## BUKTI KORESPONDENSI ARTIKEL JURNAL NASIONAL SINTA 3

Judul : The Impact of MSMEs Financing in Islamic Bank on Unemployment in Indonesia

Jurnal: Jurnal Ekonomi Syariah Teori Dan Terapan, Vol. 10 No. 5, page 443-454

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| No | Perihal   | Tanggal           |
|----|---|-------------------|
| 1  | Bukti Konfirmasi submit artikel dan artikel yang disubmit     | 19 Juli 2023      |
| 2  | Bukti hasil review editor dan isi review                      | 30 Agustus 2023   |
| 3  | Bukti submit revisi dari editor dan manuskrip yang telah      |                   |
|    | direvisi  | 6 September 2023  |
| 4  | Bukti keputusan editor dan draft hasil review dari reviewer   | 16 September 2023 |
|    | Bukti submit revisi, respon kepada reviewer, dan artikel yang |                   |
| 5  | diresubmit  | 20 September 2023 |
| 6  | Bukti konfirmasi artikel accepted                             | 26 September 2023 |
| 7  | Bukti artikel published online                                | 30 September 2023 |

1. Bukti Konfirmasi submit artikel dan artikel yang disubmit (19 Juli 2023)



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## [JESTT] Submission Acknowledgement

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Wed, Jul 19, 2023 at 10:53 AM

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Jurnal Ekonomi Syariah Teori dan Terapan p-ISSN: 2407-1935, e-ISSN: 2502-1508. Vol. ... No. ... nama bulan yyyy (tahun): 1-16 (no halaman); DOI:

# The Impact of MSMEs Financing in Islamic Bank on the Unemployment in Indonesia

# Pengaruh Pembiayaan UMKM pada Bank Syariah terhadap Pengangguran di Indonesia

#### **ABSTRACT**

One of the contributions of Islamic banking sector in Indonesia' economy is channeling fund to MSMEs in the form of financing, since a number of them could not access financial service. Interestingly, the MSMEs grew as the Islamic Banking sector rose. However, there is no single study analysing such an impact on the unemployment in both rural and urban area. This paper aims to reveal the effect of MSMEs financing in Islamic bank on the unemployment in Indonesia. It aims further to discover such an effect on the unemployment in urban and rural area separately in Indonesia. Dynamic panel GMM two-step analysis is used in this research to estimate cross-provinces data in Indonesia between 2010 and 2019. The results of the study reveal that MSMEs financing in Islamic Banks contributed significantly to the reduction of unemployment in Indonesia as a whole. It is also found that the unemployment in urban area is reduced by MSMEs financing in Islamic Banks. On the other hand, there is no significant relationship between MSMEs financing in Islamic Banks and the unemployment in rural area. This research recommends the authority to support Islamic Bank for the development of MSMEs from capital and regulation aspect.

Keywords: MSMEs Financing, Islamic Bank, Unemployment, Urban, Rural.

#### **ABSTRAK**

Salah satu kontribusi sektor perbankan syariah dalam perekonomian Indonesia adalah penyaluran dana kepada UMKM dalam bentuk pembiayaan, karena beberapa dari mereka tidak dapat mengakses layanan keuangan. Menariknya, UMKM tumbuh seiring dengan bangkitnya sektor Perbankan Syariah. Namun, tidak ada satu studi pun yang menganalisis dampak tersebut terhadap pengangguran di pedesaan dan perkotaan. Penelitian ini bertujuan untuk mengungkap pengaruh pembiayaan UMKM di bank syariah terhadap pengangguran di Indonesia. Hal ini bertujuan untuk mengetahui lebih jauh pengaruh tersebut terhadap pengangguran di daerah perkotaan dan pedesaan secara terpisah di Indonesia. Analisis dua langkah GMM panel dinamis digunakan dalam penelitian ini untuk mengestimasi data lintas provinsi di Indonesia antara tahun 2010 dan 2019. Hasil penelitian mengungkapkan bahwa pembiayaan UMKM di Bank Syariah berkontribusi signifikan terhadap pengurangan pengangguran di Indonesia secara keseluruhan. Ditemukan juga bahwa pengangguran di perkotaan berkurang dengan pembiayaan UMKM di Bank Syariah. Di sisi lain, tidak ada hubungan yang signifikan antara pembiayaan UMKM di bank syariah dengan pengangguran di pedesaan. Penelitian ini merekomendasikan kewenangan untuk mendukung Bank Syariah bagi pengembangan UMKM dari aspek permodalan dan regulasi.

Kata Kunci: Pembiayaan UMKM, Bank Syariah, Pengangguran, Perkotaan, Pedesaan.

### I. INTRODUCTION

Unemployment is one of the most popular issues in economic development whereby every country in this world has made several attempts to tackle this issue. A remarkable growth in population is recognized as one of the main causes of such an issue of unemployment which makes developing countries with huge population vulnerable to it (Singh, 2018). The greater the number of the population they have, the larger job opportunities will be needed in order to keep the unemployment cases at minimum level. Many attempts have been conducted by their government in order to keep its number as low as possible, either through human capital development, provision of educational system in accordance with market demand or increasing economic growth (Sherif, 2013). Apart from government's role, the contribution of private sector is also essential in supporting the programs so that the unemployment can be successfully reduced.

As one of the developing countries, Indonesia recorded through its statistical agency (BPS, 2021) that as of August 2020, the number of people without job within the country reached 9.76 million persons, accounting for 7.01 percent of total labor force in Indonesia. Among this group, 70 percent of them live in urban area while the others live in rural area. The unemployment rate is relatively moderate as compared to other developing countries. This percentage can be kept at that level due to the abundance of micro small medium enterprises (MSMEs) in Indonesia. According to CNN Indonesia,

based on the data released by the ministry of SMEs, the MSMEs has a major role in strengthening economy as it absorbed 97 percent of total workers and it contributed to 60.5 percent of GDP in 2019. This phenomenon needs to be proven through research whether the effect is significant.

Based on this example, unemployment in developing countries can possibly be minimized by strengthening MSMEs due to their role in creating job opportunities as well as absorbing labor (Nasr & Rostom, 2013). Such a role has also been recognized by several developed countries as it become a key to the rapid economic growth in China (Kongolo, 2010). Despite the potential in MSMEs, there are several constraints faced by MSMEs in developing their business, including the lack of an integrated accounting system, the lack of trained human resources, limited marketing and administrative matters and most importantly limited funds (Mumani, 2014). These limited funds are faced with the presence of conventional loans that apply high interest rates and the difficulty of accessing these loans (Elasrag, 2016). This capital constraint become the main issue in developing MSMEs since they have limited access to financial services as compared to the big company (Benbekhti et al., 2021). There is a huge gap in SMEs' financing in developing countries as approximately 41% of their SMEs could not afford their financial necessities (IFC, 2017).

As a response to this issue, Islamic Finance (IF) is expected to be the alternative solution to the accessibility problem in MSMEs. The nature of IF which is built on the basis of partnership, provide access to financing for the small enterprises and the poor (Elasrag, 2016). Furthermore, profit and loss sharing system in the IF allows MSMEs to survive the loss compared to the conventional loan which burden all the loss to the entrepreneurs (Kayed & Hassan, 2011).

In Indonesia, the growth of IF is relatively slow compared to other Muslim countries in the world although the trend is upward. Nevertheless, the IF industry shows a positive role in supporting MSMEs as can be seen from the data released by financial service authority (OJK, 2019) that around 51.86 trillion rupiahs has been channeled by Islamic Banking industry to MSMEs in Indonesia per December 2019. This amount of money channeled to MSMEs lead to a question whether it has an impact on the reduction of unemployment.

There were only limited studies conducted in order to reveal the effect of Islamic Finance on employment through labor absorption (Benbekhti et al., 2021; Khairina et al., 2020). At the same time, several studies have found the role of SMEs in creating employment, especially in developing countries (Abisuga-Oyekunle et al., 2020; Oyelana & Adu, 2015; Syed et al., 2012). The existing literature mostly focused on the role of SMEs in job creation without further analysis on the effect of their financial accessibility on unemployment.

This paper will be the first to discuss one of supporting attempts in unemployment reduction through financial access provided by Islamic Banks for MSMEs in Indonesia as one of developing countries by decomposition of the impact in urban and rural area. This study aims to reveal the effect of Islamic financing to MSMEs on unemployment in Indonesia. Furthermore, it aims to discover further the effect of Islamic financing to MSMEs on unemployment in urban and rural area in particular.

#### II. LITERATURE REVIEW

#### Islamic Finance, MSMEs and Unemployment

Islamic Finance brings a religious value in financing system as well as in its contribution to social matters in supporting social justice among people (Wajdi Dusuki, 2008). Islamic Banks are business entities guided by shariah board. This allows them to consistently run according to Islamic pranciples within an expectation of preventing concentration of wealth among few groups without harming people who acquired them in lawful way (Ibn, 2006). Therefore, it is only natural for Islamic Banks to promote financing scheme for the MSMEs which is nowadays known as microfinance.

IF is friendly to MSMEs as there is a profit and loss sharing (PLS) system which create fairness for MSMEs as borrowers and Islamic Banks as lenders (Chapra, 2011). Although this system generate small profit for the Islamic bank compared to the conventional, MSMEs will be helped a lot as their resilience against loss can be maintained (Fajri et al., 2022). A better development in MSMEs indirectly result in better provision of job opportunities which can finally contribute to the fall of unemployment case.

Based on the perspective of economic development, MSMEs are perceived to be able to create almost half of new job opportunities in economy, whereby the job opportunities are considered good ones (Edmiston, 2007). Mostly, MSMEs have a better response to the cultural changes in society since they can easily adapt to situation. Apart from being job creator and income generator, they are also considered as the key drivers of innovation in economy (Abisuga-Oyekunle et al., 2020). With the abundance of MSME, the poor will be helped a lot due to the provision of various job opportunities which lead them to have better quality of life in the society.

Basically, there are two contradicting theories regarding the linkage between entrepreneurship and unemployment. The first theory states that high rate of unemployment in a country will lead to the rise of entrepreneurship activities including start-ups and small business due to the decreasing opportunity in starting new business (Blanchflower & Meyer, 1994). On the other hand, the other theory asserts that the rise in entrepreneurship activities can reduce unemployment as they create jobs (Manser & Picot, 1999). According to Thurik et al. (2008) it was evident that start-ups and small business contribute to job creation better than their counterparts since they contributed to greater entrepreneurial activity which then leads to unemployment reduction. They also asserted that the entrepreneurial activity is related to Schumpeterian process where the old product will be replaced by the new products created from those entrepreneurial activities.

Neumark et al. (2011) then prove the theory through empirical research and found that small business with less than 20 workers in the United States played the biggest role in job creation. Meanwhile, in developing countries, businesses with 5 to 99 employees and businesses older than 10 years have the highest contribution to job creation (Ayyagari et al., 2011). The job creation role of MSMEs will lead to the decline of unemployment provided that the MSMEs can develop better. Therefore, it is important to create a conducive environment in which small businesses can operate, innovate and create the jobs needed. In this case International Labor Organization (ILO, 2015) asserted that SMEs' contribution in job creation and income generator is firmly crucial as two-third of the entire job opportunities worldwide are provided by SMEs.

The role of MSMEs on job creation as the product of entrepreneurship activity differs between urban and rural areas. Faggio & Silva (2014) stated that there are some characteristics that are needed in order for MSMEs to be able to reduce unemployment namely innovation, job creation and self-employment. He said that these elements can properly occur in the urban areas since the MSMEs in rural areas are mostly self-employment and not innovative producing replica products. Furthermore, Baumol et al. (2011) added that there are more MSMEs in urban areas with their various kind of products leading to more consumers' interest. In this case, there will be increase in demand of the local products which possibly lead to more workers hired to increase the production in order to fulfill the demand. In a nutshell, there will be minimum or even no effect of the existence of MSMEs on unemployment in the rural area. Meanwhile, the effect of MSMEs on unemployment can be seen in the urban areas.

#### **Previous Studies**

Several previous studies were conducted using different methods to investigate and evaluate various Islamic financing products for MSMEs. The researches also provide greater opportunities for the development and growth of the Islamic financing system as a solution to the financial problems of MSMEs. Biancone, P.P. and Radwan (2014) mentioned the role of Islamic finance in non-Muslim countries in reducing the financial gap by identifying the possibility of MSMEs in Italy to adapt to the Islamic financing system and the possibility of channeling funds through Islamic financing instruments. Huda (2012) conducted a study in Indonesia which aims to find a framework in which Islamic financing schemes can be used to overcome the financial constraints faced by MSMEs.

Shaban et al., (2016) examined the growth of MSME financing by Islamic banking by developing a two-stage competition model, where in the first stage Islamic Banks and Conventional Banks competed in price and competition in loans in the second stage. The results of the study state that Islamic banks will get their own market share due to the differences in the products offered, and in the second stage, market share competition causes a decrease in the amount of MSME financing. Another study conducted by Aysan et al., (2016) analyzed the willingness of banks to finance MSMEs using the Fixed Effect Model (FEM) in 40 banks including Islamic banking. The results show that the quality of MSME

financing by Islamic banks can compete with financing from conventional banks.

Apart from that, there were several studies conducted in investigating the determinant of unemployment. Arslan & Zaman (2014) investigated unemployment in Pakistan as political and social issue and used foreign direct investment, gross domestic product rate, inflation rate and population growth rate as independent variables. The results show that FDI, gross domestic product rate and inflation has negative impact on unemployment. This result is emphasized by (Bayrak & Tatli, 2018) who analyzed 32 OECD countries and found that inflation, economic growth and saving reduced unemployment from the youth group.

Mehmet Mucuk (2013) analyzed the effect of FDI on unemployment in Turkey, Argentina, Chile, Colombia, Thailand, Philippine and Uruguay using panel casualty test during 1981-2009. He found that FDI increased unemployment in Argentina and Uruguay while decreasing it in Thailand. Meanwhile, FDI did not influence unemployment in Chile, Colombia, and Philippine. Almula-Dhanoon et al. (2020) investigated the determinant of unemployment in MENA region between 2003 and 2018. Using Seemingly Unrelated Regression Model, they found that FDI increased unemployment in MENA region. This happen because there is limited number of domestic labour with skill required by the foreign investor. In reverse, domestic investment was found to reduce unemployment in this region.

Another study by Oktafianto et al. (2019) conducted a research on the determinants of unemployment rates in Indonesia, including calculating the direct and indirect effect using the spatial Durbin models (SDM) in the period 2000-2017. The results of this study indicate that the overall independent variables used significantly influence the unemployment rate in Indonesia. Besides, it turns out that the higher education variable completed by the population of a region has the most significant impact both in decreasing unemployment in a region and neighboring regions.

Benbekhti et al. (2021) adopted a Vector Autoregressive model (VAR) and Granger causality test using monthly data (2009M4-2017M12). Based on IRF and granger causality results, they found that there is a relative feasibility and effectiveness in the Islamic banking services for SMEs in Turkey, which means that when the Islamic bank financing improve, it will promote the SMEs' performance through the enhancing 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.

Khairina (2020) analyzed the relationship between Financing in Islamic Bank and labor absorption in real sectors in Indonesia. As developing country, the real sectors in Indonesia are dominated by MSMEs. They used Islamic Bank institutional variables and path analysis technique and found that third party fund 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 and thus reducing unemployment.

## III. RESEARCH METHODS Data

The study was conducted using secondary data from 33 provinces in Indonesia from 2010 to 2019 taken from the Central Statistics Agency (BPS) and the Financial Services Authority (OJK). The dependent variable used is unemployment which will be displayed in three models that distinguish the analysis in rural and urban area. Meanwhile, the independent variables are financing to MSMEs at Islamic Banks, financing to MSMEs inflation, and foreign investment. While the original models created is as follows:

$$UNEM_{it} = FINBUS_{it} + INF_{it} + FDI_{it} + GDP_{it} + \mu_{it}$$
 (1)

$$URBAN_{it} = FINBUS_{it} + INF_{it} + FDI_{it} + GDP_{it} + \mu_{it}$$
 (2)

$$RURAL_{it} = FINBUS_{it} + INF_{it} + FDI_{it} + GDP_{it} + \mu_{it}$$
 (3)

Variable definition:

UNEM = Number of unemployed people.
 URBAN = Number of urban unemployed people.
 RURAL = Number of rural unemployed people.

FINBUS = Financing to MSMEs in Islamic Bank, measured in billion rupiah.

*INF* = Inflation, proxied by CPI.

*FDI* = Foreign Direct Investment, measured in billion rupiah.

GDP = Economic growth, measured in million rupiah

 $\mu$  = Error term

### Research Design

Based on the data collected, it can be seen that this paper uses data of cross-sectional unit (N) = 33 and time period (T) = 10. Since the N is greater than the T, Generalized Moment of Method (GMM) estimator which was firstly developed by Arellano & Bond (1991) is the appropriate technique for analysis (Siddiqui & Ahmed, 2013). 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 unobserved individual heterogeneity (Apergis & Ozturk, 2015). Two-step GMM analysis is used instead of the counterpart in order to make sure that the estimation result is reliable and consistent (Roodman, 2009). Afterwards, it is necessary to do postestimation tests to check validity of all the instruments and autocorrelation in the error terms (Alaabed et al., 2016). To check for the validity, Sargan test is employed. In this test, null hypothesis states that all instruments are valid. Meanwhile, autocorrelation is checked by looking at second-order correlation in difference (AR2) with null hypothesis stating that there is no autocorrelation.

Before applying GMM analysis, it is necessary to confirm the use of Fixed Effect Model (FEM) among the other static panel models using Chow-test and Hausman-test. First of all, there will be unit root test in order 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 in order to select the best model among them.

# IV. RESULTS AND DISCUSSION Descriptive Statistics

It can be seen from Table 1 that unemployed people in Indonesia across the provinces range between 11,979 persons and 1,951,391 persons with 222,712 persons on average. In urban area, the average number of unemployed is 136,854 with the number ranging between 2,881 persons and 1,462,663 persons. Meanwhile, in rural area, the number of unemployed people ranges from 3,095 persons to 824,784 persons with the average number of 85,858 persons. Total amount of financing that Islamic Banks channeled to MSMEs starts from 10 billion rupiahs to 49,870 billion rupiahs with 2,051.691 billion rupiahs on average. Average value of FDI is USD 801.6761 million ranging from USD 0.2 million to USD 7124.9 million. Inflation ranges between 114.31 and 164.3167 with average value of 132.96.

**Table 1. Descriptive Statistics** 

| Variable | Mean     | Std. Dev | Min   | Max     |
|----------|----------|----------|-------|---------|
| UNEM     | 222712   | 363414.5 | 11979 | 1951391 |
| URBAN    | 136854   | 245715.7 | 2881  | 1462663 |
| RURAL    | 85858    | 131364   | 3095  | 824784  |
| FINBUS   | 2051.691 | 4812.129 | 10    | 49870   |
| FDI      | 801.6761 | 1245.474 | 0.2   | 7124.9  |

| CPI | 132.9668 | 9.573448 | 114.31   | 164.3167 |
|-----|----------|----------|----------|----------|
| GDP | 3.42e+08 | 4.98e+08 | 1.50e+07 | 2.84e+09 |

**Source: Authors' elaboration** 

#### **Unit Root Test**

In this study, unit root test is conducted to test for stationarity of the variables. Specifically, the Levin-Lin-Chen (LLC) test and the Im-Pesaran-Shin (IPS) test are used for this purpose. The result of the test can be seen on Table 2 which shows that all variables are stationary at level. This implies that there is no cointegration in the model and therefore pooling least square is more appropriate to be used for analysis.

**Table 2. Unit Root Test at Level** 

| Variable   | IPS             |           | LL              | С         |
|------------|-----------------|-----------|-----------------|-----------|
| v al lable | statistic value | p-value   | statistic value | p-value   |
| UNEM       | -3.8452         | 0.0001*** | -11.1332        | 0.0000*** |
| URBAN      | -3.1978         | 0.0007*** | -10.1606        | 0.0000*** |
| RURAL      | -2.1565         | 0.0155**  | -4.9925         | 0.0000*** |
| FINBUS     | -3.3649         | 0.0004*** | -12.3046        | 0.0000*** |
| FDI        | -4.0843         | 0.0000*** | -7.3584         | 0.0000*** |
| СРІ        | -2.261          | 0.0119**  | -7.6846         | 0.0000*** |
| GDP        | -3.9318         | 0.0000*** | -8.9815         | 0.0000*** |

<sup>\*\*\*</sup> and \*\* show that the variables are significant at 1% and 5% respectively

**Source: Authors' elaboration** 

### **Selection of the Best Model**

There are three models to be selected in this study, namely Pooled OLS, FEM dan REM. In order to select between Pooled OLS and FEM the Chow-test is conducted. In this test, null hypothesis shows that Pooled OLS is appropriate. The results of the test as shown in Table 3 show that p-value of all equation models is 0.000 which is lower than 0.05. This means null hypothesis is rejected and that FEM is the appropriate model. Afterwards, Hausman-test is needed in order to select the best model between FEM and REM. In this test, null hypothesis shows that REM is the appropriate model. The results of the Hausman-test show that probability chi-squared values are 0.0004, 0.0003 and 0.000 for model 1, model 2 and model 3 respectively. This implies that 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 for this model.

#### **Estimation Result**

The results of estimation can be seen on Table 4. There are three different results from three different models consisting of model 1, model 2 and model 3 which indicate the effects of independent variables on unemployment in general, urban unemployment and rural unemployment respectively.

In the model 1, most of the independent variables are significant at 0,1% meaning

that they have significant impact on general unemployment in Indonesia. The lagged dependent variable (*UNEM*<sub>it-1</sub>) and *GDP* show significant and positive influence on general unemployment. This implies that 1 percent increase in lagged general unemployment and economic growth result in the rise in general unemployment by 0.21 percent and 0.003 percent respectively. Meanwhile, *FINBUS* and *CPI* show that they have significantly negative impact on general unemployment. The coefficient values indicate that 1 percent rise in financing to MSMEs in Islamic banks decreases general unemployment by 0.04 percent. Likewise, 1 percent increase in inflation causes reduction of general unemployment by 0.27 percent. However, *FDI* is not significant in this model implying that foreign investment has no effect on general unemployment.

Table 3. Chow-test and Hausman-test

| Variable   | Chow-te         | est       | Hausman-test      |           |  |  |
|------------|-----------------|-----------|-------------------|-----------|--|--|
| v al lable | statistic value | p-value   | Chi-squared value | p-value   |  |  |
| Model 1    | 152.27          | 0.0000*** | 18.07             | 0.0004*** |  |  |
| Model 2    | 99.69           | 0.0000*** | 18.98             | 0.0003*** |  |  |
| Model 3    | 132.66          | 0.0000*** | 24.25             | 0.0000*** |  |  |

\*\*\* shows significance at 1%

**Source: Authors' elaboration** 

In the model 2, both lagged 3 dependent variable (*URBAN*<sub>it-3</sub>) and *FINBUS* are significant at 0.1 percent. Both lagged 2 dependent variable (*URBAN*<sub>it-2</sub>) and GDP are significant at 1 percent, while FDI is significant at 5 percent. This shows that all lagged urban unemployment, financing to MSMEs in Islamic banks, economic growth and foreign investment have influence on urban unemployment. It can be seen that *FINBUS* all lagged dependent variables have significantly negative relationship with urban unemployment. This implies that 1 percent incline in financing to MSMEs in Islamic banks can decrease urban unemployment by 0.1 percent. Similarly, 1 percent rise in lagged 1, lagged 2 and lagged 3 of urban unemployment reduce urban unemployment by 0.07 percent, 0.03 percent and 0.01 percent respectively. On the other hand, *GDP* and *FDI* show positive and significant effect on urban unemployment. This means that 1 percent increase in both economic growth and foreign investment result in hike in urban unemployment by 0.12 percent and 0.1 percent respectively. Meanwhile, CPI is not significant implying that there is no relationship between inflation and urban unemployment.

