaneous reverse causality as well as

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[23] Manuel Arellano and Stephen Bond, "Some Tests of Specification for Panel Data: Monte Carlo Evidence and an Application to Employment Equations," *The Review of Economic Studies* 58, no. 2 (April 1991): 277.

[24] Danish Ahmed Siddiqui and Qazi Masood Ahmed, "The Effect of Institutions on Economic Growth: A Global Analysis Based on GMM Dynamic Panel Estimation," *Structural Change and Economic Dynamics* 24 (March 2013): 18–33.

unobserved individual heterogeneity[25]. Two-step GMM analysis is used instead of the counterpart to make sure that the estimation result is reliable and consistent[26]. Afterward, it is necessary to do post-estimation tests to check the validity of all the instruments and autocorrelation in the error terms[27]. To check for the validity, the Sargan test is employed. In this test, the null hypothesis states that all instruments are valid. Meanwhile, autocorrelation is checked by looking at the second-order correlation in difference (AR2) with a null hypothesis stating that there is no autocorrelation.

Before applying GMM analysis, it is necessary to confirm the use of the Fixed Effect Model (FEM) among the other static panel models using the Chow test and Hausman test. First of all, there will be a unit root test to check the stationarity of all variables. When all the variables are stationary at level, the Chow test and the Hausman test can take place to select the best model among them.

RESULT AND DISCUSSION

Result

It can be seen from **Table 2** that the number of unemployed workers in Indonesia is 233,157 persons on average, with the highest number of 2,533,076 persons and the smallest number of 11,979 persons in every province. Following that, the average value of Islamic Banks' assets across provinces of Indonesia reaches 2,822. Billion rupiahs, with the nominal value ranging between 60 billion rupiahs and 483,343 billion rupiahs. With these values of assets, Islamic Banks in Indonesia managed to collect third-party funds totaling 8,486 billion rupiahs on average which range from the lowest amount of 34 billion rupiahs to the highest one at 238,290 billion rupiahs. Among the deposited fund, Islamic Banks has channeled the fund for financing the business amounting from 28 billion rupiahs to 238,290 billion rupiahs with an average value of 7,146 billion rupiahs.

In terms of macro variables, the highest amount of FDI is 7,124 billion rupiahs and the lowest one is 0.2 billion rupiahs with an average amount of 818 billion rupiahs. RGDP value ranges between the highest one at 1,856,301 million rupiahs and the lowest one at 14,983 million rupiahs with an average value of 278,744 million rupiahs.

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[25] Nicholas Apergis and Ilhan Ozturk, "Testing Environmental Kuznets Curve Hypothesis in Asian Countries," *Ecological Indicators* 52 (2015): 16–22.

[26] David Roodman, "How to Do Xtabond2: An Introduction to Difference and System GMM in Stata," *Stata Journal* 9, no. 1 (2009): 86–136.

[27] Alaa Alaabed, Mansur Masih, and Abbas Mirakhor, "Investigating Risk Shifting in Islamic Banks in the Dual Banking Systems of OIC Member Countries: An Application of Two-Step Dynamic GMM," *Risk Management* 18, no. 4 (2016): 236–63.

Table 2. Descriptive Statistics

Variable	Mean	Median	Maximum	Minimum	Std. Dev.
UNEMPLOY	233157.7	89347	2533076	11979	387430.7
iBASSET	14778.25	2833.5	483343	60	50923.72
iBFIN	7146.712	2050	162242	28	19053.69
iBTPF	8486.641	1512	238290	34	25375.14
FDI	818.4611	294.6	7124.9	0.2	1230.946
RGDP	278744.5	116746.6	1856301	14983.91	392351.5
CPI	132.9363	132.4233	164.3167	114.31	8.979777

Source: Authors' elaboration

Unit Root Test

The analysis starts with a test for stationarity of the data. Specifically, the Augmented Dickey-Fuller (ADF), the Levin-Lin-Chen (LLC) and the Phillip-Person (PP) tests are used for this purpose. The result of the test can be seen in **Table 2** which shows that all variables are stationary. This implies that using a dynamic panel estimator is possible in this research.