In the model 3, lagged dependent variable (*RURAL*<sub>it-1</sub>), CPI and GDP are significant at 1 percent, 0.1 percent and 0.1 percent respectively. On the other hand, FINBUS and FDI are not significant. This implies that lagged rural unemployment, inflation and economic growth have relationship with rural unemployment, while financing to MSMEs in Islamic banks and foreign investment are vice versa. CPI and GDP show negative sign while lagged rural unemployment shows otherwise. This implies that when inflation rises by 1 percent, rural unemployment declines by 0.57 percent. In addition, the rural unemployment decreases by 0.17 percent when economic growth rises by 1 percent. Meanwhile, 1 percent increase in lagged rural unemployment leads to increase in rural unemployment by 0.08 percent.

Table 4. Estimation Result of Two-Step Difference GMM

| Variable / Task                  | Model 1               |                     | Mode                  | el 2                | Model 3                     |                   |  |
|----------------------------------|-----------------------|---------------------|-----------------------|---------------------|-----------------------------|-------------------|--|
| Variable / Test                  | Coefficient           | p-value             | Coefficient           | p-value             | Coefficient                 | p-value           |  |
| $UNEM_{it-1}$                    | 0.2139489             | 0.000***            |                       |                     |                             |                   |  |
| URBAN <sub>it-1</sub>            |                       |                     | -0.0717939            | 0.009**             |                             |                   |  |
| URBAN <sub>it-2</sub>            |                       |                     | -0.0322086            | 0.039*              |                             |                   |  |
| URBAN <sub>it-3</sub>            |                       |                     | -0.1052668            | 0.000***            |                             |                   |  |
| $RURAL_{it-1}$                   |                       |                     |                       |                     | 0.08671141                  | 0.003**           |  |
| FINBUS                           | -0.04951534           | 0.000***            | -0.10015968           | 0.000***            | -0.02781872                 | 0.075             |  |
| FDI                              | 0.00805862            | 0.458               | 0.01451476            | 0.035*              | 0.00892782                  | 0.190             |  |
| CPI                              | -0.27362077           | 0.000***            | 0.05959613            | 0.103               | -0.57117744                 | 0.000***          |  |
| GDP                              | 0.00386451            | 0.000***            | 0.12020164            | 0.007**             | -0.17709492                 | 0.000***          |  |
| C                                | 10.62268              | 0.000***            | 11.56549              | 0.000***            | 16.02469                    | 0.000***          |  |
| Arellano-Bond<br>test for AR (1) | z = -3.7515           | Pr > z = 0.0002     | z = -2.9932           | Pr > z = 0.0028     | z = -3.6519                 | Pr > z = 0.0003   |  |
| Arellano-Bond<br>test for AR (2) | z = 0.77355           | Pr > z = 0.4392     | z = 1.0501            | Pr > z = 0.2937     | z = -0.3762                 | Pr > z = 0.7067   |  |
| Sargan test                      | Chi-square = 30.52703 | Prob > Chi2= 0.6839 | Chi-square = 23.79651 | Prob > Chi2= 0.7812 | Prob ><br>Chi2=<br>30.31919 | Prob ><br>Chi2= c |  |

\*\*\* , \*\* and \* show that the variables are significant at 0.1% , 1% and 5% respectively

Source: Authors' elaboration

Source: Authors' elaboration

#### **Post-estimation Test**

Based on the result on Table 10, it can be seen that first-order serial correlation test for model 1, model 2 and model 3 show that z=-3.7515 with Pr>z=0.0002, z=-2.9932 with Pr>z=0.0028 and z=-3.6519 with Pr>z=0.0003. Since p-value is below 0.05, null hypothesis in all models is rejected. However, second-order serial correlation test shows z=0.77355 with Pr>z=0.4392 in model 1, z=1.0501 with Pr>z=0.2937 in model 2 and z=-0.3762 with Pr>z=0.7067 in model 3. In this case, null hypothesis is accepted because p-value is greater than 0.05. This means that there is no autocorrelation in these three models. Furthermore, Sargan test shows Prob>Chi-squared = 0.6839 in model 1, Prob>Chi-squared = 0.7812 in model 2 and Prob>Chi-squared = 0.7812 in model 3. Since the p-value is greater than 0.05 in all models, null hypothesis is accepted implying that overidentifying restrictions are valid or the models are not weakened while using numerous instruments.

#### **Discussion**

Based on the result, it can be inferred that financing to MSMEs in Islamic Banks in Indonesia significantly reduce general unemployment and urban unemployment. This finding supports Benbekhti et al. (2021) and proves view of Manser & Picot (1999) on reduction of unemployment due to the job creation resulted from the entrepreneurship activities and Thurik

et al.'s (2008) view that small business is the best job creator. In Indonesia, entrepreneurship activities created by MSMEs which dominates labor absorption. Hence, the increase in financial assistance for MSMEs will definitely support the growth of job creation and thus reducing unemployment. However, such financial assistance does not affect rural unemployment. This can be explained from Faggio & Silva's (2014) view that most of the inhabitants in rural area are self-employed and Baumol's (2011) view that the MSMEs grow mostly in urban area which has high population as compared to the rural area. In such a condition, there will be no relationship between financial assistance for MSMEs and unemployment in rural area.

FDI does not show any influence on general unemployment and rural unemployment. This is in line with Mehmet Mucuk's (2013) finding of the inexistence effect of FDI on unemployment in Chile, Colombia and Philippine. This can be explained by the abundance of MSMEs that dominated labor market in Indonesia while FDI was not targeted for them. However, it is found that FDI significantly increase unemployment in urban area. This result supports Almula-Dhanoon et al. (2020) who discovered the same result in MENA region and explained that it was caused by the mismatch between the available skill and the demanded skill.

Furthermore, it can be seen that there was negative relationship between inflation and unemployment in Indonesia as a whole and unemployment in rural area in particular. This finding strengthens empirical study conducted by Arslan & Zaman (2014); Bayrak & Tatli (2018). It is also supported by Philip curve explaining that inflation and unemployment affect each other inversely.

Last but not least, economic growth was found to increase unemployment as a whole and unemployment in urban areas. Meanwhile, economic growth reduced unemployment in rural areas of Indonesia. This finding is consistent with Bayrak & Tatli (2018) who found reduction effect of economic growth on youth unemployment. This can be explained by the domination of youth unemployment in urban area which provides better salary as compared to rural area, leaving the population in urban area increase. When economic growth rises, job opportunities are expected to rise due to hike in demand in urban area. As a result, unemployment in rural area decreases while unemployment in urban area increases.

#### V. CONCLUSION

Unemployment is a pivotal issue faced by every country in the world. Several attempts have been imposed by government to tackle this issue. Financial restriction become the main problem for the business owner, especially for the small business. Islamic finance has been considered as an alternative to the conventional finance which is unfriendly to the low-income group who run small business. It became an issue since labor absorption is dominated by the MSMEs in developing country such as Indonesia where the 97 percent of its total workers are from MSMEs. Hence, this study aims to reveal the effect of MSMEs financing in Islamic banks on unemployment in Indonesia while separating the case between urban and rural areas.

The finding shows that financing to MSMEs in Islamic Banks contributed to the reduction in unemployment in Indonesia as a whole. The unemployment in urban area is also revealed to be reduced by MSMEs financing in Islamic Banks. On the other hand, there is no effect of financing to MSMEs in Islamic Banks on unemployment in rural area. FDI influences urban unemployment positively. Inflation reduces rural unemployment and unemployment in general. Meanwhile, economic growth has positive impacts on urban unemployment and unemployment as a whole, while reducing rural unemployment.

Based on this finding, it is recommended for the government to support the development of MSMEs by strengthening Islamic Banks in Indonesia either from capital aspect or regulation in order to boost labour absorption and finally reduce unemployment..

#### **ACKNOWLEDGEMENT**

The authors would like to express their thanks to Universitas Darussalam Gontor for its support in completing this research by providing research fund and other kinds of support.

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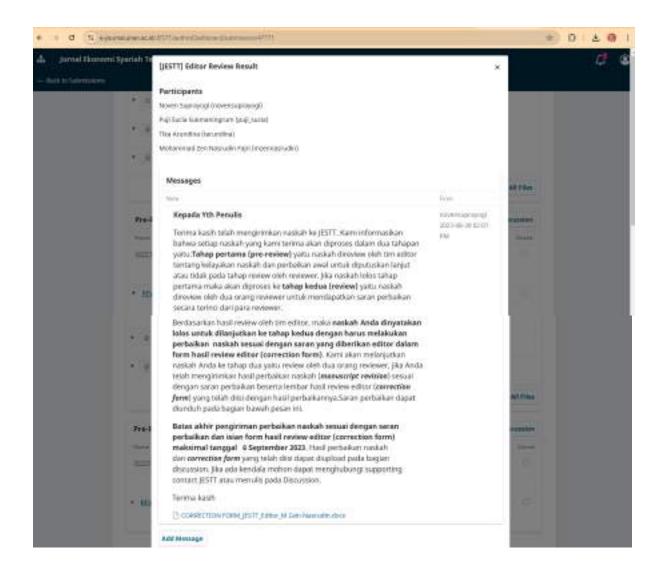
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| Research method Pada bagian ini tidak perlu sub judul jadi dihapus saja sub judul data, research design dll Pada awal bagian ini mohon dijelakan pendekatan penelitian dan metode penelitian yang digunakan  |      |  |      |

| Mohon dijelaskan definisi operasional variabel dan pengukurannya serta sumber data yang digunakan. Dan mohon didetailkan prosedur analisis data yang dilakukan dalam penelitian ini | Result and discussion Pada bagian ini hanya ada dua sub judul yaitu Result dan sub judul Discussion, jadi mohon judul yang lain dihapus. Pada bagian pembahasan mohon diperdalam penjelasan makna hasil temuan penelitian berdasarkan hasil analisis data dengan mengkaitkan teori yang relevan dan penelitian terdahulu yang | Conclusion: Mohon dijelaskan kebaharuan temuan dalam penelitian ini | Referensi: mohon disusun dengan reference manager mendeley | Minor Comments (inconsistencies, major typos, etc): | Setiap paragraph mohon ditulis terdiri dari minimal 4 kalimat | Mohon sitasi dan reference ditulis menggunakan reference manager mendeley | Tabel tidak boleh ditulis secara full tabel cukup garis horizontal pada header |  |  |
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Jurnal Ekonomi Syariah Teori dan Terapan p-ISSN: 2407-1935, e-ISSN: 2502-1508. Vol. ... No. ... nama bulan yyyy (tahun): 1-16 (no halaman); DOI:

# The Impact of MSMEs Financing in Islamic Bank on the Unemployment in Indonesia

# Pengaruh Pembiayaan UMKM pada Bank Syariah terhadap Pengangguran di Indonesia

#### **ABSTRACT**

One of the contributions of Islamic banking sector to Indonesia's economy is channeling funds to MSMEs in the form of financing since a number of them could not access financial services. Interestingly, the MSMEs grew as the Islamic Banking sector rose. However, there is no single study analyzing such an impact on unemployment in both rural and urban areas. This paper aims to reveal the effect of MSMEs financing in Islamic banks on unemployment in Indonesia. It aims further to discover such an effect on unemployment in urban and rural areas separately in Indonesia. Dynamic panel GMM two-step analysis is used in this research to estimate cross-province data in Indonesia between 2010 and 2019. The results of the study reveal that MSMEs financing in Islamic Banks contributed significantly to the reduction of unemployment in Indonesia as a whole. It is also found that the unemployment in urban areas is reduced by MSMEs financing in Islamic Banks. On the other hand, there is no significant relationship between MSMEs financing in Islamic Banks and unemployment in rural areas. These findings can be the basis for Islamic banks to increase MSMEs financing and for the government to expand Islamic banks' role in every part of Indonesia to reduce unemployment, especially in rural areas.

Keywords: MSMEs Financing, Islamic Bank, Unemployment, Urban, Rural.

#### **ABSTRAK**

Salah satu kontribusi sektor perbankan syariah dalam perekonomian Indonesia adalah penyaluran dana kepada UMKM dalam bentuk pembiayaan, karena beberapa dari mereka tidak dapat mengakses layanan keuangan. Menariknya, UMKM tumbuh seiring dengan bangkitnya sektor Perbankan Syariah. Namun, tidak ada satu studi pun yang menganalisis dampak tersebut terhadap pengangguran di pedesaan dan perkotaan. Penelitian ini bertujuan untuk mengungkap pengaruh pembiayaan UMKM di bank syariah terhadap pengangguran di Indonesia. Hal ini bertujuan untuk mengetahui lebih jauh pengaruh tersebut terhadap pengangguran di daerah perkotaan dan pedesaan secara terpisah di Indonesia. Analisis dua langkah GMM panel dinamis digunakan dalam penelitian ini untuk mengestimasi data lintas provinsi di Indonesia antara tahun 2010 dan 2019. Hasil penelitian mengungkapkan bahwa pembiayaan UMKM di Bank Syariah berkontribusi signifikan terhadap pengurangan pengangguran di Indonesia secara keseluruhan. Ditemukan juga bahwa pengangguran di perkotaan berkurang dengan pembiayaan UMKM di Bank Syariah. Di sisi lain, tidak ada hubungan yang signifikan antara pembiayaan UMKM di bank syariah dengan pengangguran di pedesaan. Hasil penelitian ini dapat menjadi dasar bagi bank-bank syariah dalam meningkatkan porsi pembiayaan UMKM dan dasar bagi pemerintah untuk memperluas peran perbankan syariah di seluruh bagian Indonesia untuk mengurangi pengangguran, khususnya di area pedesaan.

Kata Kunci: Pembiayaan UMKM, Bank Syariah, Pengangguran, Perkotaan, Pedesaan.

#### I. INTRODUCTION

Unemployment is one of the most popular issues in economic development whereby every country in this world has made several attempts to tackle this issue. A remarkable population growth is recognized as one of the main causes of such an issue of unemployment which makes developing countries with huge populations vulnerable to it (Singh, 2018). The greater the number of the population they have, the larger job opportunities will be needed to keep the unemployment cases at a minimum level. Many attempts have been made by their government to keep its number as low as possible, either through human capital development, provision of an educational system by market demand, or increasing economic growth (Sherif, 2013). Apart from the government's role, the contribution of the private sector is also essential in supporting the programs so that unemployment can be successfully reduced.

As one of the developing countries, Indonesia recorded through its statistical agency (BPS, 2021) that as of August 2020, the number of people without jobs within the country reached 9.76 million persons, accounting for 7.01 percent of the total labor force in Indonesia. Among this group, 70 percent of them live in urban areas while the others live in rural areas. The unemployment rate is relatively moderate as compared to other developing countries. This percentage can be kept at that level due to

Indonesia's abundance of micro small medium enterprises (MSMEs). It can be seen in **Table 1** that the number of MSMEs consistently increased every year from 52,764,750 units in 2010 to 65,465,497 units in 2019. According to CNN Indonesia, based on the data released by the Ministry of MSMEs, the MSMEs have a major role in strengthening the economy as they absorbed 97 percent of total workers and contributed to 60.5 percent of GDP in 2019. This phenomenon needs to be proven through research whether the effect is significant.

**Table 1.** Number of MSMEs in Indonesia (2010-2019)

| Year | Number of MSMEs |
|------|-----------------|
| 2010 | 52,764,750      |
| 2011 | 54,114,821      |
| 2012 | 55,206,444      |
| 2013 | 56,534,592      |
| 2014 | 57,895,721      |
| 2015 | 59,262,772      |
| 2016 | 61,651,177      |
| 2017 | 62,922,617      |
| 2018 | 64,194,057      |
| 2019 | 65,465,497      |

Source: Ministry of MSMEs

Based on this example, unemployment in developing countries can be minimized by strengthening MSMEs due to their role in creating job opportunities as well as absorbing labor (Nasr & Rostom, 2013). Such a role has also been recognized by several developed countries as it become a key to the rapid economic growth in China (Kongolo, 2010). Despite the potential of MSMEs, there are several constraints faced by MSMEs in developing their business, including the lack of an integrated accounting system, the lack of trained human resources, limited marketing and administrative matters, and most importantly limited funds (Mumani, 2014). These limited funds are faced with the presence of conventional loans that apply interest rates and the difficulty of accessing these loans (Elasrag, 2016). This capital constraint becomes the main issue in developing MSMEs since they have limited access to financial services as compared to the big companies (Benbekhti et al., 2021). There is a huge gap in SMEs' financing in developing countries as approximately 41% of their SMEs could not afford their financial necessities. As a response to this issue, Islamic Finance (IF) is expected to be the alternative solution to the accessibility problem in MSMEs. The nature of IF which is built based on partnership, provides access to financing for the small enterprises and the poor (Elasrag, 2016). Furthermore, the profit and loss sharing system in the IF allows MSMEs to survive the loss compared to the conventional loan which burdens all the loss to the entrepreneurs (Kayed & Hassan, 2011).

In Indonesia, the growth of IF is relatively slow compared to other Muslim countries in the world although the trend is upward. Nevertheless, the IF industry shows a positive role in supporting MSMEs as can be seen from the data released by the financial service authority (OJK, 2019) that around 51.86 trillion rupiahs were channeled by the Islamic Banking industry to MSMEs in Indonesia in December 2019. In addition, it can be seen in **Table 2** that in the period 2010-2019, the total MSMEs financing of Islamic banks in Indonesia shows an upward trend from IDR 52,565 billion in 2010 to IDR 66,333 billion in 2019. In reverse, the trend of the number of unemployed people is downward, starting at 8,319,779 people in 2010 and then ending at 7,045,761 in 2019. Furthermore, when the total MSMEs financing reached a peak at IDR 110,027 billion in 2013, the number of unemployed people fell to 7,338,737 and then it rose again to 7,560,822 as the MSMEs financing declined to IDR 50,146 billion in 2015. These movements raise the question of whether there is a relationship between the two variables.

**Table 2**. Comparison between the Number of Unemployed and MSMEs Financing of Islamic Banks in Indonesia (2010-2019)

| Year | Number of Unemployed | Total MSME Financing (in IDR billion) |
|------|----------------------|---------------------------------------|
| 2010 | 8,319,779            | 52,565                                |
| 2011 | 7,700,086            | 71,810                                |
| 2012 | 7,244,956            | 90,856                                |
| 2013 | 7,388,737            | 110,027                               |
| 2014 | 7,244,906            | 59,699                                |
| 2015 | 7,560,822            | 50,146                                |
| 2016 | 7,031,775            | 54,411                                |
| 2017 | 7,040,323            | 58,980                                |
| 2018 | 7,000,691            | 62,231                                |
| 2019 | 7,045,761            | 66,333                                |

Source: BPS and OJK

Most of the existing literature investigated the impact of credit in the banking sector on unemployment. Shabbir et al. (2011) revealed that a rise in credit volume in the banking sector reduced unemployment in Pakistan. This finding is strengthened by Pagano & Pica (2011), Feldmann (2012), and Göçer, (2013) who respectively unraveled a similar impact during the investigation on 63 countries, 53 countries of the world, and 14 countries under the European Union. Azolibe et al. (2022) found further the ability of banking system credit to control the unemployment rate in South Africa and Nigeria. At the same time, several studies have found the role of SMEs in creating employment, especially in developing countries (Abisuga-Oyekunle et al., 2020; Oyelana & Adu, 2015; Syed et al., 2012).

There is only limited study conducted to reveal the effect of financing in Islamic banking on unemployment through MSMEs financing. Khairina et al. (2020) analyzed the relationship between financing in Islamic Bank and labor absorption in real sectors in Indonesia and found that third-party fund allocation through profit and loss-sharing financing had a significantly positive impact on labor absorption in real sectors. Unfortunately, their findings end at labor absorption without further analysis of the impact on unemployment. In Turkey, Benbekhti et al. (2021) discovered that SMEs financing in Islamic banks is proven to reduce unemployment as a result of an increase in productivity. These findings did not cover the empirical impact of MSMEs financing on unemployment in urban and rural areas.

This paper will be the first to discuss one of the supporting attempts at unemployment reduction through financial access provided by Islamic Banks for MSMEs in Indonesia as one of the developing countries by decomposition of the impact in urban and rural areas. This study aims to reveal the effect of Islamic financing on MSMEs on unemployment in Indonesia. Furthermore, it aims to discover further the effect of Islamic financing on MSMEs on unemployment in urban and rural areas in particular.

#### II. LITERATURE REVIEW

#### **Entrepreneurship-Unemployment Theory**

The linkage between entrepreneurship and unemployment can be investigated through two-way communication. One of the relevant theories related to this is Schumpeter's entrepreneurial effect which states that a high rate of unemployment in a country will lead to the rise of entrepreneurship activities including start-ups and small businesses due to the decreasing opportunity to start new businesses (Blanchflower & Meyer, 1994). At the same time, this theory states that the rise in entrepreneurship activities can reduce unemployment as they create jobs (Manser & Picot, 1999). According to (Thurik et al., 2008), start-ups and small businesses contribute to job creation better than their counterparts since they contribute to greater entrepreneurial activity which then leads to unemployment reduction. They also asserted that the entrepreneurial activity is related to the Schumpeterian process where the old product will be replaced by the new products created from those entrepreneurial activities.

Based on the concept of the unemployment-push effect, a person will be pushed into entrepreneurship activity since the opportunities to get decent work and thus sufficient wage from the job are decreased by unemployment (Startiene & Remeikiene, 2009). Ritsilä & Tervo (2002) view that the person is not satisfied with such a situation because it is not his true dream. Meanwhile, According to the prosperity-pull concept at a time of low unemployment level, people most likely become self-employed due to the high possibility of earning a labor wage (Muhelberger, 2007). Conversely, during high unemployment levels, the demand for products or services falls which may lead to the bankruptcy of companies as their revenues are reduced. As a consequence, many workers will be laid off and they cannot start entrepreneurship since their expertise in start-ups is inadequate.

### Islamic Finance, MSMEs and Unemployment

Islamic Finance brings a religious value to the financing system as well as in its contribution to social matters in supporting social justice among people (Wajdi Dusuki, 2008). Islamic Banks are business entities guided by the Shariah board. This allows them to consistently run according to Islamic principles with an expectation of preventing the concentration of wealth among a few groups without harming people who lawfully acquired them (Ibn, 2006). Therefore, it is only natural for Islamic Banks to promote financing schemes for the MSMEs which is nowadays known as microfinance.

IF is friendly to MSMEs as there is a profit and loss sharing (PLS) system which creates fairness for MSMEs as borrowers and Islamic Banks as lenders (Chapra, 2011). Although this system generates small profit for the Islamic bank compared to the conventional, MSMEs will be helped a lot as their resilience against loss can be maintained (Fajri et al., 2022). Better development in MSMEs indirectly results in better provision of job opportunities which can finally contribute to the fall of unemployment case.

Based on the perspective of economic development, MSMEs are perceived to be able to create almost half of new job opportunities in the economy, whereby the job opportunities are considered good ones (Edmiston, 2007). Mostly, MSMEs have a better response to the cultural changes in society since they can easily adapt to the situation. Apart from being job creators and income generators, they are also considered the key drivers of innovation in the economy (Abisuga-Oyekunle et al., 2020). With the abundance of MSMEs, the poor will be helped a lot due to the provision of various job opportunities which lead them to have a better quality of life in society.

(Neumark et al., 2011) then proved the theory through empirical research and found that small businesses with less than 20 workers in the United States played the biggest role in job creation. Meanwhile, in developing countries, businesses with 5 to 99 employees and businesses older than 10 years have the highest contribution to job creation (Ayyagari et al., 2011). The job creation role of MSMEs will lead to the decline of unemployment provided that the MSMEs can develop better. Therefore, it is important to create a conducive environment in which small businesses can operate, innovate, and create the jobs needed. In this case, the International Labor Organization (ILO, 2015) asserted that SMEs' contribution to job creation and income generation is firmly crucial as two-thirds of the entire job opportunities worldwide are provided by SMEs.

The role of MSMEs in job creation as the product of entrepreneurship activity differs between urban and rural areas. Faggio & Silva (2014) stated that some characteristics are needed for MSMEs to be able to reduce unemployment namely innovation, job creation, and self-employment. He said that these elements can properly occur in the urban areas since the MSMEs in rural areas are mostly self-employed and are not innovative, producing replica products. Furthermore, (Baumol et al., 2011) added that there are more MSMEs in urban areas with their various kind of products leading to more consumers' interest. In this case, there will be an increase in demand for the local products which possibly leads to more workers hired to increase production to fulfill the demand. In a nutshell, there will be minimum or even no effect of the existence of MSMEs on unemployment in the rural area. Meanwhile, the effect of MSMEs on unemployment can be seen in urban areas.

#### The Impact of MSMEs Financing in Islamic Banks on Unemployment

MSMEs financing in Islamic banks is essential in reducing unemployment in developing countries where the labor market is dominated by MSMEs. Through PLS-based financing, Islamic banks support the development of MSMEs better than their counterpart due to the fairness between the lenders and

the borrowers (Chapra, 2011). The better development of MSMEs will create more new job opportunities in the market (Edmiston, 2007), leading to better labor absorption and thus reducing unemployment. Based on this assumption, the first hypothesis is developed as follows:

H1: MSMEs financing has a negative influence on unemployment

When applying the above assumption in different areas, namely urban and rural areas, there is a difference since each of them has its typical condition. This assumption can perfectly hold for MSMEs in urban areas due to the complete characteristics needed for unemployment reduction (Faggio & Silva, 2014) and the high demand for various products there (Baumol et al., 2011). The higher the product demand, the more workers will be hired to meet the consumer's demand. In addition, MSMEs in the Urban area have a high level of Islamic financial literacy and inclusion which allows them to get easy access to financial support and then increase their performance (Saifurrahman & Kassim, 2021).

H2: MSMEs financing has a negative influence on urban unemployment

In rural areas, MSMEs financing of Islamic banks does not affect unemployment. It can be explained by the domination of self-employed people in rural areas which is less innovative (Faggio & Silva, 2014) and the lack of Islamic financial literacy inclusion (Saifurrahman & Kassim, 2021) causing them to face difficulty in accessing financial services in Islamic banks. As a result, the growth of MSMEs in rural areas remains stable and thus unemployment is not affected by the financing.

H3: MSMEs financing has no significant influence on rural unemployment

#### III. RESEARCH METHODS

This research uses a quantitative approach employing the Generalized Method of Moments (GMM) as a tool for dynamic panel data analysis. This method is the most appropriate since the data of the cross-sectional unit (N) is greater than the period (T) (Siddiqui & Ahmed, 2013). 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 and unobserved individual heterogeneity (Apergis & Ozturk, 2015). Two-step GMM analysis is used instead of the counterpart to make sure that the estimation result is reliable and consistent (Roodman, 2009).

The analysis was conducted using secondary data from 33 provinces in Indonesia from 2010 to 2019. The data was mainly obtained from two sources, the Center for Statistics Agency (BPS) and the Financial Services Authority (OJK). The dependent variables are *UNEM*, *URBAN*, and *RURAL*. *UNEM* represents the number of unemployed people as a whole, while *URBAN* and *RURAL* indicate respectively the number of unemployed people in urban areas and rural areas. The data of the dependent variables are obtained from BPS. The independent variables are *FINBUS*, *INF*, *FDI*, and *GDP*. *FINBUS* is the amount of MSMEs financing in Islamic banks which is measured in billion rupiahs. The data of *FINBUS* is taken from OJK while the data of the other three variables are obtained from BPS. *INF* represents inflation measured by the consumer price index (CPI). Meanwhile, *FDI* and *GDP*, which are measured in million rupiahs, denote the amount of foreign direct investment and economic growth respectively.

The estimation starts with a unit root test to check the stationarity of all variables. When all the variables are stationary at the level, estimation is conducted using Common Effect Model (CEM), Fixed Effect Model (FEM) and Random Effect Model (REM). Afterward, It is necessary to confirm the selection of FEM among the other static panel models using the Chow-test and Hausman-test. The Two-Step GMM estimation then can be applied once FEM is selected as the best model. Afterward, it is necessary to do post-estimation tests to check the validity of all the instruments and autocorrelation in the error terms (Alaabed et al., 2016). To check for 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.

There are three models formulated that distinguish the analysis of unemployment as a whole and unemployment in rural and urban areas. The original models created are as follows:

$$UNEM_{it} = FINBUS_{it} + INF_{it} + FDI_{it} + GDP_{it} + \mu_{it}$$
 (1)

$$URBAN_{it} = FINBUS_{it} + INF_{it} + FDI_{it} + GDP_{it} + \mu_{it}$$
 (2)

$$RURAL_{it} = FINBUS_{it} + INF_{it} + FDI_{it} + GDP_{it} + \mu_{it}$$
 (3)

Variables definition:

UNEM = UnemploymentURBAN = Urban UnemploymentRURAL = Rural Unemployment

FINBUS = MSMEs financing in Islamic Bank

INF = Inflation

*FDI* = Foreign Direct Investment

GDP = Economic growth

 $\mu$  = Error term

## IV. RESULTS AND DISCUSSION

#### Result

It can be seen from **Table 3** that unemployed people in Indonesia across the provinces range between 11,979 persons and 1,951,391 persons with 222,712 persons on average. In urban areas, the average number of unemployed is 136,854 with the number ranging between 2,881 persons and 1,462,663 persons. Meanwhile, in rural areas, the number of unemployed people ranges from 3,095 persons to 824,784 persons with an average number of 85,858 persons. The total amount of financing that Islamic Banks channeled to MSMEs starts from 10 billion rupiahs to 49,870 billion rupiahs with 2,051.691 billion rupiahs on average. The average value of FDI is USD 801.6761 million ranging from USD 0.2 million to USD 7124.9 million. Inflation ranges between 114.31 and 164.3167 with an average value of 132.96.

**Table 3.** Descriptive Statistics

| Variable      | Mean     | Std. Dev | Min    | Max      |
|---------------|----------|----------|--------|----------|
| UNEM          | 222712.6 | 363414.5 | 11979  | 1951391  |
| URBAN         | 136854.3 | 245715.7 | 2881   | 1462663  |
| RURAL         | 85858.31 | 131364   | 3095   | 824784   |
| <b>FINBUS</b> | 2051.691 | 4812.129 | 10     | 49870    |
| FDI           | 801.6761 | 1245.474 | 0.2    | 7124.9   |
| CPI           | 132.9668 | 9.573448 | 114.31 | 164.3167 |

Source: Authors' elaboration

In this study, a unit root test is conducted to test for stationarity of the variables. Specifically, the Levin-Lin-Chen (LLC) test and the Im-Pesaran-Shin (IPS) test are used for this purpose. The result of the test can be seen in **Table 4** which shows that all variables are stationary at level. This implies that there is no cointegration in the model and therefore pooling least square is more appropriate to be used for analysis.

Table 4. Unit Root Test

| Variable  | I               | PS        | LL              | С         |
|-----------|-----------------|-----------|-----------------|-----------|
| v arrabic | statistic value | p-value   | statistic value | p-value   |
| UNEM      | -3.8452         | 0.0001*** | -11.1332        | 0.0000*** |
| URBAN     | -3.1978         | 0.0007*** | -10.1606        | 0.0000*** |
| RURAL     | -2.1565         | 0.0155**  | -4.9925         | 0.0000*** |
| BUS       | -3.3649         | 0.0004*** | -12.3046        | 0.0000*** |
| FDI       | -4.0843         | 0.0000*** | -7.3584         | 0.0000*** |
| CPI       | -2.261          | 0.0119**  | -7.6846         | 0.0000*** |

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

Source: Authors' elaboration

There are three models to be selected in this study, namely Pooled OLS, FEM dan REM. To select between Pooled OLS and FEM the Chow-test is conducted. In this test, the null hypothesis shows that Pooled OLS is appropriate. The results of the test as shown in **Table 5** show that the p-value of all equation models is 0.000 which is lower than 0.05. This means a null hypothesis is rejected and that 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 shows that REM is the appropriate model. The results of the Hausman test show that probability chi-squared values are 0.0004, 0.0003, and 0.000 for model 1, model 2, and model 3 respectively. 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 5.** Chow-test and Hausman-test

| Variable  | Chov            | v-test    | Hausman-test      |           |  |
|-----------|-----------------|-----------|-------------------|-----------|--|
| v arrable | statistic value | p-value   | Chi-squared value | p-value   |  |
| Model 1   | 152.27          | 0.0000*** | 18.07             | 0.0004*** |  |
| Model 2   | 99.69           | 0.0000*** | 18.98             | 0.0003*** |  |
| Model 3   | 132.66          | 0.0000*** | 24.25             | 0.0000*** |  |

\*\*\* shows significance at 1%

Source: Authors' elaboration

The results of the estimation can be seen in **Table 6**. There are three different results from three different models consisting of model 1, model 2, and model 3 which indicate the effects of independent variables on unemployment in general, urban unemployment, and rural unemployment respectively.

In model 1, most of the independent variables are significant at 0,1% meaning that they have a significant impact on general unemployment in Indonesia. The lagged dependent variable ( $UNEM_{it-1}$ ) and GDP show a significant and positive influence on general unemployment. This implies that a 1 percent increase in lagged general unemployment and economic growth results in a rise in general unemployment by 0.21 percent and 0.003 percent respectively. Meanwhile, FINBUS and CPI show that they have a significantly negative impact on general unemployment. The coefficient values indicate that a 1 percent rise in financing to MSMEs in Islamic banks decreases general unemployment by 0.04 percent. Likewise, a 1 percent increase in inflation causes a reduction of general unemployment by 0.27 percent. However, FDI is not significant in this model implying that foreign investment does not affect general unemployment.

In model 2, both lagged 3 dependent variables (*URBAN*<sub>it-3</sub>) and *FINBUS* are significant at 0.1 percent. Both lagged 2 dependent variables (*URBAN*<sub>it-2</sub>) and GDP are significant at 1 percent, while FDI is significant at 5 percent. This shows that all lagged urban unemployment, financing to MSMEs in Islamic banks, economic growth, and foreign investment influence urban unemployment. It can be seen that *FINBUS* all lagged dependent variables have a significantly negative relationship with urban unemployment. This implies that a 1 percent incline in financing to MSMEs in Islamic banks can decrease urban unemployment by 0.1 percent. Similarly, a 1 percent rise in lagged 1, lagged 2, and lagged 3 of urban unemployment reduced urban unemployment by 0.07 percent, 0.03 percent, and 0.01 percent respectively. On the other hand, *GDP* and *FDI* show positive and significant effects on urban unemployment. This means that a 1 percent increase in both economic growth and foreign investment results in a hike in urban unemployment by 0.12 percent and 0.1 percent respectively. Meanwhile, CPI is not significant implying that there is no relationship between inflation and urban unemployment.

In model 3, lagged dependent variable ( $RURAL_{it-1}$ ), CPI, and GDP are significant at 1 percent, 0.1 percent, and 0.1 percent respectively. On the other hand, FINBUS and FDI are not significant. This implies that lagged rural unemployment, inflation, and economic growth have a relationship with rural unemployment while financing to MSMEs in Islamic banks and foreign investment are vice versa. CPI and GDP show negative signs while lagged rural unemployment shows otherwise. This implies that when inflation rises by 1 percent, rural unemployment declines by 0.57 percent. In addition, rural

unemployment decreases by 0.17 percent when economic growth rises by 1 percent. Meanwhile, a 1 percent increase in lagged rural unemployment leads to an increase in rural unemployment by 0.08 percent.

Table 6. Estimation Result of Two-Step Difference GMM

| Variable / Test                  | Mod                   | el 1                | Mode                  | el 2                | Mod                   | lel 3             |
|----------------------------------|-----------------------|---------------------|-----------------------|---------------------|-----------------------|-------------------|
| Variable / Test                  | Coefficient           | p-value             | Coefficient           | p-value             | Coefficient           | p-value           |
| $UNEM_{it-1}$                    | 0.2139489             | 0.000***            |                       |                     |                       |                   |
| $URBAN_{it	ext{-}1}$             |                       |                     | -0.071794             | 0.009**             |                       |                   |
| $URBAN_{it-2}$                   |                       |                     | -0.032209             | 0.039*              |                       |                   |
| URBAN <sub>it-3</sub>            |                       |                     | -0.105267             | 0.000***            |                       |                   |
| $RURAL_{it-1}$                   |                       |                     |                       |                     | 0.08671141            | 0.003**           |
| <i>FINBUS</i>                    | -0.049515             | 0.000***            | -0.10016              | 0.000***            | -0.0278187            | 0.075             |
| FDI                              | 0.0080586             | 0.458               | 0.0145148             | 0.035*              | 0.00892782            | 0.19              |
| CPI                              | -0.273621             | 0.000***            | 0.0595961             | 0.103               | -0.5711774            | 0.000***          |
| GDP                              | 0.0038645             | 0.000***            | 0.1202016             | 0.007**             | -0.1770949            | 0.000***          |
| C                                | 10.62268              | 0.000***            | 11.56549              | 0.000***            | 16.02469              | 0.000***          |
| Arellano-Bond<br>test for AR (1) | z = -3.7515           | Pr > z = 0.0002     | z = -2.9932           | Pr > z = 0.0028     | z = -3.6519           | Pr > z = 0.0003   |
| Arellano-Bond<br>test for AR (2) | z = 0.77355           | Pr > z = 0.4392     | z = 1.0501            | Pr > z = 0.2937     | z = -0.3762           | Pr > z = 0.7067   |
| Sargan test                      | Chi-square = 30.52703 | Prob > Chi2= 0.6839 | Chi-square = 23.79651 | Prob > Chi2= 0.7812 | Prob > Chi2= 30.31919 | Prob ><br>Chi2= c |

\*\*\*, \*\* and \* show that the variables are significant at 0.1%, 1% and 5% respectively

Source: Authors' elaboration

Based on the result in **Table 6**, it can be seen that the first-order serial correlation test for model 1, model 2, and model 3 shows that z=-3.7515 with Pr>z=0.0002, z=-2.9932 with Pr>z=0.0028 and z=-3.6519 with Pr>z=0.0003. Since the p-value is below 0.05, the null hypothesis in all models is rejected. However, the second-order serial correlation test shows z=0.77355 with Pr>z=0.4392 in model 1, z=1.0501 with Pr>z=0.2937 in model 2, and z=-0.3762 with Pr>z=0.7067 in model 3. 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 these three models. Furthermore, the Sargan test shows Prob>Chi-squared z=0.6839 in model 1, z=0.6839 in model 2, and z=0.6839 in model 1, z=0.6839 in model 2, and z=0.6839 in model 1, z=0.6839 in model 1, z=0.6839 in model 2, and z=0.6839 in model 3. Since the p-value is greater than 0.05 in all models, the null hypothesis is accepted implying that overidentifying restrictions are valid or the models are not weakened while using numerous instruments.

#### Discussion

Based on the result, it can be inferred that MSMEs financing in Islamic Banks in Indonesia significantly reduces unemployment as a whole. This finding is in line with the Schumpeter entrepreneurship theory which states that entrepreneurship activities contributed to the reduction of unemployment due to job creation (Manser & Picot, 1999) and with (Thurik et al., 2008) view that small business is the best job creator. In this case, entrepreneurship activities were increased as a result of MSMEs financing channeled by the Islamic banks which brings fairness for both lenders and borrowers (Chapra, 2011) leading to better development of MSMEs and thus creating more new job opportunities in the economy (Edmiston, 2007). In Indonesia, entrepreneurship activities were created by MSMEs which dominate labor absorption. Hence, the increase in financial assistance for MSMEs will support the growth of job creation and thus reduce unemployment. This finding strengthens studies by Khairina et al. (2020) who unraveled the positive impact of Islamic bank financing on labor

absorption of real sectors in Indonesia and Benbekhti et al. (2021) who found the negative impact of MSMEs financing in Islamic banks on unemployment in Turkey due to increase in productivity.

Furthermore, MSME financing has a negative impact on urban unemployment. This finding also supports the theory of Schumpeter entrepreneurship. In urban areas, more people were hired by MSMEs because the demand for various goods is high (Baumol et al., 2011) triggering better growth of MSMEs which are innovative, self-employed, and generating jobs (Faggio & Silva, 2014). The growth of MSMEs in urban areas was also supported by a high level of Islamic financial inclusion which allows them to get better access to financial support to increase their performance (Saifurrahman, 2021). As MSMEs grew with good performance in urban areas, more people were hired, and therefore unemployment decreased.

Unfortunately, MSMEs financing in Islamic banks does not affect rural unemployment. This can be explained by (Faggio & Silva, 2014) view that most of the inhabitants in the rural area are self-employed and Baumol et al. (2011) view that the MSMEs grow mostly in urban area which has a high population as compared to the rural area. Furthermore, MSMEs in rural areas have low levels of financial inclusion and literacy which allows them to get financial support for better growth (Saifurrahman & Kassim, 2021). Hence, as MSMEs financing in Islamic Bank increases, MSMEs in rural areas are more likely to remain unchanged because they have very limited access to financing. As a result, rural unemployment will also be unchanged.

FDI does not show any influence on general unemployment and rural unemployment. This is in line with (Mehmet Mucuk, 2013) finding of the inexistence effect of FDI on unemployment in Chile, Colombia, and the Philippines. This can be explained by the abundance of MSMEs that dominated the labor market in Indonesia while FDI was not targeted for them. However, it is found that FDI significantly increases unemployment in urban areas. This result supports (Almula-Dhanoon et al., 2020) who discovered the same result in the MENA region and explained that it was caused by the mismatch between the available skill and the demanded skill.

Furthermore, it can be seen that there was a negative relationship between inflation and unemployment in Indonesia as a whole and unemployment in rural areas in particular. This finding strengthens the empirical study conducted by (Arslan & Zaman, 2014; Bayrak & Tatli, 2018). It is also supported by the Philip curve explaining that inflation and unemployment affect each other inversely.

Last but not least, economic growth was found to increase unemployment as a whole and unemployment in urban areas. Meanwhile, economic growth reduced unemployment in rural areas of Indonesia. This finding is consistent with (Bayrak & Tatli, 2018) who found a reduction effect of economic growth on youth unemployment. This can be explained by the domination of youth unemployment in urban areas which provides better salaries as compared to rural areas, leaving the population in urban areas to increase. When economic growth rises, job opportunities are expected to rise due to a hike in demand in urban areas. As a result, unemployment in rural areas decreases while unemployment in urban areas increases.

### V. CONCLUSION

Unemployment is a pivotal issue faced by every country in the world. Several attempts have been made by the government to tackle this issue. Financial restrictions become the main problem for the business owner, especially for the small business. Islamic finance has been considered as an alternative to conventional finance which is unfriendly to the low-income group who run small businesses. It became an issue since labor absorption is dominated by the MSMEs in developing countries such as Indonesia where 97 percent of its total workers are from MSMEs. Hence, this study aims to reveal the effect of MSMEs financing in Islamic banks on unemployment in Indonesia while separating the case between urban and rural areas. Such an analysis of the impact of MSMEs on urban and rural unemployment has never been conducted before.

The finding shows that financing to MSMEs in Islamic Banks contributed to the reduction in unemployment in Indonesia as a whole. The unemployment in urban areas is also revealed to be reduced by MSMEs financing in Islamic Banks. On the other hand, there is no effect of financing to MSMEs in

Islamic Banks on unemployment in rural areas. FDI influences urban unemployment positively. Inflation reduces rural unemployment and unemployment in general. Meanwhile, economic growth has positive impacts on urban unemployment and unemployment as a whole, while reducing rural unemployment. The implication of this finding for Islamic banks is the provision of a foundation in increasing the amount of financing channeled to MSMEs in Indonesia since it is proven to be effective in reducing unemployment. For the government, this study can be the basis for further expansion of Islamic banks and their role in every part of Indonesia to reduce unemployment, especially in rural areas.