Table 3. Unit Root Test

Variable	Level			1st Difference		
	ADF	**LLC**	**PP**	**ADF**	**LLC**	**PP**
UNEMPLOY	83.4304	-2.62274	105.066	-7.87864	133.536	336.376
	0.0724*	0.0044***	0.0016***	0.000***	0.000***	0.000***
iBASSET	60.8519	-0.83963	206.093	157.095	-11.9726	245.792
	0.6561	0.2006	0.000***	0.000***	0.000***	0.000***
iBFIN	61.7735	-0.95369	271.241	140.904	-10.4263	238.380
	0.6246	0.1701	0.000***	0.000***	0.000***	0.000***
iBTPF	42.4118	-1.73864	208.745	180.554	-14.1368	299.684
	0.9894	0.041**	0.000***	0.000***	0.000***	0.000***
FDI	114.821	-5.24526	212.307	177.707	-9.8397	363.039
	0.0002***	0.000***	0.000***	0.000***	0.000***	0.000***
GDP	82.1106	-10.5418	224.796	170.223	-11.1243	123.981
	0.0871*	0.000***	0.000***	0.000***	0.000***	0.000***
CPI	106.009	-10.018	133.717	133.046	-12.0291	492.908
	0.0013***	0.000***	0.000***	0.000***	0.000***	0.000***

***, ** and * show that the variables are significant at 1%, 5% and 10% respectively
Source: Eviews edited by author

Selection of the Best Model

There are three models to be selected in this study, namely CEM, FEM and REM. The results of the test as shown in **Table 4** show among the three models, FEM has the highest R-Squared value of 0.975406 meaning that the dependent variable in FEM can be explained by all the independent variables by 97.56 percent. However, there is a need to conduct some tests for the selection of the best model. The first test would be Chow-test where the null hypothesis states that CEM is appropriate. The probability value of Chi-squared in this test show 0.000 which means that the null hypothesis is rejected and therefore FEM is the appropriate model. Afterward, the Hausman test is needed to select the best model between FEM and REM. In this test, the null hypothesis states that REM is the appropriate model. The results of the Hausman test show that the probability chi-squared value is 0.000. This implies that the null hypothesis is rejected and thus FEM is more appropriate to be used than REM for data analysis. In this case, GMM analysis can be applied to this model.

Table 4. Selection of Models (CEM, FEM and REM)

VARIABLES	MODELS		
	CEM	FEM	REM
Log$iBASSET$	0.127274	-0.028564	0.010923
	(0.3155)	(0.6672)	(0.8679)
Log$iBFIN$	-0.085133	-0.008756	-0.033959
	(0.1607)	(0.8085)	(0.3396)
Log$iBTPF$	0.005122	-0.036828	-0.099729
	(0.9621)	(0.5041)	(0.0632)*
LogCPI	-0.651623	-0.462021	-0.436956
	(0.0973)*	(0.0035)***	(0.0055)***
LogFDI	-0.052541	-0.015467	-0.025821
	(0.0105)***	(0.2203)	(0.0373)**
LogGDP	0.869612	0.423053	0.743931
	(0.0000)***	(0.0000)***	(0.0000)***
C	4.379855	9.500142	5.987919
	(0.0289)**	(0.0000)***	(0.0000)***
R-Squared	0.803703	0.975406	0.242422
Chow-Test		Chi-square = 822.544480	
		(0.0000)***	
Hausman-Test			Chi-square = 36.497504
			(0.0000)***

***, ** and * show that the variables are significant at 1%, 5% and 10% respectively

Source: Eviews edited by author

Estimation Result

The final result of estimation using the GMM estimator is shown in Table 4. Based on the result of the estimation, the model can be written as follows:

$$LogUNEMPLOY_{it}$$
$$= 0.2146 \, LogUNEMPLOY(-1)_{it} + 0.1276 \, LogiBASSET_{it}$$
$$- 0.13009 \, LogiBFIN_{it} + 0.0965 \, LogiBTPF_{it}$$
$$- 0.3984 \, LogINF_{it} - 0.0477 \, LogFDI_{it}$$
$$+ 0.0927 \, LogRGDP_{it} + \mu_{it}$$

It can be seen that the probability value of lagged *LogUNEMPLOY* is 0.0000 which indicates that the past value of unemployment significantly influences unemployment in the present time at a 1% level of significance. The coefficient value is 0.214633 meaning that a 1 percent increase in the past value of unemployment caused a 0.21% increase in the present unemployment.