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| ED | EDITOR REVIEW RESULT   |      |   |  |      |
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| No | Editor's Suggestion  | Page | Manuscript Change by Author (Please fill in the blank with copy-paste your manuscript revision based on the editor's  |  | Page |
| -  | Major Comments (need for clarification, re-write, re-analysis, and/or additional information, and suggestions that would improve the manuscript):  |      | (nonseasons)  |  |      |
|    | Abstack: mohon bagian implikasi di paragraph terakhir diperkuat dengan implikasi karena yang ditulis sekarang lebih sekedar saran yang kurang dapat diimplimentasikan.  Berikan implikasi yang jelas dan realistis   |      | These findings can be the basis for Islamic banks to increase MSMEs financing and for the government to expand Islamic banks in every part of Indonesia to reduce unemployment.   | nancing and for the  |      |
|    | Introduction: mohon ditambahkan penjelasan tentang state of the art yaitu ditambahkan penelitian terdahulu yang relevan atau sama dengan topik penelitian ini agar lebih kuat, yaitu minimal 10 artikel.  Mohon untuk kebaharuan diperjelas lebih kuat lagi agar lebih kuat originalitas penelitian.  Untuk memperkuat research gap mohon disajikan data gambaran umum UMKM, pembiayaan bank syariah untuk UMKM dan pengangguran di Indonesia dalam bentuk table |      | As one of the developing countries, Indonesia recorded through its statistical agency (BPS, 2021) that as of August 2020, the number of people without jobs within the country reached 9.76 million persons, accounting for 7.01 percent of the total labor force in Indonesia. Among this group, 70 percent of them live in urban areas while the others live in rural areas. The memployment rate is relatively moderate as compared to other developing countries. This percentage can be kept at that level due to Indonesia's abundance of micro small medium enterprises (MSMEs). It can be seen in <b>Table 1</b> that the number of MSMEs consistently increased every year from 52,764,750 units in 2010 to 65,465,497 units in 2019. According to CNN Indonesia, based on the data released by the Ministry of MSMEs, the MSMEs have a major role in strengthening the economy as they absorbed 97 percent of total workers and contributed to 60.5 percent of GDP in 2019. This phenomenon needs to be proven through research whether the effect is significant. <b>Table 1.</b> Number of MSMEs in Indonesia (2010-2019)  Year  Number of MSMEs  S2010  S2,764,750 | statistical agency (BPS, 2021) country reached 9.76 million Among this group, 70 percent employment rate is relatively an be kept at that level due to can be seen in <b>Table 1</b> that the ) units in 2010 to 65,465,497 d by the Ministry of MSMEs, absorbed 97 percent of total on needs to be proven through |      |
|    |  |      |   |  |      |

|            |            |            |            |            |            |            |            |            |                     | atries can be minimized by swell as absorbing labor (Nasr eloped countries as it become a the potential of MSMEs, there less, including the lack of an uces, limited marketing and 2014). These limited funds are and the difficulty of accessing n issue in developing MSMEs e big companies (Benbekhti et atries as approximately 41% of a to this issue, Islamic Finance in m MSMEs. The nature of IF e small enterprises and the poor e IF allows MSMEs to survive to the entrepreneurs (Kayed &  | r Muslim countries in the world itive role in supporting MSMEs  |
|------------|------------|------------|------------|------------|------------|------------|------------|------------|---------------------|---|---|
| 54,114,821 | 55,206,444 | 56,534,592 | 57,895,721 | 59,262,772 | 61,651,177 | 62,922,617 | 64,194,057 | 65,465,497 | Ministry of MSMEs   | Based on this example, unemployment in developing countries can be minimized by strengthening MSMEs due to their role in creating job opportunities as well as absorbing labor (Nasr & Rostom, 2013). Such a role has also been recognized by several developed countries as it become a key to the rapid economic growth in China (Kongolo, 2010). Despite the potential of MSMEs, there are several constraints faced by MSMEs in developing their business, including the lack of an integrated accounting system, the lack of trained human resources, limited marketing and administrative matters, and most importantly limited funds (Mumani, 2014). These limited accessing these loans (Elasrag, 2016). This capital constraint becomes the main issue in developing MSMEs since they have limited access to financial services as compared to the big companies (Benbekhti et al., 2021). There is a huge gap in SMEs' financing in developing countries as approximately 41% of their SMEs could not afford their financial necessities. As a response to this issue, Islamic Finance (IF) is expected to be the alternative solution to the accessibility problem in MSMEs. The nature of IF which is built based on partnership, provides access to financing for the small enterprises and the poor (Elasrag, 2016). Furthermore, the profit and loss sharing system in the IF allows MSMEs to survive the loss compared to the conventional loan which burdens all the loss to the entrepreneurs (Kayed & Hassan, 2011). | In Indonesia, the growth of IF is relatively slow compared to other Muslim countries in the world although the trend is upward. Nevertheless, the IF industry shows a positive role in supporting MSMEs |
| 2011       | 2012       | 2013       | 2014       | 2015       | 2016       | 2017       | 2018       | 2019       | Source: Ministry of | Based on this strengthening MSIN & Rostom, 2013). Skey to the rapid eccare several constraintegrated account administrative mattafaced with the press these loans (Elasra, since they have lim al., 2021). There is their SMEs could refer their SMEs could refer is expected to be which is built based (Elasrag, 2016). Fut the loss compared the Hassan, 2011).  | although the trend is   |
|            |            |            |            |            |            |            |            |            |                     |   |   |

| of Islamic billion in 8,319,779 financing 7,338,737 in 2015. Table 2. Banks in Pyear | of Islamic banks in Indonesia shows an upward trend from IDR 52,565 billion in 2010 to IDR 66,333 billion in 2019. In reverse, the trend of the number of unemployed people is downward, starting at 8,319,779 people in 2010 and then ending at 7,045,761 in 2019. Furthermore, when the total MSMEs financing reached a peak at IDR 110,027 billion in 2013, the number of unemployed people fell to 7,338,737 and then it rose again to 7,560,822 as the MSMEs financing declined to IDR 50,146 billion in 2015. These movements raise the question of whether there is a relationship between the two | trend from IDR 52 565 billion in 2010 to IDR 66 333  |
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| ratiables.  Table 2.  Banks in  Year   | mese movements raise are question   | billion in 2019. In reverse, the trend of the number of unemployed people is downward, starting at 8,319,779 people in 2010 and then ending at 7,045,761 in 2019. Furthermore, when the total MSMEs financing reached a peak at IDR 110,027 billion in 2013, the number of unemployed people fell to 7,338,737 and then it rose again to 7,560,822 as the MSMEs financing declined to IDR 50,146 billion in 2015. These movements raise the mastion of whether there is a relationship between the two |
| Year   | Table 2. Comparison between the Number of Banks in Indonesia (2010-2019)  | ariables.  Table 2. Comparison between the Number of Unemployed and MSMEs Financing of Islamic Banks in Indonesia (2010-2019)  |
| 2010   | Number of Unemployed  | Total MSME Financing (in IDR billion)  |
|  | 8,319,779   | 52,565   |
| 2011   | 7,700,086   | 71,810   |
| 2012   | 7,244,956   | 90,856   |
| 2013   | 7,388,737   | 110,027  |
| 2014   | 7,244,906   | 59,699   |
| 2015   | 7,560,822   | 50,146   |
| 2016   | 7,031,775   | 54,411   |
| 2017   | 7,040,323   | 58,980   |
| 2018   | 7,000,691   | 62,231   |
| 2019   | 7,045,761   | 66,333   |
| Source: I  | Source: BPS and OJK   |  |

|  | unemployment in Pakistan. This finding is strengthened by Pagano & Pica (2011), Feldmann (2012), and Göçer, (2013) who respectively unraveled a similar impact during the investigation on 63 countries, 53 countries of the world, and 14 countries under the European Union. Azolibe et al. (2022) found further the ability of banking system credit to control the unemployment rate in South Africa and Nigeria. At the same time, several studies have found the role of SMEs in creating employment, especially in developing countries (Abisuga-Oyekunle et al., 2020; Oyelana & Adu, 2015; Syed et al., 2012).   |  |
|--|---|--|
|  | There is only limited study conducted to reveal the effect of financing in Islamic banking on unemployment through MSMEs financing. Khairina et al. (2020) analyzed the relationship between financing in Islamic Bank and labor absorption in real sectors in Indonesia and found that third-party fund allocation through profit and loss-sharing financing had a significantly positive impact on labor absorption in real sectors. Unfortunately, their findings end at labor absorption without further analysis of the impact on unemployment. In Turkey, Benbekhti et al. (2021) discovered that SMEs financing in Islamic banks is proven to reduce unemployment as a result of an increase in productivity. These findings did not cover the empirical impact of MSMEs financing on unemployment in urban and rural areas. |  |
|  | This paper will be the first to discuss one of the supporting attempts at unemployment reduction through financial access provided by Islamic Banks for MSMEs in Indonesia as one of the developing countries by decomposition of the impact in urban and rural areas. This study aims to reveal the effect of Islamic financing on MSMEs on unemployment in Indonesia. Furthermore, it aims to discover further the effect of Islamic financing on MSMEs on unemployment in urban and rural areas in particular.   |  |
| Literatur review: Bagian ini mohon disaiikan ulang                     | Entrepreneurship-Unemployment Theory  |  |
| karena bagian ini ditulis masih dalam                                  | The linkage between entrepreneurship and unemployment can be investigated through two-way   |  |
| gaya selingkung tugas akhir. Pada<br>bagian ini tidak perlu penelitian | communication. One of the relevant theories related to this is schumpeter's entrepreneurial effect which states that a high rate of unemployment in a country will lead to the rise of entrepreneurship   |  |
| terdahulu, sebaiknya penelitian  | activities including start-ups and small businesses due to the decreasing opportunity to start new husinesses (Blanchflower & Mever 1994). At the same time, this theory states that the rise in  |  |
| introduction untuk memperkuat state                                    | entrepreneurship activities can reduce unemployment as they create jobs (Manser & Picot, 1999).   |  |
| of the art penelitian.   | According to (Thurik et al., 2008), start-ups and small businesses contribute to job creation better than   |  |
| Pada bagian awal bagian ini mohon                                      | their counterparts since they contribute to greater entrepreneurial activity which then leads to  |  |
| diberikan kajian atas teori dan<br>konsen vanα digmakan dalam          | unemployment reduction. They also asserted that the entrepreneurial activity is related to the Schimpeterian process where the old product will be replaced by the new products created from those  |  |
| penelitian ini sebagai dasar desain                                    | entrepreneurial activities.   |  |

asserted that SMEs' contribution to job creation and income generation is firmly crucial as two-thirds innovate, and create the jobs needed. In this case, the International Labor Organization (ILO, 2015) of the entire job opportunities worldwide are provided by SMEs

added that there are more MSMEs in urban areas with their various kind of products leading to more consumers' interest. In this case, there will be an increase in demand for the local products which possibly leads to more workers hired to increase production to fulfill the demand. In a nutshell, there The role of MSMEs in job creation as the product of entrepreneurship activity differs between urban and rural areas. Faggio & Silva (2014) stated that some characteristics are needed for MSMEs to be able to reduce unemployment namely innovation, job creation, and self-employment. He said that these elements can properly occur in the urban areas since the MSMEs in rural areas are mostly self-employed and are not innovative, producing replica products. Furthermore, (Baumol et al., 2011) will be minimum or even no effect of the existence of MSMEs on unemployment in the rural area. Meanwhile, the effect of MSMEs on unemployment can be seen in urban areas.

# The Impact of MSMEs Financing in Islamic Banks on Unemployment

countries where the labor market is dominated by MSMEs. Through PLS-based financing, Islamic banks support the development of MSMEs better than their counterpart due to the fairness between the lenders and the borrowers (Chapra, 2011). The better development of MSMEs will create more new job opportunities in the market (Edmiston, 2007), leading to better labor absorption and thus MSMEs financing in Islamic banks is essential in reducing unemployment in developing reducing unemployment. Based on this assumption, the first hypothesis is developed as follows:

H1: MSMEs financing has a negative influence on unemployment

When applying the above assumption in different areas, namely urban and rural areas, there is a difference since each of them has its typical condition. This assumption can perfectly hold for MSMEs demand, the more workers will be hired to meet the consumer's demand. In addition, MSMEs in the Urban area have a high level of Islamic financial literacy and inclusion which allows them to get easy in urban areas due to the complete characteristics needed for unemployment reduction (Faggio & Silva, 2014) and the high demand for various products there (Baumol et al., 2011). The higher the product access to financial support and then increase their performance (Saifurrahman & Kassim, 2021).

H2: MSMEs financing has a negative influence on urban unemployment

explained by the domination of self-employed people in rural areas which is less innovative (Faggio & Silva, 2014) and the lack of Islamic financial literacy inclusion (Saifurrahman & Kassim, 2021) In rural areas, MSMEs financing of Islamic banks does not affect unemployment. It can be causing them to face difficulty in accessing financial services in Islamic banks. As a result, the growth of MSMEs in rural areas remains stable and thus unemployment is not affected by the financing.

H3: MSMEs financing has no significant influence on rural unemployment

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Pada bagian ini tidak perlu sub judul jadi dihapus saja sub judul data, research design dll.
Pada awal bagian ini mohon dijelakan pendekatan penelitian dan metode penelitian yang digunakan Mohon dijelaskan definisi operasional variabel dan pengukurannya serta sumber data yang digunakan. Dan mohon didetailkan prosedur analisis data yang dilakukan dalam penelitian ini

This research uses a quantitative approach employing the Generalized Method of Moments (GMM) as a tool for dynamic panel data analysis. This method is the most appropriate since the data of the cross-sectional unit (N) is greater than the period (T) (Siddiqui & Ahmed, 2013). Moreover, this technique has advantages over the other dynamic panel analysis techniques when dealing with the as well and unobserved individual heterogeneity (Apergis & Ozturk, 2015). Two-step GMM analysis problems of biasedness, heavy heteroskedasticity, measurement error, simultaneous reverse causality is used instead of the counterpart to make sure that the estimation result is reliable and consistent (Roodman, 2009)

2019. The data was mainly obtained from two sources, the Center for Statistics Agency (BPS) and the UNEM represents the number of unemployed people as a whole, while URBAN and RURAL indicate respectively the number of unemployed people in urban areas and rural areas. The data of the GDP. FINBUS is the amount of MSMEs financing in Islamic banks which is measured in billion The analysis was conducted using secondary data from 33 provinces in Indonesia from 2010 to Financial Services Authority (OJK). The dependent variables are UNEM, URBAN, and RURAL dependent variables are obtained from BPS. The independent variables are FINBUS, INF, FDI, and rupiahs. The data of FINBUS is taken from OJK while the data of the other three variables are obtained from BPS. INF represents inflation measured by the consumer price index (CPI). Meanwhile, FDI and GDP, which are measured in million rupiahs, denote the amount of foreign direct investment and economic growth respectively.

the selection of FEM among the other static panel models using the Chow-test and Hausman-test. The Two-Step GMM estimation then can be applied once FEM is selected as the best model. Afterward, it is necessary to do post-estimation tests to check the validity of all the instruments and autocorrelation looking at the second-order correlation in difference (AR2) with a null hypothesis stating that there is The estimation starts with a unit root test to check the stationarity of all variables. When all the variables are stationary at the level, estimation is conducted using Common Effect Model (CEM), Fixed Effect Model (FEM) and Random Effect Model (REM). Afterward, It is necessary to confirm in the error terms (Alaabed et al., 2016). To check for validity, the Sargan test is employed. In this test, the null hypothesis states that all instruments are valid. Meanwhile, autocorrelation is checked by no autocorrelation. There are three models formulated that distinguish the analysis of unemployment as a whole and unemployment in rural and urban areas. The original models created are as follows:

$$UNEM_{it} = FINBUS_{it} + INF_{it} + FDI_{it} + GDP_{it} + \mu_{it}$$
 (1)

$$URBAN_{it} = FINBUS_{it} + INF_{it} + FDI_{it} + GDP_{it} + \mu_{it}$$
(2)

$$RURAL_{it} = FINBUS_{it} + INF_{it} + FDI_{it} + GDP_{it} + \mu_{it} \quad (3)$$

|                       |   | Result  It can be seen from <b>Table 3</b> that unemployed people in Indonesia across the provinces range between 11,979 persons and 1,951,391 persons with 222,712 persons on average. In urban areas, the average number of unemployed is 136,854 with the number ranging between 2,881 persons and 1,462,663 persons. Meanwhile, in rural areas, the number of unemployed people ranges from 3,095 persons to 824,784 persons with an average number of 85,858 persons. The total amount of financing that Islamic Banks channeled to MSMEs starts from 10 billion rupiahs to 49,870 billion rupiahs with 2,051.691 billion rupiahs on average. The average value of FDI is USD 801.6761 million ranging from uverage value of 132.96. <b>Table 3.</b> Descriptive Statistics | Max      | 1951391  | 1462663  | 824784   | 49870    | 7124.9   | 164.3167 |                      |
|-----------------------|---|--|----------|----------|----------|----------|----------|----------|----------|----------------------|
|                       |   | n Indonesia acro li persons on avera er ranging betwe li unemployed pec g persons. The tot on rupiahs to 49,8 M is USD 801.676 between 114.31  | Min      | 11979    | 2881     | 3095     | 10       | 0.2      | 114.31   |                      |
|                       | = Unemployment = Urban Unemployment = Rural Unemployment = MSMEs financing in Islamic Bank = Inflation = Foreign Direct Investment = Economic growth = Error term | unemployed people i<br>persons with 222,712<br>5,854 with the numb<br>areas, the number of<br>age number of 85,856<br>s starts from 10 billic<br>e average value of FL<br>on. Inflation ranges   | Std. Dev | 363414.5 | 245715.7 | 131364   | 4812.129 | 1245.474 | 9.573448 |                      |
| n:                    | = Unemployment = Urban Unemployment = Rural Unemployment = MSMEs financing in Islam = Inflation = Foreign Direct Investment = Economic growth = Error term        | rrsons and 1,951,391 f unemployed is 136 f unemployed is 136. Meanwhile, in rural persons with an averchanneled to MSME upiahs on average. The to USD 7124.9 milli 32.96.  | Mean     | 222712.6 | 136854.3 | 85858.31 | 2051.691 | 801.6761 | 132.9668 | Authors' elaboration |
| Variables definition: | UNEM<br>URBAN<br>RURAL<br>FINBUS<br>INF<br>FDI<br>GDP   | It can be seen from <b>Table</b> between 11,979 persons and 1,5 average number of unemploye 1,462,663 persons. Meanwhile, persons to 824,784 persons with that Islamic Banks channeled to 2,051.691 billion rupiahs on ave USD 0.2 million to USD 7124 average value of 132.96. <b>Table 3.</b> Descriptive Statistics   | Variable | UNEM     | URBAN    | RURAL    | FINBUS   | FDI      | CPI      | Source: Authors'     |
|                       |   | Result and discussion Pada bagian ini hanya ada dua sub judul yaitu Result dan sub judul Discussion, jadi mohon judul yang lain dihapus. Pada bagian pembahasan mohon diperdalam penjelasan makna hasil temuan penelitian berdasarkan hasil analisis data dengan mengkaitkan teori yang relevan dan penelitian terdahulu yang relevan  |          |          |          |          |          |          |          |                      |

| In this study, a unit root test is conducted to test for stationarity of the variables. Specifically, the        |
|--|
| Levin-Lin-Chen (LLC) test and the Im-Pesaran-Shin (IPS) test are used for this purpose. The result of            |
| the test can be seen in <b>Table 4</b> which shows that all variables are stationary at level. This implies that |
| there is no cointegration in the model and therefore pooling least square is more appropriate to be used         |
| for analysis.  |

 Table 4. Unit Root Test

| Variable  | Т               | 153       | רדכ             | د         |
|-----------|-----------------|-----------|-----------------|-----------|
| v allable | statistic value | p-value   | statistic value | p-value   |
| UNEM      | -3.8452         | 0.0001*** | -11.1332        | 0.0000*** |
| URBAN     | -3.1978         | 0.0007*** | -10.1606        | 0.0000*** |
| RURAL     | -2.1565         | 0.0155**  | -4.9925         | ***000000 |
| BUS       | -3.3649         | 0.0004*** | -12.3046        | 0.0000*** |
| FDI       | -4.0843         | 0.0000*** | -7.3584         | 0.0000*** |
| CPI       | -2.261          | 0.0119**  | -7.6846         | 0.0000*** |

show that the variables are significant at 1% and 3% respectively

Source: Authors' elaboration

There are three models to be selected in this study, namely Pooled OLS, FEM dan REM. To select 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 shows that REM is the appropriate model. The results between Pooled OLS and FEM the Chow-test is conducted. In this test, the null hypothesis shows that Pooled OLS is appropriate. The results of the test as shown in **Table 5** show that the p-value of all equation models is 0.000 which is lower than 0.05. This means a null hypothesis is rejected and that of the Hausman test show that probability chi-squared values are 0.0004, 0.0003, and 0.000 for model is more appropriate to be used than REM for data analysis. In this case, GMM analysis can be applied 1, model 2, and model 3 respectively. This implies that the null hypothesis is rejected and thus FEM to this model.

Table 5. Chow-test and Hausman-test

|  | CIIOW-ICSI   | רכש   | Hausillall-test   |  |
|--|--|---|---|--|
| Variable   | statistic value  | p-value   | Chi-squared value   | p-value  |
| Model 1  | 152.27   | 0.0000***   | 18.07   | 0.0004***  |
| Model 2  | 69.66  | 0.0000***   | 18.98   | 0.0003***  |
| Model 3  | 132.66   | 0.0000***   | 24.25   | 0.0000***  |
| *** shows significance at 1%   | ice at 1%  |   |   |  |
| Source: Authors' elaboration   | ooration   |   |   |  |
| The results of the estimation can be seen in T different models consisting of model 1, model 2, an variables on unemployment in general, urban unen In model 1, most of the independent variable significant impact on general unemployment in Inand GDP show a significant and positive influence percent increase in lagged general unemployment unemployment by 0.21 percent and 0.003 percent that they have a significantly negative impact of indicate that a 1 percent rise in financing to MSME by 0.04 percent. Likewise, a 1 percent incresumently does not affect general unemployment by 0.27 percent. However, FDI is | estimation can be s<br>sting of model 1, mo<br>yment in general, urb<br>of the independent<br>general unemployme<br>ifficant and positive<br>gged general unemp<br>11 percent and 0.003<br>inficantly negative i<br>at rise in financing to<br>kewise, a 1 percer<br>7 percent. However,   | een in <b>Table 6</b> . T del 2, and model 3 an unemploymen variables are sign influence on general loyment and ecolopercent respective mpact on general MSMEs in Islam at increase in it. FDI is not significant.                  | The results of the estimation can be seen in <b>Table 6</b> . There are three different results from three different models consisting of model 1, model 2, and model 3 which indicate the effects of independent variables on unemployment in general, urban unemployment, and rural unemployment respectively. In model 1, most of the independent variables are significant at 0.01% meaning that they have a significant and positive influence on general unemployment. This implies that a 1 percent increase in lagged general unemployment and economic growth results in a rise in general unemployment by 0.21 percent and 0.003 percent respectively. Meanwhile, <i>FINBUS</i> and <i>CPI</i> show that they have a significantly negative impact on general unemployment. The coefficient values indicate that a 1 percent rise in financing to MSMEs in Islamic banks decreases general unemployment by 0.27 percent. However, <i>FDI</i> is not significant in this model implying that foreign investment does not affect general unemployment.                          | results from three cts of independent ent respectively. g that they have a ariable ( <i>UNEM<sub>ii-1</sub></i> ) is implies that a 1 is a rise in general <i>US</i> and <i>CPI</i> show coefficient values ral unemployment iction of general olying that foreign |
| In model 2, both percent. Both lagged 2 FDI is significant at 5 in Islamic banks, econ seen that FINBUS all 1 unemployment. This decrease urban unemplagged 3 of urban unempresent respectively. Cunemployment. This n   | Lagged 3 dependent 2 dependent variable percent. This shows nomic growth, and folagged dependent variables that a 1 perchoyment by 0.1 perchoyment reduced to The other hand, General percent a 1 percent of the other hand, General percent and that a 1 percent and the other hand, General percent and the other hand, General percent and the other hand, General and the other hand, General percent and the other hand, General and the other hand, General and the other hand, General and Gene | t variables ( <i>URB</i> , ss. ( <i>URBAN</i> <sub>ir-2</sub> ) and that all lagged urreign investment riables have a sign cent incline in fincent. Similarly, a urban unemployme <i>DP</i> and <i>FDI</i> show it increase in both | In model 2, both lagged 3 dependent variables ( <i>URBAN<sub>it-3</sub></i> ) and <i>FINBUS</i> are significant at 0.1 percent. Both lagged 2 dependent variables ( <i>URBAN<sub>it-2</sub></i> ) and GDP are significant at 1 percent, while FDI is significant at 5 percent. This shows that all lagged urban unemployment, financing to MSMEs in Islamic banks, economic growth, and foreign investment influence urban unemployment. It can be seen that <i>FINBUS</i> all lagged dependent variables have a significantly negative relationship with urban unemployment. This implies that a 1 percent incline in financing to MSMEs in Islamic banks can decrease urban unemployment by 0.1 percent. Similarly, a 1 percent rise in lagged 1, lagged 2, and lagged 3 of urban unemployment reduced urban unemployment by 0.07 percent, 0.03 percent, and 0.01 percent respectively. On the other hand, <i>GDP</i> and <i>FDI</i> show positive and significant effects on urban unemployment. This means that a 1 percent increase in both economic growth and foreign investment | significant at 0.1 at 1 percent, while ancing to MSMEs loyment. It can be onship with urban Islamic banks can 11, lagged 2, and 3 percent, and 0.01 at effects on urban oreign investment  |