Among the Islamic Bank variables, Log*iBFIN* has the best probability value of 0.0034 which implies that Islamic Banks financing has a significant relationship with unemployment at a 1% level of significance. Furthermore, it has a coefficient value of -0.13009 showing that when Islamic bank financing increases by 1 percent, unemployment decreases by 0.13%. On the contrary, the results show that the probability values of Log*iBASSET* and Log*iBTPF* are 0.0571 and 0.0963 respectively implying that each of Islamic Bank's assets and Islamic Bank third-party funds significantly affect unemployment at a 10% level of significance. The coefficient values of both variables are 0.1276 and 0.0965. These values show that a 1 percent increase in either Islamic Banks' assets or Islamic Banks contributed to the rise of unemployment by 0.12 percent and 0.09 percent respectively.

As for macro variables, each of inflation and FDI has a significant impact on unemployment at a 1% level of significance since the probability values of Log*CPI* and Log*FDI* are 0.0000 and 0.0023 respectively. In addition, the coefficient values of both variables are -0.398467 and -0.047788 respectively, which means that 1 percent increase in inflation leads to 0.39% decline in unemployment while 1 percent rise in FDI contributes to the unemployment reduction by 0.04%. Meanwhile, the probability value of Log*RGDP* is 0.2325 which implies that the economic growth of the province has no significant impact on unemployment.

Post-estimation Test

First of all, the post-estimation test is conducted in testing for autocorrelation in the model. Using the Arellano Bond test, the results in **Table**

4 show that the probability value of the first-order serial correlation test is 0.0004 with z = -3.5177. In this case, the null hypothesis is rejected and thus the model suffers from autocorrelation. However, the second-order serial correlation test shows z = 0.7608 with Pr > z = 0.4468. In this case, the null hypothesis is accepted because the p-value is greater than 0.05. This means that there is no autocorrelation in this model. Furthermore, the results of the Sargan test show that the Chi-square value is 30.0058 with a probability Chi-Square value of 0.3138. Since the p-value is greater than 0.05, the null hypothesis is accepted implying that over identifying restrictions are valid or the models are not weakened while using numerous instruments.

Table 4. GMM Estimation Result

Variables	Coefficient	P-Values
Log*UNEMPLOY(-1)*	0.214633	0.0000***
Log*iBASSET*	0.127673	0.0517*
Log*iBFIN*	-0.130096	0.0034***
Log*iBTPF*	0.096570	0.0963*
Log*CPI*	-0.398467	0.0000***
Log*FDI*	-0.047788	0.0023***
Log*GDP*	0.092793	0.2325
Arellano Bond test (AR1)	z = -3.5177	Pr > z = 0.0004
Arellano Bond test (AR2)	z = 0.760809	Pr > z = 0.4468
Sargan-test	Chi-square = 30.0058	Prob > Chi2= 0.313891

***, ** and * show that the variables are significant at 1%, 5% and 10% respectively

Source: Eviews edited by author

Discussion

The Impact of Islamic Banks' Total Assets on Unemployment in Indonesia

The results show that the Islamic Bank's assets have a significant and positive impact on unemployment in Indonesia. It further shows that a 1 percent increase in Islamic banks' total assets leads to a rise in unemployment by 0.12 percent. This finding is contradictive to the finding by Khairina which states otherwise[28]. This implies that having a huge amount of Islamic Bank assets is not enough. It can be explained by a huge gap in Islamic Banks' total assets between provinces whereby the minimum value of the total assets is 60

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[28] Nabila Nur Khairina, Mochamad Edman Syarief, and Setiawan Setiawan, "Peran Perbankan Syariah Dalam Penyerapan Tenaga Kerja Pada Sektor Riil," *HUMAN FALAH: Jurnal Ekonomi Dan Bisnis Islam* 7, no. 1 (2020): 118–37.

billion rupiahs and the maximum value is IDR 483,343 billion. Such an inequitable distribution of Islamic banks' assets may lead to the failure of the Islamic banks' system in contributing to unemployment distribution as a whole.