|  | 0.1<br>his<br>ral<br>YPI<br>hat  | a 1<br>.08   |   |                 | 1           |                     |                      |                      |                |                |            |            |            |            |          |                                  |
|--|--|--|---|-----------------|-------------|---------------------|----------------------|----------------------|----------------|----------------|------------|------------|------------|------------|----------|----------------------------------|
| leanwnile, t<br>mployment  | t 1 percent, gnificant. T ship with ru vice versa. C is implies t  | addition, ru<br>Aeanwhile,<br>yment by 0   |   | Model 3         | p-value     |                     |                      |                      |                | 0.003**        | 0.075      | 0.19       | 0.000***   | ***000.0   | ***0000  | Pr > z = 0.0003                  |
| respectively. Mand urban une   | nodel 3, lagged dependent variable ( <i>RURAL</i> <sub>ii-1</sub> ), CPI, and GDP are significant at 1 percent, 0.1 and 0.1 percent respectively. On the other hand, FINBUS and FDI are not significant. This hat lagged rural unemployment, inflation, and economic growth have a relationship with rural yment while financing to MSMEs in Islamic banks and foreign investment are vice versa. CPI P show negative signs while lagged rural unemployment shows otherwise. This implies that                                   | flation rises by 1 percent, rural unemployment declines by 0.57 percent. In addition, rural syment decreases by 0.17 percent when economic growth rises by 1 percent. Meanwhile, a 1 increase in lagged rural unemployment leads to an increase in rural unemployment by 0.08                      |   | Mod             | Coefficient |                     |                      |                      |                | 0.08671141     | -0.0278187 | 0.00892782 | -0.5711774 | -0.1770949 | 16.02469 | z = -3.6519                      |
| 0.1 percent<br>en inflation  | , and GDP a<br>INBUS and<br>omic growth<br>and foreign i   | lines by 0 rowth rises in increase in  |   | el 2            | p-value     |                     | 0.009**              | 0.039*               | 0.000***       |                | 0.000***   | 0.035*     | 0.103      | 0.007**    | 0.000*** | Pr > z = 0.0028                  |
| 2 percent and ionship betwe  | JRALit,), CPI. other hand, Fl. on, and econc slamic banks $\varepsilon$ starmic banks $\varepsilon$ tral unemploy  | uployment dec<br>n economic g<br>nt leads to an  | erence GMM                                      | Model 2         | Coefficient |                     | -0.071794            | -0.032209            | -0.105267      |                | -0.10016   | 0.0145148  | 0.0595961  | 0.1202016  | 11.56549 | z = -2.9932                      |
| ment by 0.1 re is no relat   | variable (RU sly. On the oment, inflati MSMEs in Isle lagged rule lagged rule  | rural unem<br>percent whe  | o-Step Diff                                     | el 1            | p-value     | 0.000***            |                      |                      |                |                | 0.000***   | 0.458      | 0.000***   | 0.000***   | 0.000*** | Pr > z = 0.0002                  |
| rban unemploy<br>plying that the   | ged dependent reent respective rural unemploy e financing to lative signs whi  | s by 1 percent, eases by 0.17 lagged rural un  | 5. Estimation Result of Two-Step Difference GMM | Model           | Coefficient | 0.2139489           |                      |                      |                |                | -0.049515  | 0.0080586  | -0.273621  | 0.0038645  | 10.62268 | z = -<br>3.7515                  |
| results in a hike in urban unemployment by 0.12 percent and 0.1 percent respectively. Meanwhile, CPI is not significant implying that there is no relationship between inflation and urban unemployment. | In model 3, lagged dependent variable ( <i>RURAL</i> <sub>ii-1</sub> ), CPI, and GDP are significant at 1 percent, 0.1 percent, and 0.1 percent respectively. On the other hand, FINBUS and FDI are not significant. This implies that lagged rural unemployment, inflation, and economic growth have a relationship with rural unemployment while financing to MSMEs in Islamic banks and foreign investment are vice versa. CPI and GDP show negative signs while lagged rural unemployment shows otherwise. This implies that | when inflation rises by 1 percent, rural unemployment declines by 0.57 percent. In addition, rural unemployment decreases by 0.17 percent when economic growth rises by 1 percent. Meanwhile, a 1 percent increase in lagged rural unemployment leads to an increase in rural unemployment by 0.08 | percent.<br><b>Table 6.</b> Estimatio           | Variable / Test |             | $UNEM_{it	ext{-}I}$ | $URBAN_{it	ext{-}I}$ | $URBAN_{it	ext{-}2}$ | $URBAN_{it-3}$ | $RURAL_{it-1}$ | FINBUS     | FDI        | CPI        | GDP        | C        | Arellano-Bond<br>test for AR (1) |
|  |  |  |   |                 |             |                     |                      |                      |                |                |            |            |            |            |          |                                  |
|  |  |  |   |                 |             |                     |                      |                      |                |                |            |            |            |            |          |                                  |
|  |  |  |   |                 |             |                     |                      |                      |                |                |            |            |            |            |          |                                  |
|  |  |  |   |                 |             |                     |                      |                      |                |                |            |            |            |            |          |                                  |
|  |  |  |   |                 |             |                     |                      |                      |                |                |            |            |            |            |          |                                  |
|  |  |  |   |                 |             |                     |                      |                      |                |                |            |            |            |            |          |                                  |

| Pr > z = 0.7067                  | Prob ><br>Chi2= c           |
|----------------------------------|-----------------------------|
| z = -0.3762                      | Prob ><br>Chi2=<br>30.31919 |
| Pr > z = 0.2937                  | Prob > Chi2= 0.7812         |
| z = 1.0501                       | Chi-square = = 23.79651     |
| Pr > z = 0.4392                  | Prob ><br>Chi2=<br>0.6839   |
| z =<br>0.77355                   | Chi-square<br>=<br>30.52703 |
| Arellano-Bond<br>test for AR (2) | Sargan test                 |
|                                  |                             |

<sup>\*\*\*, \*\*</sup> and \* show that the variables are significant at 0.1%, 1% and 5% respectively

Source: Authors' elaboration

-2.9932 with Pr > z = 0.0028 and z = -3.6519 with Pr > z = 0.0003. Since the p-value is below 0.05, the null hypothesis in z = 0.4392 in model 1, z = 1.0501 with Pr > z = 0.2937 in model 2, and z = -0.3762 with Pr > z = 0.4392This means that there is no autocorrelation in these three models. Furthermore, the Sargan test shows Prob > Chi-squared = 0.6839 in model 1, Prob > Chi-squared = 0.7812 in model 2, and Prob > Chisquared = 0.7812 in model 3. Since the p-value is greater than 0.05 in all models, the null hypothesis is accepted implying that overidentifying restrictions are valid or the models are not weakened while Based on the result in Table 6, it can be seen that the first-order serial correlation test for model all models is rejected. However, the second-order serial correlation test shows z = 0.77355 with Pr >0.7067 in model 3. In this case, the null hypothesis is accepted because the p-value is greater than 0.05. 1, model 2, and model 3 shows that z = -3.7515 with Pr > z = 0.0002, z =using numerous instruments.

# Discussion

entrepreneurship theory which states that entrepreneurship activities contributed to the reduction of by MSMEs which dominate labor absorption. Hence, the increase in financial assistance for MSMEs will support the growth of job creation and thus reduce unemployment. This finding strengthens studies by Khairina et al. (2020) who unraveled the positive impact of Islamic bank financing on labor absorption of real sectors in Indonesia and Benbekhti et al. (2021) who found the negative impact of Based on the result, it can be inferred that MSMEs financing in Islamic Banks in Indonesia significantly reduces unemployment as a whole. This finding is in line with the Schumpeter unemployment due to job creation (Manser & Picot, 1999) and with (Thurik et al., 2008) view that small business is the best job creator. In this case, entrepreneurship activities were increased as a result of MSMEs financing channeled by the Islamic banks which brings fairness for both lenders and borrowers (Chapra, 2011) leading to better development of MSMEs and thus creating more new job opportunities in the economy (Edmiston, 2007). In Indonesia, entrepreneurship activities were created MSMEs financing in Islamic banks on unemployment in Turkey due to increase in productivity.

of MSMEs which are innovative, self-employed, and generating jobs (Faggio & Silva, 2014). The which allows them to get better access to financial support to increase their performance (Saifurrahman, 2021). As MSMEs grew with good performance in urban areas, more people were Furthermore, MSME financing has a negative impact on urban unemployment. This finding also supports the theory of Schumpeter entrepreneurship. In urban areas, more people were hired by MSMEs because the demand for various goods is high (Baumol et al., 2011) triggering better growth growth of MSMEs in urban areas was also supported by a high level of Islamic financial inclusion hired, and therefore unemployment decreased. Unfortunately, MSMEs financing in Islamic banks does not affect rural unemployment. This can employed and Baumol et al. (2011) view that the MSMEs grow mostly in urban area which has a high population as compared to the rural area. Furthermore, MSMEs in rural areas have low levels of (Saifurrahman & Kassim, 2021). Hence, as MSMEs financing in Islamic Bank increases, MSMEs in be explained by (Faggio & Silva, 2014) view that most of the inhabitants in the rural area are selffinancial inclusion and literacy which allows them to get financial support for better growth rural areas are more likely to remain unchanged because they have very limited access to financing. As a result, rural unemployment will also be unchanged.

significantly increases unemployment in urban areas. This result supports (Almula-Dhanoon et al., 2020) who discovered the same result in the MENA region and explained that it was caused by the FDI does not show any influence on general unemployment and rural unemployment. This is in Colombia, and the Philippines. This can be explained by the abundance of MSMEs that dominated the line with (Mehmet Mucuk, 2013) finding of the inexistence effect of FDI on unemployment in Chile, labor market in Indonesia while FDI was not targeted for them. However, it is found that FDI mismatch between the available skill and the demanded skill.

strengthens the empirical study conducted by (Arslan & Zaman, 2014; Bayrak & Tatli, 2018). It is also Furthermore, it can be seen that there was a negative relationship between inflation and unemployment in Indonesia as a whole and unemployment in rural areas in particular. This finding supported by the Philip curve explaining that inflation and unemployment affect each other inversely.

unemployment in urban areas. Meanwhile, economic growth reduced unemployment in rural areas of Indonesia. This finding is consistent with (Bayrak & Tatli, 2018) who found a reduction effect of unemployment in urban areas which provides better salaries as compared to rural areas, leaving the population in urban areas to increase. When economic growth rises, job opportunities are expected to Last but not least, economic growth was found to increase unemployment as a whole and economic growth on youth unemployment. This can be explained by the domination of youth rise due to a hike in demand in urban areas. As a result, unemployment in rural areas decreases while unemployment in urban areas increases.

| Conclusion:  Mohon dijelaskan kebaharuan temuan dalam penelitian ini | Unemployment is a pivotal issue faced by every country in the world. Several attempts have been made by the government to tackle this issue. Financial restrictions become the main problem for the business owner, especially for the small business. Islamic finance has been considered as an alternative to conventional finance which is unfriendly to the low-income group who run small businesses. It became an issue absorption is dominated by the MSMEs in developing countries such as Indonesia where 97 percent of its total workers are from MSMEs. Hence, this study aims to reveal the effect of MSMEs financing in Islamic banks on unemployment in Indonesia while separating the case between urban and rural areas. Such an analysis of the impact of MSMEs on urban and rural unemployment has never been conducted before.  The finding shows that financing to MSMEs in Islamic Banks contributed to the reduction in unemployment in Indonesia as a whole. The unemployment in urban areas is also revealed to be reduced by MSMEs financing in Islamic Banks. On the other hand, there is no effect of financing to MSMEs in Islamic Banks on unemployment in rural areas. FDI influences urban unemployment positively. Inflation reduces rural unemployment and unemployment as a whole, while reducing growth has positive impacts on urban unemployment and unemployment as a whole, while reducing rural unemployment. The implication of this finding for Islamic banks is the provision of a foundation in increasing the amount of financing channelled to MSMEs in Indonesia since it is proven to be effective in reducing unemployment. For the government, this study can be the basis for further expansion of Islamic banks and their role in every part of Indonesia to reduce unemployment, especially in rural areas. |
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|---|---|---|---|--|--|--|
|   | 2 Minor Comments (inconsistencies, major typos, etc): | Setiap paragraph mohon ditulis terdiri dari minimal 4 kalimat | Mohon sitasi dan reference ditulis<br>menggunakan reference manager<br>Mendeley | Tabel tidak boleh ditulis secara full tabel cukup garis horizontal pada header |  |  |

4. Bukti keputusan editor dan draft hasil review dari reviewer (16 September 2023)



### Muhammad Zen Nasrudin Fajri <mzennasrudin@unida.gontor.ac.id>

### [JESTT] Editor Decision

1 message

Puji Sucia Sukmaningrum <puji.sucia@feb.unair.ac.id>

Sat, Sep 16, 2023 at 9:06 AM

To: Mohammad Zen Nasrudin Fajri <mzennasrudin@unida.gontor.ac.id>, Azidni Rofiqo <azidnirofiqo@unida.gontor.ac.id>, Abdul Latif Rizqon <latifrizqon@unida.gontor.ac.id>, Raditya Hasan` <radityahasan47@student.ei.unida.gontor.ac.id>

Mohammad Zen Nasrudin Fajri, Azidni Rofigo, Abdul Latif Rizgon, Raditya Hasan':

We have reached a decision regarding your submission to Jurnal Ekonomi Syariah Teori dan Terapan, "The Impact of MSMEs Financing in Islamic Bank on the Unemployment in Indonesia".

Our decision is to require your manuscript to be revised based on the comments given by the reviewers. Please download the attachment for further details. If you cannot find the attachment, Please open your account on the journal website to see the attachment under the section of review discussions.

Please upload your revised manuscript and the correction form provided in the attachment to respond to the reviewers' comments using English or Indonesian languages. Afterward, upload both the revised manuscript and the correction form in the revisions section.

The revision itself is due on 22 September 2023.

Thank You

Best Regards,

\_\_\_\_\_ Jurnal Ekonomi Syariah Teori

dan Terapan http://e-journal.unair.ac.id/index.php/JESTT

### 2 attachments



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C-Comments from Reviewers\_Mohammad Zen Nasrudin Fajri.docx 25K Jurnal Ekonomi Syariah Teori dan Terapan p-ISSN: 2407-1935, e-ISSN: 2502-1508. Vol. ... No. ... nama bulan yyyy (tahun): 1-16 (no halaman); DOI:

## The Impact of MSMEs Financing in Islamic Bank on the Unemployment in Indonesia

# Pengaruh Pembiayaan UMKM pada Bank Syariah terhadap Pengangguran di Indonesia

### ABSTRACT

One of the contributions of Islamic banking sector to Indonesia's economy is channeling funds to MSMEs in the form of financing since a number of them could not access financial services. Interestingly, the MSMEs grew as the Islamic Banking sector rose. However, there is no single study analyzing such an impact on unemployment in both rural and urban areas. This paper aims to reveal the effect of MSMEs financing in Islamic banks on unemployment in Indonesia. It aims further to discover such an effect on unemployment in urban and rural areas separately in Indonesia. Dynamic panel GMM two-step analysis is used in this research to estimate cross-province data in Indonesia between 2010 and 2019. The results of the study reveal that MSMEs financing in Islamic Banks contributed significantly to the reduction of unemployment in Indonesia as a whole. It is also found that the unemployment in urban areas is reduced by MSMEs financing in Islamic Banks. On the other hand, there is no significant relationship between MSMEs financing in Islamic Banks and unemployment in rural areas. These findings can be the basis for Islamic banks to increase MSMEs financing and for the government to expand Islamic banks' role in every part of Indonesia to reduce unemployment, especially in rural areas.

Keywords: MSMEs Financing, Islamic Bank, Unemployment, Urban, Rural.

### **ABSTRAK**

Salah satu kontribusi sektor perbankan syariah dalam perekonomian Indonesia adalah penyaluran dana kepada UMKM dalam bentuk pembiayaan, karena beberapa dari mereka tidak dapat mengakses layanan keuangan. Menariknya, UMKM tumbuh seiring dengan bangkitnya sektor Perbankan Syariah. Namun, tidak ada satu studi pun yang menganalisis dampak tersebut terhadap pengangguran di pedesaan dan perkotaan. Penelitian ini bertujuan untuk mengungkap pengaruh pembiayaan UMKM di bank syariah terhadap pengangguran di daerah perkotaan dan pedesaan secara terpisah di Indonesia. Analisis dua langkah GMM panel dinamis digunakan dalam penelitian ini untuk mengestimasi data lintas provinsi di Indonesia antara tahun 2010 dan 2019. Hasil penelitian mengungkapkan bahwa pembiayaan UMKM di Bank Syariah berkontribusi signifikan terhadap pengurangan pengangguran di Indonesia secara keseluruhan. Ditemukan juga bahwa pengangguran di perkotaan berkurang dengan pembiayaan UMKM di Bank Syariah. Di sisi lain, tidak ada hubungan yang signifikan antara pembiayaan UMKM di bank syariah dengan pengangguran di pedesaan. Hasil penelitian ini dapat menjadi dasar bagi bank-bank syariah dalam meningkatkan porsi pembiayaan UMKM dan dasar bagi pemerintah untuk memperluas peran perbankan syariah di seluruh bagian Indonesia untuk mengurangi pengangguran, khususnya di area pedesaan.

Kata Kunci: Pembiayaan UMKM, Bank Syariah, Pengangguran, Perkotaan, Pedesaan.

### I. INTRODUCTION

Unemployment is one of the most popular issues in economic development whereby every country in this world has made several attempts to tackle this issue. A remarkable population growth is recognized as one of the main causes of such an issue of unemployment which makes developing countries with huge populations vulnerable to it (Singh, 2018). The greater the number of the population they have, the larger job opportunities will be needed to keep the unemployment cases at a minimum level. Many attempts have been made by their government to keep its number as low as possible, either through human capital development, provision of an educational system by market demand, or increasing economic growth (Sherif, 2013). Apart from the government's role, the contribution of the private sector is also essential in supporting the programs so that unemployment can be successfully reduced.

As one of the developing countries, Indonesia recorded through its statistical agency (BPS, 2021) that as of August 2020, the number of people without jobs within the country reached 9.76 million persons, accounting for 7.01 percent of the total labor force in Indonesia. Among this group, 70 percent of them live in urban areas while the others live in rural areas. The unemployment rate is relatively moderate as compared to other developing countries. This percentage can be kept at that level due to

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Indonesia's abundance of micro small medium enterprises (MSMEs). It can be seen in **Table 1** that the number of MSMEs consistently increased every year from 52,764,750 units in 2010 to 65,465,497 units in 2019. According to CNN Indonesia, based on the data released by the Ministry of MSMEs, the MSMEs have a major role in strengthening the economy as they absorbed 97 percent of total workers and contributed to 60.5 percent of GDP in 2019. This phenomenon needs to be proven through research whether the effect is significant.

**Table 1.** Number of MSMEs in Indonesia (2010-2019)

| Year | Number of MSMEs |  |  |  |
|------|-----------------|--|--|--|
| 2010 | 52,764,750      |  |  |  |
| 2011 | 54,114,821      |  |  |  |
| 2012 | 55,206,444      |  |  |  |
| 2013 | 56,534,592      |  |  |  |
| 2014 | 57,895,721      |  |  |  |
| 2015 | 59,262,772      |  |  |  |
| 2016 | 61,651,177      |  |  |  |
| 2017 | 62,922,617      |  |  |  |
| 2018 | 64,194,057      |  |  |  |
| 2019 | 65,465,497      |  |  |  |

Source: Ministry of MSMEs

Based on this example, unemployment in developing countries can be minimized by strengthening MSMEs due to their role in creating job opportunities as well as absorbing labor (Nasr & Rostom, 2013). Such a role has also been recognized by several developed countries as it become a key to the rapid economic growth in China (Kongolo, 2010). Despite the potential of MSMEs, there are several constraints faced by MSMEs in developing their business, including the lack of an integrated accounting system, the lack of trained human resources, limited marketing and administrative matters, and most importantly limited funds (Mumani, 2014). These limited funds are faced with the presence of conventional loans that apply interest rates and the difficulty of accessing these loans (Elasrag, 2016). This capital constraint becomes the main issue in developing MSMEs since they have limited access to financial services as compared to the big companies (Benbekhti et al., 2021). There is a huge gap in SMEs' financing in developing countries as approximately 41% of their SMEs could not afford their financial necessities. As a response to this issue, Islamic Finance (IF) is expected to be the alternative solution to the accessibility problem in MSMEs. The nature of IF which is built based on partnership, provides access to financing for the small enterprises and the poor (Elasrag, 2016). Furthermore, the profit and loss sharing system in the IF allows MSMEs to survive the loss compared to the conventional loan which burdens all the loss to the entrepreneurs (Kayed & Hassan, 2011).

In Indonesia, the growth of IF is relatively slow compared to other Muslim countries in the world although the trend is upward. Nevertheless, the IF industry shows a positive role in supporting MSMEs as can be seen from the data released by the financial service authority (OJK, 2019) that around 51.86 trillion rupiahs were channeled by the Islamic Banking industry to MSMEs in Indonesia in December 2019. In addition, it can be seen in **Table 2** that in the period 2010-2019, the total MSMEs financing of Islamic banks in Indonesia shows an upward trend from IDR 52,565 billion in 2010 to IDR 66,333 billion in 2019. In reverse, the trend of the number of unemployed people is downward, starting at 8,319,779 people in 2010 and then ending at 7,045,761 in 2019. Furthermore, when the total MSMEs financing reached a peak at IDR 110,027 billion in 2013, the number of unemployed people fell to 7,338,737 and then it rose again to 7,560,822 as the MSMEs financing declined to IDR 50,146 billion in 2015. These movements raise the question of whether there is a relationship between the two variables.

**Table 2.** Comparison between the Number of Unemployed and MSMEs Financing of Islamic Banks in Indonesia (2010-2019)

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| Year | Number of Unemployed | Total MSME Financing (in IDR billion) |
|------|----------------------|---------------------------------------|
| 2010 | 8,319,779            | 52,565                                |
| 2011 | 7,700,086            | 71,810                                |
| 2012 | 7,244,956            | 90,856                                |
| 2013 | 7,388,737            | 110,027                               |
| 2014 | 7,244,906            | 59,699                                |
| 2015 | 7,560,822            | 50,146                                |
| 2016 | 7,031,775            | 54,411                                |
| 2017 | 7,040,323            | 58,980                                |
| 2018 | 7,000,691            | 62,231                                |
| 2019 | 7,045,761            | 66,333                                |

Source: BPS and OJK

Most of the existing literature investigated the impact of credit in the banking sector on unemployment. Shabbir et al. (2011) revealed that a rise in credit volume in the banking sector reduced unemployment in Pakistan. This finding is strengthened by Pagano & Pica (2011), Feldmann (2012), and Göçer, (2013) who respectively unraveled a similar impact during the investigation on 63 countries, 53 countries of the world, and 14 countries under the European Union. Azolibe et al. (2022) found further the ability of banking system credit to control the unemployment rate in South Africa and Nigeria. At the same time, several studies have found the role of SMEs in creating employment, especially in developing countries (Abisuga-Oyekunle et al., 2020; Oyelana & Adu, 2015; Syed et al., 2012).

There is only limited study conducted to reveal the effect of financing in Islamic banking on unemployment through MSMEs financing. Khairina et al. (2020) analyzed the relationship between financing in Islamic Bank and labor absorption in real sectors in Indonesia and found that third-party fund allocation through profit and loss-sharing financing had a significantly positive impact on labor absorption in real sectors. Unfortunately, their findings end at labor absorption without further analysis of the impact on unemployment. In Turkey, Benbekhti et al. (2021) discovered that SMEs financing in Islamic banks is proven to reduce unemployment as a result of an increase in productivity. These findings did not cover the empirical impact of MSMEs financing on unemployment in urban and rural areas.

This paper will be the first to discuss one of the supporting attempts at unemployment reduction through financial access provided by Islamic Banks for MSMEs in Indonesia as one of the developing countries by decomposition of the impact in urban and rural areas. This study aims to reveal the effect of Islamic financing on MSMEs on unemployment in Indonesia. Furthermore, it aims to discover further the effect of Islamic financing on MSMEs on unemployment in urban and rural areas in particular.

### II. LITERATURE REVIEW

### **Entrepreneurship-Unemployment Theory**

The linkage between entrepreneurship and unemployment can be investigated through two-way communication. One of the relevant theories related to this is Schumpeter's entrepreneurial effect which states that a high rate of unemployment in a country will lead to the rise of entrepreneurship activities including start-ups and small businesses due to the decreasing opportunity to start new businesses (Blanchflower & Meyer, 1994). At the same time, this theory states that the rise in entrepreneurship activities can reduce unemployment as they create jobs (Manser & Picot, 1999). According to (Thurik et al., 2008), start-ups and small businesses contribute to job creation better than their counterparts since they contribute to greater entrepreneurial activity which then leads to unemployment reduction. They also asserted that the entrepreneurial activity is related to the Schumpeterian process where the old product will be replaced by the new products created from those entrepreneurial activities.

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Based on the concept of the unemployment-push effect, a person will be pushed into entrepreneurship activity since the opportunities to get decent work and thus sufficient wage from the job are decreased by unemployment (Startiene & Remeikiene, 2009). Ritsilä & Tervo (2002) view that the person is not satisfied with such a situation because it is not his true dream. Meanwhile, According to the prosperity-pull concept at a time of low unemployment level, people most likely become self-employed due to the high possibility of earning a labor wage (Muhelberger, 2007). Conversely, during high unemployment levels, the demand for products or services falls which may lead to the bankruptcy of companies as their revenues are reduced. As a consequence, many workers will be laid off and they cannot start entrepreneurship since their expertise in start-ups is inadequate.

### Islamic Finance, MSMEs and Unemployment

Islamic Finance brings a religious value to the financing system as well as in its contribution to social matters in supporting social justice among people (Wajdi Dusuki, 2008). Islamic Banks are business entities guided by the Shariah board. This allows them to consistently run according to Islamic principles with an expectation of preventing the concentration of wealth among a few groups without harming people who lawfully acquired them (Ibn, 2006). Therefore, it is only natural for Islamic Banks to promote financing schemes for the MSMEs which is nowadays known as microfinance.

IF is friendly to MSMEs as there is a profit and loss sharing (PLS) system which creates fairness for MSMEs as borrowers and Islamic Banks as lenders (Chapra, 2011). Although this system generates small profit for the Islamic bank compared to the conventional, MSMEs will be helped a lot as their resilience against loss can be maintained (Fajri et al., 2022). Better development in MSMEs indirectly results in better provision of job opportunities which can finally contribute to the fall of unemployment

Based on the perspective of economic development, MSMEs are perceived to be able to create almost half of new job opportunities in the economy, whereby the job opportunities are considered good ones (Edmiston, 2007). Mostly, MSMEs have a better response to the cultural changes in society since they can easily adapt to the situation. Apart from being job creators and income generators, they are also considered the key drivers of innovation in the economy (Abisuga-Oyekunle et al., 2020). With the abundance of MSMEs, the poor will be helped a lot due to the provision of various job opportunities which lead them to have a better quality of life in society.

(Neumark et al., 2011) then proved the theory through empirical research and found that small businesses with less than 20 workers in the United States played the biggest role in job creation. Meanwhile, in developing countries, businesses with 5 to 99 employees and businesses older than 10 years have the highest contribution to job creation (Ayyagari et al., 2011). The job creation role of MSMEs will lead to the decline of unemployment provided that the MSMEs can develop better. Therefore, it is important to create a conducive environment in which small businesses can operate, innovate, and create the jobs needed. In this case, the International Labor Organization (ILO, 2015) asserted that SMEs' contribution to job creation and income generation is firmly crucial as two-thirds of the entire job opportunities worldwide are provided by SMEs.

The role of MSMEs in job creation as the product of entrepreneurship activity differs between urban and rural areas. Faggio & Silva (2014) stated that some characteristics are needed for MSMEs to be able to reduce unemployment namely innovation, job creation, and self-employment. He said that these elements can properly occur in the urban areas since the MSMEs in rural areas are mostly self-employed and are not innovative, producing replica products. Furthermore, (Baumol et al., 2011) added that there are more MSMEs in urban areas with their various kind of products leading to more consumers' interest. In this case, there will be an increase in demand for the local products which possibly leads to more workers hired to increase production to fulfill the demand. In a nutshell, there will be minimum or even no effect of the existence of MSMEs on unemployment in the rural area. Meanwhile, the effect of MSMEs on unemployment can be seen in urban areas.

### The Impact of MSMEs Financing in Islamic Banks on Unemployment

MSMEs financing in Islamic banks is essential in reducing unemployment in developing countries where the labor market is dominated by MSMEs. Through PLS-based financing, Islamic banks support the development of MSMEs better than their counterpart due to the fairness between the lenders and

the borrowers (Chapra, 2011). The better development of MSMEs will create more new job opportunities in the market (Edmiston, 2007), leading to better labor absorption and thus reducing unemployment. Based on this assumption, the first hypothesis is developed as follows:

H1: MSMEs financing has a negative influence on unemployment

When applying the above assumption in different areas, namely urban and rural areas, there is a difference since each of them has its typical condition. This assumption can perfectly hold for MSMEs in urban areas due to the complete characteristics needed for unemployment reduction (Faggio & Silva, 2014) and the high demand for various products there (Baumol et al., 2011). The higher the product demand, the more workers will be hired to meet the consumer's demand. In addition, MSMEs in the Urban area have a high level of Islamic financial literacy and inclusion which allows them to get easy access to financial support and then increase their performance (Saifurrahman & Kassim, 2021). H2: MSMEs financing has a negative influence on urban unemployment

In rural areas, MSMEs financing of Islamic banks does not affect unemployment. It can be explained by the domination of self-employed people in rural areas which is less innovative (Faggio & Silva, 2014) and the lack of Islamic financial literacy inclusion (Saifurrahman & Kassim, 2021) causing them to face difficulty in accessing financial services in Islamic banks. As a result, the growth of MSMEs in rural areas remains stable and thus unemployment is not affected by the financing.

H3: MSMEs financing has no significant influence on rural unemployment

### III. RESEARCH METHODS

This research uses a quantitative approach employing the Generalized Method of Moments (GMM) as a tool for dynamic panel data analysis. This method is the most appropriate since the data of the cross-sectional unit (N) is greater than the period (T) (Siddiqui & Ahmed, 2013). 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 and unobserved individual heterogeneity (Apergis & Ozturk, 2015). Two-step GMM analysis is used instead of the counterpart to make sure that the estimation result is reliable and consistent (Roodman, 2009).

The analysis was conducted using secondary data from 33 provinces in Indonesia from 2010 to 2019. The data was mainly obtained from two sources, the Center for Statistics Agency (BPS) and the Financial Services Authority (OJK). The dependent variables are *UNEM*, *URBAN*, and *RURAL*. *UNEM* represents the number of unemployed people as a whole, while *URBAN* and *RURAL* indicate respectively the number of unemployed people in urban areas and rural areas. The data of the dependent variables are obtained from BPS. The independent variables are *FINBUS*, *INF*, *FDI*, and *GDP*. *FINBUS* is the amount of MSMEs financing in Islamic banks which is measured in billion rupiahs. The data of *FINBUS* is taken from OJK while the data of the other three variables are obtained from BPS. *INF* represents inflation measured by the consumer price index (CPI). Meanwhile, *FDI* and *GDP*, which are measured in million rupiahs, denote the amount of foreign direct investment and economic growth respectively.

The estimation starts with a unit root test to check the stationarity of all variables. When all the variables are stationary at the level, estimation is conducted using Common Effect Model (CEM), Fixed Effect Model (FEM) and Random Effect Model (REM). Afterward, It is necessary to confirm the selection of FEM among the other static panel models using the Chow-test and Hausman-test. The Two-Step GMM estimation then can be applied once FEM is selected as the best model. Afterward, it is necessary to do post-estimation tests to check the validity of all the instruments and autocorrelation in the error terms (Alaabed et al., 2016). To check for 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.

There are three models formulated that distinguish the analysis of unemployment as a whole and unemployment in rural and urban areas. The original models created are as follows:

$$UNEM_{it} = FINBUS_{it} + INF_{it} + FDI_{it} + GDP_{it} + \mu_{it}$$
 (1)

$$URBAN_{it} = FINBUS_{it} + INF_{it} + FDI_{it} + GDP_{it} + \mu_{it}$$
(2)  

$$RURAL_{it} = FINBUS_{it} + INF_{it} + FDI_{it} + GDP_{it} + \mu_{it}$$
(3)

### Variables definition:

UNEM = Unemployment URBAN = Urban Unemployment RURAL = Rural Unemployment

FINBUS = MSMEs financing in Islamic Bank

INF = Inflation

FDI = Foreign Direct Investment GDP = Economic growth

= Error term

### IV. RESULTS AND DISCUSSION

### Result

It can be seen from **Table 3** that unemployed people in Indonesia across the provinces range between 11,979 persons and 1,951,391 persons with 222,712 persons on average. In urban areas, the average number of unemployed is 136,854 with the number ranging between 2,881 persons and 1,462,663 persons. Meanwhile, in rural areas, the number of unemployed people ranges from 3,095 persons to 824,784 persons with an average number of 85,858 persons. The total amount of financing that Islamic Banks channeled to MSMEs starts from 10 billion rupiahs to 49,870 billion rupiahs with 2,051.691 billion rupiahs on average. The average value of FDI is USD 801.6761 million ranging from USD 0.2 million to USD 7124.9 million. Inflation ranges between 114.31 and 164.3167 with an average value of 132.96.

Table 3. Descriptive Statistics

| Variable | Mean     | Std. Dev | Min    | Max      |
|----------|----------|----------|--------|----------|
| UNEM     | 222712.6 | 363414.5 | 11979  | 1951391  |
| URBAN    | 136854.3 | 245715.7 | 2881   | 1462663  |
| RURAL    | 85858.31 | 131364   | 3095   | 824784   |
| FINBUS   | 2051.691 | 4812.129 | 10     | 49870    |
| FDI      | 801.6761 | 1245.474 | 0.2    | 7124.9   |
| CPI      | 132.9668 | 9.573448 | 114.31 | 164.3167 |

Source: Authors' elaboration

In this study, a unit root test is conducted to test for stationarity of the variables. Specifically, the Levin-Lin-Chen (LLC) test and the Im-Pesaran-Shin (IPS) test are used for this purpose. The result of the test can be seen in **Table 4** which shows that all variables are stationary at level. This implies that there is no cointegration in the model and therefore pooling least square is more appropriate to be used for analysis.

Table 4. Unit Root Test

| Variable  | IPS             |           | LLC             |           |  |
|-----------|-----------------|-----------|-----------------|-----------|--|
| v arrable | statistic value | p-value   | statistic value | p-value   |  |
| UNEM      | -3.8452         | 0.0001*** | -11.1332        | 0.0000*** |  |
| URBAN     | -3.1978         | 0.0007*** | -10.1606        | 0.0000*** |  |
| RURAL     | -2.1565         | 0.0155**  | -4.9925         | 0.0000*** |  |
| BUS       | -3.3649         | 0.0004*** | -12.3046        | 0.0000*** |  |
| FDI       | -4.0843         | 0.0000*** | -7.3584         | 0.0000*** |  |
| CPI       | -2.261          | 0.0119**  | -7.6846         | 0.0000*** |  |

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

Source: Authors' elaboration

There are three models to be selected in this study, namely Pooled OLS, FEM dan REM. To select between Pooled OLS and FEM the Chow-test is conducted. In this test, the null hypothesis shows that Pooled OLS is appropriate. The results of the test as shown in **Table 5** show that the p-value of all equation models is 0.000 which is lower than 0.05. This means a null hypothesis is rejected and that 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 shows that REM is the appropriate model. The results of the Hausman test show that probability chi-squared values are 0.0004, 0.0003, and 0.000 for model 1, model 2, and model 3 respectively. 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 5. Chow-test and Hausman-test

| Variable | Variable Chow-te |           | Hausman           | Hausman-test |  |
|----------|------------------|-----------|-------------------|--------------|--|
| variable | statistic value  | p-value   | Chi-squared value | p-value      |  |
| Model 1  | 152.27           | 0.0000*** | 18.07             | 0.0004***    |  |
| Model 2  | 99.69            | 0.0000*** | 18.98             | 0.0003***    |  |
| Model 3  | 132.66           | 0.0000*** | 24.25             | 0.0000***    |  |

\*\*\* shows significance at 1%

Source: Authors' elaboration

The results of the estimation can be seen in **Table 6**. There are three different results from three different models consisting of model 1, model 2, and model 3 which indicate the effects of independent variables on unemployment in general, urban unemployment, and rural unemployment respectively.

In model 1, most of the independent variables are significant at 0,1% meaning that they have a significant impact on general unemployment in Indonesia. The lagged dependent variable (*UNEM<sub>ii-1</sub>*) and *GDP* show a significant and positive influence on general unemployment. This implies that a 1 percent increase in lagged general unemployment and economic growth results in a rise in general unemployment by 0.21 percent and 0.003 percent respectively. Meanwhile, *FINBUS* and *CPI* show that they have a significantly negative impact on general unemployment. The coefficient values indicate that a 1 percent rise in financing to MSMEs in Islamic banks decreases general unemployment by 0.04 percent. Likewise, a 1 percent increase in inflation causes a reduction of general unemployment by 0.27 percent. However, *FDI* is not significant in this model implying that foreign investment does not affect general unemployment.

In model 2, both lagged 3 dependent variables ( $URBAN_{it-3}$ ) and FINBUS are significant at 0.1 percent. Both lagged 2 dependent variables ( $URBAN_{it-2}$ ) and GDP are significant at 1 percent, while FDI is significant at 5 percent. This shows that all lagged urban unemployment, financing to MSMEs in Islamic banks, economic growth, and foreign investment influence urban unemployment. It can be seen that FINBUS all lagged dependent variables have a significantly negative relationship with urban unemployment. This implies that a 1 percent incline in financing to MSMEs in Islamic banks can decrease urban unemployment by 0.1 percent. Similarly, a 1 percent rise in lagged 1, lagged 2, and lagged 3 of urban unemployment reduced urban unemployment by 0.07 percent, 0.03 percent, and 0.01 percent respectively. On the other hand, GDP and FDI show positive and significant effects on urban unemployment. This means that a 1 percent increase in both economic growth and foreign investment results in a hike in urban unemployment by 0.12 percent and 0.1 percent respectively. Meanwhile, CPI is not significant implying that there is no relationship between inflation and urban unemployment.

In model 3, lagged dependent variable (*RURAL*<sub>(t-1</sub>), CPI, and GDP are significant at 1 percent, 0.1 percent, and 0.1 percent respectively. On the other hand, FINBUS and FDI are not significant. This implies that lagged rural unemployment, inflation, and economic growth have a relationship with rural unemployment while financing to MSMEs in Islamic banks and foreign investment are vice versa. CPI and GDP show negative signs while lagged rural unemployment shows otherwise. This implies that when inflation rises by 1 percent, rural unemployment declines by 0.57 percent. In addition, rural

unemployment decreases by 0.17 percent when economic growth rises by 1 percent. Meanwhile, a 1 percent increase in lagged rural unemployment leads to an increase in rural unemployment by 0.08 percent.

Table 6. Estimation Result of Two-Step Difference GMM

| Variable / Test                  | Mod                   | el 1                | Model 2               |                     | Mod                         | el 3              |
|----------------------------------|-----------------------|---------------------|-----------------------|---------------------|-----------------------------|-------------------|
| variable / Test                  | Coefficient           | p-value             | Coefficient           | p-value             | Coefficient                 | p-value           |
| $UNEM_{it-1}$                    | 0.2139489             | 0.000***            |                       |                     |                             |                   |
| $URBAN_{it-1}$                   |                       |                     | -0.071794             | 0.009**             |                             |                   |
| $URBAN_{it-2}$                   |                       |                     | -0.032209             | 0.039*              |                             |                   |
| $URBAN_{it-3}$                   |                       |                     | -0.105267             | 0.000***            |                             |                   |
| $RURAL_{it-1}$                   |                       |                     |                       |                     | 0.08671141                  | 0.003**           |
| FINBUS                           | -0.049515             | 0.000***            | -0.10016              | 0.000***            | -0.0278187                  | 0.075             |
| FDI                              | 0.0080586             | 0.458               | 0.0145148             | 0.035*              | 0.00892782                  | 0.19              |
| CPI                              | -0.273621             | 0.000***            | 0.0595961             | 0.103               | -0.5711774                  | 0.000***          |
| GDP                              | 0.0038645             | 0.000***            | 0.1202016             | 0.007**             | -0.1770949                  | 0.000***          |
| C                                | 10.62268              | 0.000***            | 11.56549              | 0.000***            | 16.02469                    | 0.000***          |
| Arellano-Bond<br>test for AR (1) | z = -<br>3.7515       | Pr > z = 0.0002     | z = -<br>2.9932       | Pr > z = 0.0028     | z = -3.6519                 | Pr > z = 0.0003   |
| Arellano-Bond<br>test for AR (2) | z = 0.77355           | Pr > z = 0.4392     | z = 1.0501            | Pr > z = 0.2937     | z = -0.3762                 | Pr > z = 0.7067   |
| Sargan test                      | Chi-square = 30.52703 | Prob > Chi2= 0.6839 | Chi-square = 23.79651 | Prob > Chi2= 0.7812 | Prob ><br>Chi2=<br>30.31919 | Prob ><br>Chi2= c |

\*\*\* , \*\* and \* show that the variables are significant at 0.1% , 1% and 5% respectively

Source: Authors' elaboration

Based on the result in **Table 6**, it can be seen that the first-order serial correlation test for model 1, model 2, and model 3 shows that z=-3.7515 with  $Pr>z=0.0002,\,z=\text{-}2.9932$  with Pr>z=0.0028 and z=-3.6519 with Pr>z=0.0003. Since the p-value is below 0.05, the null hypothesis in all models is rejected. However, the second-order serial correlation test shows z=0.77355 with Pr>z=0.4392 in model 1, z=1.0501 with Pr>z=0.2937 in model 2, and z=-0.3762 with Pr>z=0.7067 in model 3. 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 these three models. Furthermore, the Sargan test shows Prob> Chi-squared =0.6839 in model 1, Prob> Chi-squared =0.7812 in model 2, and Prob> Chi-squared =0.7812 in model 3. Since the p-value is greater than 0.05 in all models, the null hypothesis is accepted implying that overidentifying restrictions are valid or the models are not weakened while using numerous instruments.

### Discussion

Based on the result, it can be inferred that MSMEs financing in Islamic Banks in Indonesia significantly reduces unemployment as a whole. This finding is in line with the Schumpeter entrepreneurship theory which states that entrepreneurship activities contributed to the reduction of unemployment due to job creation (Manser & Picot, 1999) and with (Thurik et al., 2008) view that small business is the best job creator. In this case, entrepreneurship activities were increased as a result of MSMEs financing channeled by the Islamic banks which brings fairness for both lenders and borrowers (Chapra, 2011) leading to better development of MSMEs and thus creating more new job opportunities in the economy (Edmiston, 2007). In Indonesia, entrepreneurship activities were created by MSMEs which dominate labor absorption. Hence, the increase in financial assistance for MSMEs will support the growth of job creation and thus reduce unemployment. This finding strengthens studies by Khairina et al. (2020) who unraveled the positive impact of Islamic bank financing on labor

Commented [R9]: Excellent presentation of discussion

absorption of real sectors in Indonesia and Benbekhti et al. (2021) who found the negative impact of MSMEs financing in Islamic banks on unemployment in Turkey due to increase in productivity.

Furthermore, MSME financing has a negative impact on urban unemployment. This finding also supports the theory of Schumpeter entrepreneurship. In urban areas, more people were hired by MSMEs because the demand for various goods is high (Baumol et al., 2011) triggering better growth of MSMEs which are innovative, self-employed, and generating jobs (Faggio & Silva, 2014). The growth of MSMEs in urban areas was also supported by a high level of Islamic financial inclusion which allows them to get better access to financial support to increase their performance (Saifurrahman, 2021). As MSMEs grew with good performance in urban areas, more people were hired, and therefore unemployment decreased.

Unfortunately, MSMEs financing in Islamic banks does not affect rural unemployment. This can be explained by (Faggio & Silva, 2014) view that most of the inhabitants in the rural area are self-employed and Baumol et al. (2011) view that the MSMEs grow mostly in urban area which has a high population as compared to the rural area. Furthermore, MSMEs in rural areas have low levels of financial inclusion and literacy which allows them to get financial support for better growth (Saifurrahman & Kassim, 2021). Hence, as MSMEs financing in Islamic Bank increases, MSMEs in rural areas are more likely to remain unchanged because they have very limited access to financing. As a result, rural unemployment will also be unchanged.

FDI does not show any influence on general unemployment and rural unemployment. This is in line with (Mehmet Mucuk, 2013) finding of the inexistence effect of FDI on unemployment in Chile, Colombia, and the Philippines. This can be explained by the abundance of MSMEs that dominated the labor market in Indonesia while FDI was not targeted for them. However, it is found that FDI significantly increases unemployment in urban areas. This result supports (Almula-Dhanoon et al., 2020) who discovered the same result in the MENA region and explained that it was caused by the mismatch between the available skill and the demanded skill.

Furthermore, it can be seen that there was a negative relationship between inflation and unemployment in Indonesia as a whole and unemployment in rural areas in particular. This finding strengthens the empirical study conducted by (Arslan & Zaman, 2014; Bayrak & Tatli, 2018). It is also supported by the Philip curve explaining that inflation and unemployment affect each other inversely.

Last but not least, economic growth was found to increase unemployment as a whole and unemployment in urban areas. Meanwhile, economic growth reduced unemployment in rural areas of Indonesia. This finding is consistent with (Bayrak & Tatli, 2018) who found a reduction effect of economic growth on youth unemployment. This can be explained by the domination of youth unemployment in urban areas which provides better salaries as compared to rural areas, leaving the population in urban areas to increase. When economic growth rises, job opportunities are expected to rise due to a hike in demand in urban areas. As a result, unemployment in rural areas decreases while unemployment in urban areas increases.

### V. CONCLUSION

Unemployment is a pivotal issue faced by every country in the world. Several attempts have been made by the government to tackle this issue. Financial restrictions become the main problem for the business owner, especially for the small business. Islamic finance has been considered as an alternative to conventional finance which is unfriendly to the low-income group who run small businesses. It became an issue since labor absorption is dominated by the MSMEs in developing countries such as Indonesia where 97 percent of its total workers are from MSMEs. Hence, this study aims to reveal the effect of MSMEs financing in Islamic banks on unemployment in Indonesia while separating the case between urban and rural areas. Such an analysis of the impact of MSMEs on urban and rural unemployment has never been conducted before.

The finding shows that financing to MSMEs in Islamic Banks contributed to the reduction in unemployment in Indonesia as a whole. The unemployment in urban areas is also revealed to be reduced by MSMEs financing in Islamic Banks. On the other hand, there is no effect of financing to MSMEs in

Islamic Banks on unemployment in rural areas. FDI influences urban unemployment positively. Inflation reduces rural unemployment and unemployment in general. Meanwhile, economic growth has positive impacts on urban unemployment and unemployment as a whole, while reducing rural unemployment. The implication of this finding for Islamic banks is the provision of a foundation in increasing the amount of financing channeled to MSMEs in Indonesia since it is proven to be effective in reducing unemployment. For the government, this study can be the basis for further expansion of Islamic banks and their role in every part of Indonesia to reduce unemployment, especially in rural areas.