The Impact of Islamic Banks' Third-Party Funds on Unemployment in Indonesia

Islamic Bank's third-party funds (TPF) have a significant and positive impact on unemployment in Indonesia. It further shows that a 1 percent increase in Islamic banks' TPF leads to a rise in unemployment by 0.09 percent. This finding is contradictive to the finding by Khairina[29] which states otherwise. Islamic Banks' TPF is not enough without a high proportion of TPF channeled to the real sector business which absorbs more labor.

The Impact of Islamic Banks' Financing on Unemployment in Indonesia

Islamic banks' financing has a significant and negative impact on unemployment in Indonesia. A 1 percent increase in Islamic banks' financing reduces unemployment by 0.13 percent. This finding strengthens Khairina's[30] finding and proves the realization of one of the Islamic Bank's goals in its operation according to Chapra[31] in achieving full employment by reducing unemployment. It also shows that financing is really helpful in Indonesia since the real sectors that are labor-intensive dominate the market.

The Impact of Control Variables on Unemployment in Indonesia

The findings reveal that FDI has a positive relationship with unemployment. This is in line with the study conducted by Trimurti[32] who revealed similar findings when analyzing unemployment of provinces in Java and Bali. This finding shows that increasing FDI is not a proper measure to do in reducing unemployment in Indonesia. This happened because the labor market in Indonesia is dominated by real sectors from small and medium businesses with low-skilled workers. Therefore, when FDI increases, high technology that needs high-skilled workers and less low-skilled workers may be used. As a consequence, low-skilled workers would eventually be laid off causing an increase in unemployment.

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[29] Khairina, Syarief, and Setiawan.
[30] Khairina, Syarief, and Setiawan.
[31] Chapra, "Money and Banking in an Islamic Economy."
[32] Trimurti and Sukarsa, "Determinants And The Impact Foreign Investment To Economic Growth And Unemployment In Java-Bali Region."

Likewise, it can be seen that inflation influences unemployment positively. The findings support Tenzin's[33] research on unemployment in Bhutan. It can be explained by the nature of inflation which is uncertain. This uncertainty would discourage investors from keeping their investments and lead to a fall in economic growth when it is not controlled and anticipated. As a result, the production decreases leaving unemployment rise.

Last but not least, regional economic growth was found to be insignificant in affecting unemployment. The findings support Feriyanto[34] who did not find a significant impact of economic growth on unemployment in Yogyakarta. It can be explained that economic growth in Indonesia failed to create adequate jobs for the workers or it is not labor-intensive.

CONCLUSION

Unemployment is one of the key issues in macroeconomics where the discussion around the preventive and resolving measures has been conducted until now. In a high-populated country like Indonesia, such an issue becomes more complicated due to the various causes of unemployment. One of those causes is the lack of job opportunities which results from the inaccessibility of financial support experienced by small businesses hindering them from improvement. Islamic Bank is a socio-economic-based financial institution that provides financial access to small business that dominates the labor market in Indonesia. The positive trend of the growth of the Islamic Bank in Indonesia is expected to contribute to the unemployment reduction.

The findings of this research show that Islamic Bank's asset has a positive relationship with unemployment in Indonesia, whereby a 1 percent increase in Islamic Bank's asset will increase unemployment by 0.21%. Likewise, a 1 percent increase in the Third Party Fund of the Islamic Bank in Indonesia contributed to a rise in unemployment by 0.09 percent. On the contrary, total financing in the Islamic Bank in Indonesia reduced unemployment by 0.13 percent. It can be seen from the result that the impact of Islamic Bank development in Indonesia can be seen from the total funds channeled to the business. The more the funds are channeled to the business, the more it can reduce unemployment in Indonesia.

Based on these results, it is recommended that the government support

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[33] Ugyen Tenzin, "The Nexus Among Economic Growth, Inflation and Unemployment in Bhutan," *South Asia Economic Journal* 20, no. 1 (March 2019): 94–105, https://doi.org/10.1177/1391561418822204.

[34] Nur Feriyanto, "Determinants of Unemployment in Regency/ City in Special Province Yogyakarta," *European Research Studies Journal* 21, no. 3 (2018): 367–80.

the Islamic Bank in Indonesia through regulation or capital support to be able to channel more funds to the business, especially from the real sector. This way the economy will grow based on labor-intensive and absorb more labor finally reducing unemployment.■

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