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Commented [R10]: Sharpen the recommendation on the particular sector or MSEs, as an example. Please append in the few sentences

- Nama Akhir Penulis Pertama, et al/Jurnal Ekonomi Syariah Teori dan Terapan Vol. ... No. ... nama bulan yyyy (tahun): 1-16 (no halaman)
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### **COMMENTS FROM REVIEWERS**

| 1st REVIEWER |   |   |   |  |  |  |  |
|--------------|---|---|---|--|--|--|--|
| Section      | Ask yourself these questions while reviewing each section   | Review Comments   | Manuscript Change by Author (Please copy and paste the revised content from your manuscript in this column using Indonesian or English) |  |  |  |  |
| Introduction | <ol> <li>Is it clear what is already known about this topic?</li> <li>Is the research gap and state-of-the-art clearly outlined?</li> <li>Is the research question or aims clearly outlined?</li> <li>Is the research question justified givens what is already known about the topic?</li> <li>Is the research novelty justified givens properly?</li> <li>Is the research contribution clearly outlined?</li> </ol> | To write the impressive problem statement leading to worthiness of issues you may simplify this table into one or two sentences being inserted into the paragraph somewhere. You may continue displaying the statistical data via table on the most updated basis up to 2022 at least. This seems author lost 2 years most recent facts on the MSMEs in Indonesia. Normally the government typical data is obsolete and little bit slow to be updated for several "normative and bureaucratic reasoning". The suggestion will be either continuing the table display with update or changing and simplifying into sentences which say "The number of SMEs in Indonesia is increasingly growing into optimistic landscape of economy driver (Quote source, year). The readers can track down the information being cited for further references.  Author may state this with proven evidence of bibliometric review or systematic review alike, revealing the study to conclude no prior study being carried out on the topics. The suggested solution is to improve sentence more accepted efficiently, for |   |  |  |  |  |

|                      |  | instance with similar modified sentence by adding the phrase, to the best of author's knowledge. In addition, the far better version of revised sentence can be rewritten like "There is a urgent need to study, conduct, and reveal the effect of financing in Islamic banking on unemployment through MSMEs financing."and adding the reasoning is driven by the proliferating argumentation about banking, finance and unemployment opportunity. Among few studies for instance  Author may emphasize with the uniqueness and novelty on why the study is supposed to be done. |  |
|----------------------|--|---|--|
| Literature<br>Review | <ul> <li>7. Is the manuscript demonstrate an adequate understanding of the relevant literature in the field and cite an appropriate range of literature sources? Is any significant work ignored?</li> <li>8. Is the manuscript's argument built on an appropriate base of theory, concepts, or other ideas? Has the research or equivalent intellectual work on which the paper is based been well designed?</li> </ul> | Excellent grouping for hypothesis development   |  |
| Methodology          | <ul><li>9. Is the study design appropriate to answer the aim?</li><li>10. Are the study methods valid and reliable?</li><li>11. Is there enough detail in order to replicate the study</li></ul>   | Please add the reference where author is being inspired to harness and employ the model, just refer the textbook or reputable article.  |  |

|                           | <ul><li>12. If applicable, is the process of subject selection clear?</li><li>13. Are variables defined and measured appropriately?</li></ul>   |  |  |
|---------------------------|---|--|--|
| Results and<br>Discussion | <ul><li>14. Are the results stated clearly?</li><li>15. Is the data presented in a clear and appropriate way?</li><li>16. Are the results discussed from multiple angles and placed into context without being over-interpreted?</li><li>17. Are the research finding supported by the data and previous studies? If not, are they supported by references or theory?</li></ul> | Excellent comparison and stages via GMM. Robust and rigid procedures.  |  |
| Conclusions               | <ul><li>18. Do the conclusions answer the aims of the study?</li><li>19. Are the conclusions supported by the results?</li><li>20. Are the research finding stated clearly?</li><li>21. Is the novelty finding and implication finding stated clearly?</li><li>22. Are the limitations of the study fatal or are they opportunities to inform future research?</li></ul>        | Sharpen the recommendation on the particular sector or MSEs, as an example. Please append in the few sentences   |  |
| References                | <ul><li>23. Are the references relevant?</li><li>24. Have key studies been referenced or is key reference missing?</li></ul>  | Good reference   |  |
| Title                     | 25. Now that you know what the study is about, is the title informative and relevant?   | Potential article. Based on the content and model being developed, the suggested tittle can be amended toward "The Impact of MSMEs Financing from Islamic Bank on the Unemployment in Indonesia", the preposition like in or from matters in |  |

|          |  | English language. Please do consult with language expert. The idea is to gauge the MSMEs financing being served by Islamic banking on the Unemployment in Indonesia? |  |
|----------|--|--|--|
| Abstract | 26. Now that you have read the whole manuscript, does the abstract clearly summarise what the aims, results, and conclusion are, implications, and the methodology used  | Good abstract  |  |
| Overall  | <ul> <li>27. What did this study add to what was already known (novelty and contribution) on this topic?</li> <li>28. Does the manuscript contain new and significant information adequate to justify publication?</li> <li>29. Is the manuscript consistent within itself?</li> <li>30. Is the anything that stands out in the author or funder statement(s) that makes you question the objectivity of the study?</li> <li>31. What are the strengths and the weakness of the manuscript?</li> </ul> | Excellent paper for publication  |  |

| 2 <sup>nd</sup> REVIEWER |   |                 |   |
|--------------------------|---|-----------------|---|
| Section                  | Ask yourself these questions while reviewing each section | Review Comments | Responses (Please copy and paste the revised content from your manuscript in this column using Indonesian or English) |

| Introduction           | <ol> <li>Is it clear what is already known about this topic?</li> <li>Is the research gap and state-of-the-art clearly outlined?</li> <li>Is the research question or aims clearly outlined?</li> <li>Is the research question justified givens what is already known about the topic?</li> <li>Is the research novelty justified givens properly?</li> <li>Is the research contribution clearly outlined?</li> </ol>    | quite clear, however have not capture/<br>telling more about unemployment in<br>urban and rural area, as the goal of the<br>research want to capture that<br>phenomenon. Please add more<br>information regarding these issues |  |
|------------------------|--|--|--|
| Literature<br>Review   | <ul> <li>7. Is the manuscript demonstrate an adequate understanding of the relevant literature in the field and cite an appropriate range of literature sources? Is any significant work ignored?</li> <li>8. Is the manuscript's argument built on an appropriate base of theory, concepts, or other ideas? Has the research or equivalent intellectual work on which the paper is based been well designed?</li> </ul> | adequate   |  |
| Methodology            | <ul> <li>9. Is the study design appropriate to answer the aim?</li> <li>10. Are the study methods valid and reliable?</li> <li>11. Is there enough detail in order to replicate the study</li> <li>12. If applicable, is the process of subject selection clear?</li> <li>13. Are variables defined and measured appropriately?</li> </ul>   | quite appropriate. why have to use GMM? please explain more. why did not use the usual data panel?   |  |
| Results and Discussion | 14. Are the results stated clearly?  | the basis of the comparative analysis is not yet clear.  |  |

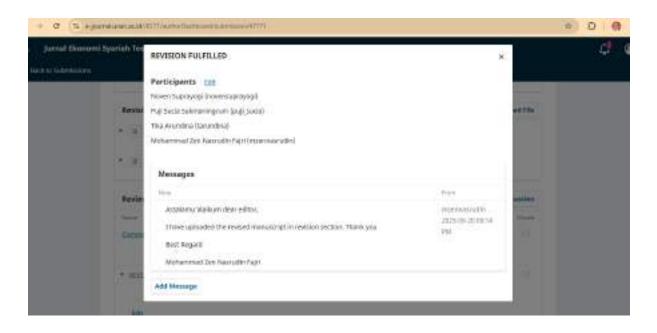
| 15. Is the data presented in a clear and    |  |
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| appropriate way?                            |  |
| 16. Are the results discussed from multiple |  |
| angles and placed into context without      |  |
| being over-interpreted?                     |  |
| 17. Are the research finding supported by   |  |
| the data and previous studies? If not, are  |  |
| they supported by references or theory?     |  |
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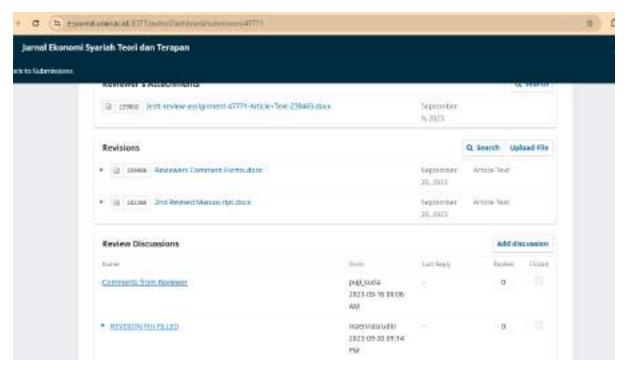
| 3 <sup>rd</sup> REVIEWER |   |  |   |
|--------------------------|---|--|---|
| Section                  | Ask yourself these questions while reviewing each section   | Review Comments  | Manuscript Change by Author (Please copy and paste the revised content from your manuscript in this column using Indonesian or English) |
| Introduction             | <ol> <li>Is it clear what is already known about this topic?</li> <li>Is the research gap and state-of-the-art clearly outlined?</li> <li>Is the research question or aims clearly outlined?</li> <li>Is the research question justified givens what is already known about the topic?</li> <li>Is the research novelty justified givens properly?</li> <li>Is the research contribution clearly outlined?</li> </ol> | <ul> <li>The problem of the research is not clear. Provide more explanation on unemployment in Indonesia and the need to overcome this issue. The author can relate to SDG's as well.</li> <li>The paper doesn't explain how Islamic Banking can contributes to the major issue as compared to conventional banks.</li> <li>The paper gives an overrated claim, "These limited funds are faced with the presence of conventional loans that apply high interest rates and the difficulty of accessing these loans", and cannot provide the counter argument on Islamic Banking side.</li> <li>Are Islamic Banks give cheaper price? Or easier assessment?</li> </ul> |   |

|                      |  | Are Islamic Banks perform mudharabah and musyarakah contract to MSMEs?  Just emphasize the social function of Islamic Banks or other advantages rather than pointing out on conventional banks' performance without proper justification.   |  |
|----------------------|--|---|--|
| Literature<br>Review | <ul> <li>7. Is the manuscript demonstrate an adequate understanding of the relevant literature in the field and cite an appropriate range of literature sources? Is any significant work ignored?</li> <li>8. Is the manuscript's argument built on an appropriate base of theory, concepts, or other ideas? Has the research or equivalent intellectual work on which the paper is based been well designed?</li> </ul> | "Islamic Banks are business entities guided by shariah board". please use more appropriate terms Please use graph to explain data so the reader able to learn the dynamic of historical data (also in introduction part)  The contribution of Islamic Banking to unemployment is overrated. Please justify the statement:  1. IF is friendly to MSMEs as there is a profit and loss sharing (PLS) system 2. Although this system (PLS system) generate small profit for the Islamic bank compared to the conventional |  |
| Methodology          | <ul> <li>9. Is the study design appropriate to answer the aim?</li> <li>10. Are the study methods valid and reliable?</li> <li>11. Is there enough detail in order to replicate the study</li> <li>12. If applicable, is the process of subject selection clear?</li> <li>13. Are variables defined and measured appropriately?</li> </ul>   | , a sa sa sa sa sa sa sa sa sa sa sa sa s   |  |

| Results and<br>Discussion | <ul> <li>15. Is the data presented in a clear and appropriate way?</li> <li>16. Are the results discussed from multiple angles and placed into context without being over-interpreted?</li> <li>17. Are the research finding supported by the data and previous studies? If not, are they supported by references or theory?</li> </ul>                                  | control var? especially in rural area? Please provide more relevant control var  - Do you use lag for smoothing the big amount in the variable?  - Why you prefer to use nominal value rather than ratio to explain the financing amount?  - On Table 4, UNEM and RURAL coefficient are positive. It means the MSME financing significantly increase unemployment, please explain.  - Please explain the interpretation of lag (URBANit-1, it-2, etc) in this context, what does it imply?  - Please elaborate on the result: use more analytical interpretation rather than technical explanation |  |
|---------------------------|--|--|--|
| Conclusions               | <ul><li>18. Do the conclusions answer the aims of the study?</li><li>19. Are the conclusions supported by the results?</li><li>20. Are the research finding stated clearly?</li><li>21. Is the novelty finding and implication finding stated clearly?</li><li>22. Are the limitations of the study fatal or are they opportunities to inform future research?</li></ul> | The recommendation is very normative, please improve.  |  |

# 5. Bukti submit revisi, respon kepada reviewer, dan artikel yang diresubmit (20 September 2023)





Jurnal Ekonomi Syariah Teori dan Terapan p-ISSN: 2407-1935, e-ISSN: 2502-1508. Vol. ... No. ... nama bulan yyyy (tahun): 1-16 (no halaman); DOI:

## The Impact of MSMEs Financing in Islamic Bank on Unemployment in Indonesia

## Pengaruh Pembiayaan UMKM pada Bank Syariah terhadap Pengangguran di Indonesia

#### **ABSTRACT**

One of the contributions of Islathe mic banking sector to Indonesia's economy is channeling funds to MSMEs in the form of financing since a number of them could not access financial services. Interestingly, the MSMEs grew as the Islamic Banking sector rose. However, no single study analyzes such an impact on unemployment in both rural and urban areas. This paper aims to reveal the effect of MSMEs financing in Islamic banks on unemployment in Indonesia. It further aims to discover such an effect on unemployment in Indonesia's urban and rural areas separately. Dynamic panel GMM two-step analysis is used in this research to estimate cross-province data in Indonesia between 2010 and 2019. The results of the study reveal that MSMEs financing in Islamic Banks contributed significantly to the reduction of unemployment in Indonesia as a whole. It is also found that the unemployment in urban areas is reduced by MSMEs financing in Islamic Banks. On the other hand, there is no significant relationship between MSMEs financing in Islamic Banks and unemployment in rural areas. These findings can be the basis for Islamic banks to increase MSMEs financing and for the government to expand Islamic banks' role in every part of Indonesia to reduce unemployment, especially in rural areas.

Keywords: MSMEs Financing, Islamic Bank, Unemployment, Urban, Rural.

#### **ABSTRAK**

Salah satu kontribusi sektor perbankan syariah dalam perekonomian Indonesia adalah penyaluran dana kepada UMKM dalam bentuk pembiayaan, karena beberapa dari mereka tidak dapat mengakses layanan keuangan. Menariknya, UMKM tumbuh seiring dengan bangkitnya sektor Perbankan Syariah. Namun, tidak ada satu studi pun yang menganalisis dampak tersebut terhadap pengangguran di pedesaan dan perkotaan. Penelitian ini bertujuan untuk mengungkap pengaruh pembiayaan UMKM di bank syariah terhadap pengangguran di Indonesia. Hal ini bertujuan untuk mengetahui lebih jauh pengaruh tersebut terhadap pengangguran di daerah perkotaan dan pedesaan secara terpisah di Indonesia. Analisis dua langkah GMM panel dinamis digunakan dalam penelitian ini untuk mengestimasi data lintas provinsi di Indonesia antara tahun 2010 dan 2019. Hasil penelitian mengungkapkan bahwa pembiayaan UMKM di Bank Syariah berkontribusi signifikan terhadap pengurangan pengangguran di Indonesia secara keseluruhan. Ditemukan juga bahwa pengangguran di perkotaan berkurang dengan pembiayaan UMKM di Bank Syariah. Di sisi lain, tidak ada hubungan yang signifikan antara pembiayaan UMKM di bank syariah dengan pengangguran di pedesaan. Hasil penelitian ini dapat menjadi dasar bagi bank-bank syariah dalam meningkatkan porsi pembiayaan UMKM dan dasar bagi pemerintah untuk memperluas peran perbankan syariah di seluruh bagian Indonesia untuk mengurangi pengangguran, khususnya di area pedesaan.

Kata Kunci: Pembiayaan UMKM, Bank Syariah, Pengangguran, Perkotaan, Pedesaan.

#### I. INTRODUCTION

Unemployment is one of the most popular issues in economic development whereby every country in this world has made several attempts to tackle this issue. A remarkable population growth is recognized as one of the main causes of such an issue of unemployment which makes developing countries with huge populations vulnerable to it (Singh, 2018). The greater the number of the population they have, the larger job opportunities will be needed to keep the unemployment cases at a minimum level. Many attempts have been made by their government to keep its number as low as possible, either through human capital development, provision of an educational system by market demand, or increasing economic growth (Sherif, 2013). Apart from the government's role, the contribution of the private sector is also essential in supporting the programs so that unemployment can be successfully reduced.

As one of the developing countries, Indonesia recorded through its statistical agency (BPS, 2021) that as of August 2020, the number of people without jobs within the country reached 9.76 million persons, accounting for 7.01 percent of the total labor force in Indonesia. Among this group, 70 percent of them live in urban areas while the others live in rural areas. This happened due to the massive migration from rural to urban areas in response to the gap in economic opportunities between the two

areas, despite low-level of skill and social networking of the migrants (Lyu et al., 2019). However, in general, the unemployment rate is relatively moderate as compared to other developing countries. This percentage can be kept at that level due to Indonesia's abundance of micro small medium enterprises (MSMEs). It can be seen in **Table 1** that the number of MSMEs consistently increased every year from 52.7 million units in 2010 to 65 million units in 2022. According to CNN Indonesia, based on the data released by the Ministry of MSMEs, the MSMEs have a major role in strengthening the economy as they absorbed 97 percent of total workers and contributed to 60.5 percent of GDP in 2019. This phenomenon needs to be proven through research whether the effect is significant.

**Table 1.** Number of MSMEs in Indonesia (2010-2021)

| Year | Number of MSMEs (million units) |
|------|---------------------------------|
| 2010 | 52.7                            |
| 2011 | 54.1                            |
| 2012 | 55.2                            |
| 2013 | 56.5                            |
| 2014 | 57.8                            |
| 2015 | 59.2                            |
| 2016 | 61.6                            |
| 2017 | 62.9                            |
| 2018 | 64.1                            |
| 2019 | 65.4                            |
| 2020 | 64                              |
| 2021 | 64.2                            |
| 2022 | 65                              |
|      |                                 |

Source: Ministry of MSMEs

Based on this example, unemployment in developing countries can be minimized by strengthening MSMEs due to their role in creating job opportunities as well as absorbing labor (Nasr & Rostom, 2013). Such a role has also been recognized by several developed countries as it become a key to the rapid economic growth in China (Kongolo, 2010). Despite the potential of MSMEs, there are several constraints faced by MSMEs in developing their business, including the lack of an integrated accounting system, the lack of trained human resources, limited marketing and administrative matters, and most importantly limited funds (Mumani, 2014). These limited funds are faced with the presence of conventional loans that apply interest rates and the difficulty of accessing these loans (Elasrag, 2016). This capital constraint becomes the main issue in developing MSMEs since they have limited access to financial services as compared to the big companies (Benbekhti et al., 2021).

There is a huge gap in financial access between big companies and small enterprises in developing countries as approximately 41% MSMEs could not afford their financial necessities. This financial constraint may threaten the existence of the MSMEs and hinder their development, leading to lesser absorption of labor and increasing unemployment. As a response to this issue, Islamic Finance (IF) is expected to be the alternative solution to the financial accessibility problem in MSMEs. The nature of IF which is built based on partnership, provides access to financing for the small enterprises and the poor (Elasrag, 2016). Furthermore, the profit and loss sharing system in the IF allows MSMEs to survive the loss compared to the conventional loan which burdens all the loss to the entrepreneurs (Kayed & Hassan, 2011). Such a poor-friendly system in IF may contribute to the development of MSMEs and thus increasing labor absorption and reducing unemployment.

In Indonesia, the growth of IF is relatively slow compared to other Muslim countries in the world although the trend is upward. Nevertheless, the IF industry shows a positive role in supporting MSMEs as can be seen from the data released by the financial service authority (OJK) in 2019 that around 51.86 trillion rupiahs were channeled by the Islamic Banking industry to MSMEs in Indonesia in December

2019. In addition, it can be seen in **Table 2** that in the period 2010-2019, the total MSMEs financing of Islamic banks in Indonesia shows an upward trend from IDR 52,565 billion in 2010 to IDR 66,333 billion in 2019. In reverse, the trend of the number of unemployed people is downward, starting at 8,319,779 people in 2010 and then ending at 7,045,761 in 2019. Furthermore, when the total MSMEs financing reached a peak at IDR 110,027 billion in 2013, the number of unemployed people fell to 7,338,737 and then it rose again to 7,560,822 as the MSMEs financing declined to IDR 50,146 billion in 2015. And during the Covid-19 period 2020-2022, an increase in MSMEs financing was associated with a reduction in the number of unemployed from 9,767,754 people in 2020 to 8,425,931 people in 2022. These movements raise the question of whether there was a relationship between the two variables.

**Table 2**. Comparison between the Number of Unemployed and MSMEs Financing of Islamic Banks in Indonesia (2010-2019)

| Year | Number of Unemployed | Total MSME Financing (in IDR billion) |
|------|----------------------|---------------------------------------|
| 2010 | 8,319,779            | 52,565                                |
| 2011 | 7,700,086            | 71,810                                |
| 2012 | 7,244,956            | 90,856                                |
| 2013 | 7,388,737            | 110,027                               |
| 2014 | 7,244,906            | 59,699                                |
| 2015 | 7,560,822            | 50,146                                |
| 2016 | 7,031,775            | 54,411                                |
| 2017 | 7,040,323            | 58,980                                |
| 2018 | 7,000,691            | 62,231                                |
| 2019 | 7,045,761            | 66,333                                |
| 2020 | 9,767,754            | 57,318                                |
| 2021 | 9,102,052            | 76,009                                |
| 2022 | 8,425,931            | 87,140                                |

Source: BPS and OJK

Most of the existing literature investigated the impact of credit in the banking sector on unemployment. Shabbir et al. (2011) revealed that a rise in credit volume in the banking sector reduced unemployment in Pakistan. This finding is strengthened by Pagano & Pica (2011), Feldmann (2012), and Göçer, (2013) who respectively unraveled a similar impact during the investigation on 63 countries, 53 countries of the world, and 14 countries under the European Union. Azolibe et al. (2022) found further the ability of banking system credit to control the unemployment rate in South Africa and Nigeria. At the same time, several studies have found the role of SMEs in creating employment, especially in developing countries (Abisuga-Oyekunle et al., 2020; Oyelana & Adu, 2015; Syed et al., 2012).

According to Hassanein & Mostafa (2023) through their bibliometric analysis, in the last 30 years, the discussion of the MSMEs in Islamic bank research is quite limited since the popular discussion is on the performance, efficiency, and consumer behavior of Islamic Bank. To the best of the author's knowledge, there is only limited study conducted to reveal the effect of Islamic banking on unemployment through MSMEs financing. Khairina et al. (2020) analyzed the relationship between financing in Islamic Bank and labor absorption in real sectors in Indonesia and found that third-party fund allocation through profit and loss-sharing financing had a significantly positive impact on labor absorption in real sectors. Unfortunately, their findings end at labor absorption without further analysis of the impact on unemployment. In Turkey, Benbekhti et al. (2021) discovered that SMEs financing in Islamic banks is proven to reduce unemployment as a result of an increase in productivity. These findings did not cover the empirical impact of MSMEs financing on unemployment in urban and rural areas. Such an investigation is urgently needed since there is a gap between the urban and rural areas in terms of financial access and unemployment reduction programs.

This paper will be the first to discuss one of the supporting attempts at unemployment reduction through financial access provided by Islamic Banks for MSMEs in Indonesia as one of the developing countries by decomposition of the impact in urban and rural areas since both areas are important for human development programs. This study aims to reveal the effect of Islamic financing on MSMEs on unemployment in Indonesia. Furthermore, it aims to discover further the effect of Islamic financing on MSMEs on unemployment in urban and rural areas.

#### II. LITERATURE REVIEW

#### **Entrepreneurship-Unemployment Theory**

The linkage between entrepreneurship and unemployment can be investigated through two-way communication. One of the relevant theories related to this is Schumpeter's entrepreneurial effect which states that a high rate of unemployment in a country will lead to the rise of entrepreneurship activities including start-ups and small businesses due to the decreasing opportunity to start new businesses (Blanchflower & Meyer, 1994). At the same time, this theory states that the rise in entrepreneurship activities can reduce unemployment as they create jobs (Manser & Picot, 1999). According to (Thurik et al., 2008), start-ups and small businesses contribute to job creation better than their counterparts since they contribute to greater entrepreneurial activity which then leads to unemployment reduction. They also asserted that the entrepreneurial activity is related to the Schumpeterian process where the old product will be replaced by the new products created from those entrepreneurial activities.

Based on the concept of the unemployment-push effect, a person will be pushed into entrepreneurship activity since the opportunities to get decent work and thus sufficient wage from the job are decreased by unemployment (Startiene & Remeikiene, 2009). Ritsilä & Tervo (2002) view that the person is not satisfied with such a situation because it is not his true dream. Meanwhile, According to the prosperity-pull concept at a time of low unemployment level, people most likely become self-employed due to the high possibility of earning a labor wage (Muhelberger, 2007). Conversely, during high unemployment levels, the demand for products or services falls which may lead to the bankruptcy of companies as their revenues are reduced. As a consequence, many workers will be laid off and they cannot start entrepreneurship since their expertise in start-ups is inadequate.

#### Islamic Finance, MSMEs and Unemployment

Islamic Finance brings a religious value to the financing system as well as in its contribution to social matters in supporting social justice among people (Wajdi Dusuki, 2008). Islamic Banks are business entities guided by the Shariah board. This allows them to consistently run according to Islamic principles with an expectation of preventing the concentration of wealth among a few groups without harming people who lawfully acquired them (Ibn, 2006). Therefore, it is only natural for Islamic Banks to promote financing schemes for the MSMEs which is nowadays known as microfinance.

IF is friendly to MSMEs as there is a profit and loss sharing (PLS) system which creates fairness for MSMEs as borrowers and Islamic Banks as lenders (Chapra, 2011). Although this system generates small profit for the Islamic bank compared to the conventional, MSMEs will be helped a lot as their resilience against loss can be maintained (Fajri et al., 2022). Better development in MSMEs indirectly results in better provision of job opportunities which can finally contribute to the fall of unemployment cases.

Based on the perspective of economic development, MSMEs are perceived to be able to create almost half of new job opportunities in the economy, whereby the job opportunities are considered good ones (Edmiston, 2007). Mostly, MSMEs have a better response to the cultural changes in society since they can easily adapt to the situation. Apart from being job creators and income generators, they are also considered the key drivers of innovation in the economy (Abisuga-Oyekunle et al., 2020). With the abundance of MSMEs, the poor will be helped a lot due to the provision of various job opportunities which lead them to have a better quality of life in society.

(Neumark et al., 2011) then proved the theory through empirical research and found that small businesses with less than 20 workers in the United States played the biggest role in job creation. Meanwhile, in developing countries, businesses with 5 to 99 employees and businesses older than 10 years have the highest contribution to job creation (Ayyagari et al., 2011). The job creation role of

MSMEs will lead to the decline of unemployment provided that the MSMEs can develop better. Therefore, it is important to create a conducive environment in which small businesses can operate, innovate, and create the jobs needed. In this case, the International Labor Organization (ILO, 2015) asserted that SMEs' contribution to job creation and income generation is firmly crucial as two-thirds of the entire job opportunities worldwide are provided by SMEs.

The role of MSMEs in job creation as the product of entrepreneurship activity differs between urban and rural areas. Faggio & Silva (2014) stated that some characteristics are needed for MSMEs to be able to reduce unemployment namely innovation, job creation, and self-employment. He said that these elements can properly occur in the urban areas since the MSMEs in rural areas are mostly self-employed and are not innovative, producing replica products. Furthermore, (Baumol et al., 2011) added that there are more MSMEs in urban areas with their various kind of products leading to more consumer interest. In this case, there will be an increase in demand for the local products which possibly leads to more workers hired to increase production to fulfill the demand. In a nutshell, there will be minimum or even no effect of the existence of MSMEs on unemployment in the rural area. Meanwhile, the effect of MSMEs on unemployment can be seen in urban areas.

#### The Impact of MSMEs Financing in Islamic Banks on Unemployment

MSMEs financing in Islamic banks is essential in reducing unemployment in developing countries where the labor market is dominated by MSMEs. Through PLS-based financing, Islamic banks support the development of MSMEs better than their counterpart due to the fairness between the lenders and the borrowers (Chapra, 2011). The better development of MSMEs will create more new job opportunities in the market (Edmiston, 2007), leading to better labor absorption and thus reducing unemployment. Based on this assumption, the first hypothesis is developed as follows:

H1: MSMEs financing has a negative influence on unemployment

When applying the above assumption in different areas, namely urban and rural areas, there is a difference since each of them has its typical condition. This assumption can perfectly hold for MSMEs in urban areas due to the complete characteristics needed for unemployment reduction (Faggio & Silva, 2014) and the high demand for various products there (Baumol et al., 2011). The higher the product demand, the more workers will be hired to meet the consumer's demand. In addition, MSMEs in the Urban area have a high level of Islamic financial literacy and inclusion which allows them to get easy access to financial support and then increase their performance (Saifurrahman & Kassim, 2021).

H2: MSMEs financing has a negative influence on urban unemployment

In rural areas, MSMEs financing of Islamic banks does not affect unemployment. It can be explained by the domination of self-employed people in rural areas which is less innovative (Faggio & Silva, 2014) and the lack of Islamic financial literacy inclusion (Saifurrahman & Kassim, 2021) causing them to face difficulty in accessing financial services in Islamic banks. As a result, the growth of MSMEs in rural areas remains stable and thus unemployment is not affected by the financing.

H3: MSMEs financing has no significant influence on rural unemployment

#### III. RESEARCH METHODS

This research uses a quantitative approach employing the Generalized Method of Moments (GMM) as a tool for dynamic panel data analysis. This method is the most appropriate since the data of the cross-sectional unit (N) is greater than the period (T) (Siddiqui & Ahmed, 2013). 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 and unobserved individual heterogeneity (Apergis & Ozturk, 2015). Two-step GMM analysis is used instead of the counterpart to make sure that the estimation result is reliable and consistent (Roodman, 2009).

The analysis was conducted using secondary data from 33 provinces in Indonesia from 2010 to 2019. The data was mainly obtained from two sources, the Center for Statistics Agency (BPS) and the Financial Services Authority (OJK). The dependent variables are *UNEM*, *URBAN*, and *RURAL*. *UNEM* represents the number of unemployed people as a whole, while *URBAN* and *RURAL* indicate

respectively the number of unemployed people in urban areas and rural areas. The data of the dependent variables are obtained from BPS. The independent variables are *FINBUS*, *INF*, *FDI*, and *GDP*. *FINBUS* is the amount of MSMEs financing in Islamic banks which is measured in billion rupiahs. The data of *FINBUS* is taken from OJK while the data of the other three variables are obtained from BPS. *INF* represents inflation measured by the consumer price index (CPI). Meanwhile, *FDI* and *GDP*, which are measured in million rupiahs, denote the amount of foreign direct investment and economic growth respectively.

The estimation starts with a unit root test to check the stationarity of all variables. When all the variables are stationary at the level, estimation is conducted using Common Effect Model (CEM), Fixed Effect Model (FEM) and Random Effect Model (REM). Afterward, It is necessary to confirm the selection of FEM among the other static panel models using the Chow-test and Hausman-test. The Two-Step GMM estimation then can be applied once FEM is selected as the best model. Afterward, it is necessary to do post-estimation tests to check the validity of all the instruments and autocorrelation in the error terms (Alaabed et al., 2016). To check for 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.

There are three models formulated that distinguish the analysis of unemployment as a whole and unemployment in rural and urban areas. These models are developed from the models used by Folawewo & Adeboje (2017) and Benbekhti et al. (2021). The models are as follows:

$$UNEM_{it} = FINBUS_{it} + INF_{it} + FDI_{it} + GDP_{it} + \mu_{it}$$
 (1)

$$URBAN_{it} = FINBUS_{it} + INF_{it} + FDI_{it} + GDP_{it} + \mu_{it}$$
 (2)

$$RURAL_{it} = FINBUS_{it} + INF_{it} + FDI_{it} + GDP_{it} + \mu_{it}$$
 (3)

Variables definition:

UNEM = UnemploymentURBAN = Urban UnemploymentRURAL = Rural Unemployment

FINBUS = MSMEs financing in Islamic Bank

INF = Inflation

*FDI* = Foreign Direct Investment

GDP = Economic growth

 $\mu$  = Error term

#### IV. RESULTS AND DISCUSSION

#### Result

It can be seen from **Table 3** that unemployed people in Indonesia across the provinces range between 11,979 persons and 1,951,391 persons with 222,712 persons on average. In urban areas, the average number of unemployed is 136,854 with the number ranging between 2,881 persons and 1,462,663 persons. Meanwhile, in rural areas, the number of unemployed people ranges from 3,095 persons to 824,784 persons with an average number of 85,858 persons. The total amount of financing that Islamic Banks channeled to MSMEs starts from 10 billion rupiahs to 49,870 billion rupiahs with 2,051.691 billion rupiahs on average. The average value of FDI is USD 801.6761 million ranging from USD 0.2 million to USD 7124.9 million. Inflation ranges between 114.31 and 164.3167 with an average value of 132.96.

**Table 3.** Descriptive Statistics

| Variable | Mean     | Std. Dev | Min   | Max     |
|----------|----------|----------|-------|---------|
| UNEM     | 222712.6 | 363414.5 | 11979 | 1951391 |
| URBAN    | 136854.3 | 245715.7 | 2881  | 1462663 |

| RURAL         | 85858.31 | 131364   | 3095   | 824784   |  |
|---------------|----------|----------|--------|----------|--|
| <i>FINBUS</i> | 2051.691 | 4812.129 | 10     | 49870    |  |
| FDI           | 801.6761 | 1245.474 | 0.2    | 7124.9   |  |
| CPI           | 132.9668 | 9.573448 | 114.31 | 164.3167 |  |

Source: Authors' elaboration

In this study, a unit root test is conducted to test for stationarity of the variables. Specifically, the Levin-Lin-Chen (LLC) test and the Im-Pesaran-Shin (IPS) test are used for this purpose. The result of the test can be seen in **Table 4** which shows that all variables are stationary at level. This implies that there is no cointegration in the model and therefore pooling least square is more appropriate to be used for analysis.

**Table 4.** Unit Root Test

| Variable  | I               | PS        | LL              | C         |
|-----------|-----------------|-----------|-----------------|-----------|
| v arrable | statistic value | p-value   | statistic value | p-value   |
| UNEM      | -3.8452         | 0.0001*** | -11.1332        | 0.0000*** |
| URBAN     | -3.1978         | 0.0007*** | -10.1606        | 0.0000*** |
| RURAL     | -2.1565         | 0.0155**  | -4.9925         | 0.0000*** |
| BUS       | -3.3649         | 0.0004*** | -12.3046        | 0.0000*** |
| FDI       | -4.0843         | 0.0000*** | -7.3584         | 0.0000*** |
| CPI       | -2.261          | 0.0119**  | -7.6846         | 0.0000*** |

<sup>\*\*\*</sup> and \*\* show that the variables are significant at 1% and 5% respectively

Source: Authors' elaboration

There are three models to be selected in this study, namely Pooled OLS, FEM dan REM. To select between Pooled OLS and FEM the Chow-test is conducted. In this test, the null hypothesis shows that Pooled OLS is appropriate. The results of the test as shown in **Table 5** show that the p-value of all equation models is 0.000 which is lower than 0.05. This means a null hypothesis is rejected and that 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 shows that REM is the appropriate model. The results of the Hausman test show that probability chi-squared values are 0.0004, 0.0003, and 0.000 for model 1, model 2, and model 3 respectively. 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 5. Chow-test and Hausman-test

| Variable  | Chov            | v-test    | Hausman-          | -test     |
|-----------|-----------------|-----------|-------------------|-----------|
| v arrable | statistic value | p-value   | Chi-squared value | p-value   |
| Model 1   | 152.27          | 0.0000*** | 18.07             | 0.0004*** |
| Model 2   | 99.69           | 0.0000*** | 18.98             | 0.0003*** |
| Model 3   | 132.66          | 0.0000*** | 24.25             | 0.0000*** |

<sup>\*\*\*</sup> shows significance at 1%

Source: Authors' elaboration

The results of the estimation can be seen in **Table 6**. There are three different results from three different models consisting of model 1, model 2, and model 3 which indicate the effects of independent variables on unemployment in general, urban unemployment, and rural unemployment respectively.

In model 1, most of the independent variables are significant at 0,1% meaning that they have a significant impact on general unemployment in Indonesia. The lagged dependent variable ( $UNEM_{it-I}$ ) and GDP show a significant and positive influence on general unemployment. This implies that a 1 percent increase in lagged general unemployment and economic growth results in a rise in general unemployment by 0.21 percent and 0.003 percent respectively. Meanwhile, FINBUS and CPI show that they have a significantly negative impact on general unemployment. The coefficient values indicate

that a 1 percent rise in financing to MSMEs in Islamic banks decreases general unemployment by 0.04 percent. Likewise, a 1 percent increase in inflation causes a reduction of general unemployment by 0.27 percent. However, *FDI* is not significant in this model implying that foreign investment does not affect general unemployment.

In model 2, lagged 1 dependent variable (*URBAN*<sub>it-1</sub>) and GDP are significant at 1 percent while both lagged 3 dependent variables (*URBAN*<sub>it-3</sub>) and *FINBUS* are significant at 0.1 percent. Furthermore, both lagged 2 dependent variables (*URBAN*<sub>it-2</sub>) and FDI are significant at 5 percent. This shows that all lagged urban unemployment, financing to MSMEs in Islamic banks, economic growth, and foreign investment influence urban unemployment. It can be seen that *FINBUS* and all lagged dependent variables have a significantly negative relationship with urban unemployment. This implies that a 1 percent incline in financing to MSMEs in Islamic banks can decrease urban unemployment by 0.1 percent. Similarly, a 1 percent rise in lagged 1, lagged 2, and lagged 3 of urban unemployment reduced urban unemployment by 0.07 percent, 0.03 percent, and 0.01 percent respectively. On the other hand, *GDP* and *FDI* show positive and significant effects on urban unemployment. This means that a 1 percent increase in both economic growth and foreign investment results in a hike in urban unemployment by 0.12 percent and 0.1 percent respectively. Meanwhile, CPI is not significant implying that there is no relationship between inflation and urban unemployment.

In model 3, lagged dependent variable ( $RURAL_{it-1}$ ), CPI, and GDP are significant at 1 percent, 0.1 percent, and 0.1 percent respectively. On the other hand, FINBUS and FDI are not significant. This implies that lagged rural unemployment, inflation, and economic growth have a relationship with rural unemployment while financing to MSMEs in Islamic banks and foreign investment are vice versa. CPI and GDP show negative signs while lagged rural unemployment shows otherwise. This implies that when inflation rises by 1 percent, rural unemployment declines by 0.57 percent. In addition, rural unemployment decreases by 0.17 percent when economic growth rises by 1 percent. Meanwhile, a 1 percent increase in lagged rural unemployment leads to an increase in rural unemployment by 0.08 percent.

Table 6. Estimation Result of Two-Step Difference GMM

| Variable / Test                  | Mod                   | el 1                | Mode                  | el 2                | Mod                   | lel 3           |
|----------------------------------|-----------------------|---------------------|-----------------------|---------------------|-----------------------|-----------------|
| variable / Test                  | Coefficient           | p-value             | Coefficient           | p-value             | Coefficient           | p-value         |
| $\mathit{UNEM}_{\mathit{it-1}}$  | 0.2139489             | 0.000***            |                       |                     |                       |                 |
| $\mathit{URBAN}_{it	ext{-}1}$    |                       |                     | -0.071794             | 0.009**             |                       |                 |
| $URBAN_{it-2}$                   |                       |                     | -0.032209             | 0.039*              |                       |                 |
| $URBAN_{it-3}$                   |                       |                     | -0.105267             | 0.000***            |                       |                 |
| $RURAL_{it-1}$                   |                       |                     |                       |                     | 0.08671141            | 0.003**         |
| FINBUS                           | -0.049515             | 0.000***            | -0.10016              | 0.000***            | -0.0278187            | 0.075           |
| FDI                              | 0.0080586             | 0.458               | 0.0145148             | 0.035*              | 0.00892782            | 0.19            |
| CPI                              | -0.273621             | 0.000***            | 0.0595961             | 0.103               | -0.5711774            | 0.000***        |
| GDP                              | 0.0038645             | 0.000***            | 0.1202016             | 0.007**             | -0.1770949            | 0.000***        |
| C                                | 10.62268              | 0.000***            | 11.56549              | 0.000***            | 16.02469              | 0.000***        |
| Arellano-Bond<br>test for AR (1) | z = -3.7515           | Pr > z = 0.0002     | z = -2.9932           | Pr > z = 0.0028     | z = -3.6519           | Pr > z = 0.0003 |
| Arellano-Bond<br>test for AR (2) | z = 0.77355           | Pr > z = 0.4392     | z = 1.0501            | Pr > z = 0.2937     | z = -0.3762           | Pr > z = 0.7067 |
| Sargan test                      | Chi-square = 30.52703 | Prob > Chi2= 0.6839 | Chi-square = 23.79651 | Prob > Chi2= 0.7812 | Prob > Chi2= 30.31919 | Prob > Chi2= c  |

<sup>\*\*\*, \*\*</sup> and \* show that the variables are significant at 0.1%, 1% and 5% respectively

Source: Authors' elaboration

Based on the result in **Table 6**, it can be seen that the first-order serial correlation test for model 1, model 2, and model 3 shows that z=-3.7515 with Pr>z=0.0002, z=-2.9932 with Pr>z=0.0028 and z=-3.6519 with Pr>z=0.0003. Since the p-value is below 0.05, the null hypothesis in all models is rejected. However, the second-order serial correlation test shows z=0.77355 with Pr>z=0.4392 in model 1, z=1.0501 with Pr>z=0.2937 in model 2, and z=-0.3762 with Pr>z=0.7067 in model 3. 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 these three models. Furthermore, the Sargan test shows Prob>Chi-squared z=0.6839 in model 1, z=0.6839 in model 1, z=0.7812 in model 2, and z=0.7812 in model 3. Since the p-value is greater than 0.05 in all models, the null hypothesis is accepted implying that overidentifying restrictions are valid or the models are not weakened while using numerous instruments.

#### **Discussion**

Based on the result, it can be inferred that MSMEs financing in Islamic Banks in Indonesia significantly reduces unemployment as a whole. This finding is in line with the Schumpeter entrepreneurship theory which states that entrepreneurship activities contributed to the reduction of unemployment due to job creation (Manser & Picot, 1999) and with (Thurik et al., 2008) view that small business is the best job creator. In this case, entrepreneurship activities were increased as a result of MSMEs financing channeled by the Islamic banks which brings fairness for both lenders and borrowers (Chapra, 2011) leading to better development of MSMEs and thus creating more new job opportunities in the economy (Edmiston, 2007). In Indonesia, entrepreneurship activities were created by MSMEs which dominate labor absorption. Hence, the increase in financial assistance for MSMEs will support the growth of job creation and thus reduce unemployment. This finding strengthens studies by Khairina et al. (2020) who unraveled the positive impact of Islamic bank financing on labor absorption of real sectors in Indonesia and Benbekhti et al. (2021) who found the negative impact of MSMEs financing in Islamic banks on unemployment in Turkey due to increase in productivity.

Furthermore, MSME financing has a negative impact on urban unemployment. This finding also supports the theory of Schumpeter entrepreneurship. In urban areas, more people were hired by MSMEs because the demand for various goods is high (Baumol et al., 2011) triggering better growth of MSMEs which are innovative, self-employed, and generating jobs (Faggio & Silva, 2014). The growth of MSMEs in urban areas was also supported by a high level of Islamic financial inclusion which allows them to get better access to financial support to increase their performance (Saifurrahman, 2021). As MSMEs grew with good performance in urban areas, more people were hired, and therefore unemployment decreased.

Unfortunately, MSMEs financing in Islamic banks does not affect rural unemployment. This can be explained by (Faggio & Silva, 2014) view that most of the inhabitants in the rural area are self-employed and Baumol et al. (2011) view that the MSMEs grow mostly in urban area which has a high population as compared to the rural area. Furthermore, MSMEs in rural areas have low levels of financial inclusion and literacy which allows them to get financial support for better growth (Saifurrahman & Kassim, 2021). Hence, as MSMEs financing in Islamic Bank increases, MSMEs in rural areas are more likely to remain unchanged because they have very limited access to financing. As a result, rural unemployment will also be unchanged.

FDI does not show any influence on general unemployment and rural unemployment. This is in line with (Mehmet Mucuk, 2013) finding of the inexistence effect of FDI on unemployment in Chile, Colombia, and the Philippines. This can be explained by the abundance of MSMEs that dominated the labor market in Indonesia while FDI was not targeted for them. However, it is found that FDI significantly increases unemployment in urban areas. This result supports (Almula-Dhanoon et al., 2020) who discovered the same result in the MENA region and explained that it was caused by the mismatch between the available skill and the demanded skill.

Furthermore, it can be seen that there was a negative relationship between inflation and unemployment in Indonesia as a whole and unemployment in rural areas in particular. This finding strengthens the empirical study conducted by (Arslan & Zaman, 2014; Bayrak & Tatli, 2018). It is also supported by the Philip curve explaining that inflation and unemployment affect each other

inversely.

Last but not least, economic growth was found to increase unemployment as a whole and unemployment in urban areas. Meanwhile, economic growth reduced unemployment in rural areas of Indonesia. This finding is consistent with (Bayrak & Tatli, 2018) who found a reduction effect of economic growth on youth unemployment. This can be explained by the domination of youth unemployment in urban areas which provides better salaries as compared to rural areas, leaving the population in urban areas to increase. When economic growth rises, job opportunities are expected to rise due to a hike in demand in urban areas. As a result, unemployment in rural areas decreases while unemployment in urban areas increases.

#### V. CONCLUSION

Unemployment is a pivotal issue faced by every country in the world. Several attempts have been made by the government to tackle this issue. Financial restrictions become the main problem for the business owner, especially for the small business. Islamic finance has been considered as an alternative to conventional finance which is unfriendly to the low-income group who run small businesses. It became an issue since labor absorption is dominated by the MSMEs in developing countries such as Indonesia where 97 percent of its total workers are from MSMEs. Hence, this study aims to reveal the effect of MSMEs financing in Islamic banks on unemployment in Indonesia while separating the case between urban and rural areas. Such an analysis of the impact of MSMEs on urban and rural unemployment has never been conducted before.

The finding shows that financing to MSMEs in Islamic Banks contributed to the reduction in unemployment in Indonesia as a whole. Unemployment in urban areas is also revealed to be reduced by MSMEs financing in Islamic Banks. On the other hand, there is no effect of MSMEs financing in Islamic Banks on unemployment in rural areas. FDI influences urban unemployment positively. Inflation reduces rural unemployment and unemployment in general. Meanwhile, economic growth has positive impacts on urban unemployment and unemployment as a whole, while reducing rural unemployment. The implication of this finding for Islamic banks is the provision of a foundation for increasing the amount of financing channeled to MSMEs in Indonesia since it is proven to be effective in reducing unemployment. The fund can be channeled to the grocery, food and drink, and textiles sectors since these are the largest MSME sectors in Indonesia. For the government, this study can be the basis for further expansion of Islamic banks and their role in every part of Indonesia to reduce unemployment, especially in rural areas.

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# COMMENTS FROM REVIEWERS

| 1st REVIEWER | 3 <b>R</b>                                   |                                       |   |
|--------------|--|---------------------------------------|---|
|              | Ask yourself                                 |                                       | Manuscript Change by Author   |
| Section      | these questions while reviewing each section | Review<br>Comments                    | (Please copy and paste the revised content from your manuscript in this column using Indonesian or English) |
|              | 1. Is it clear                               | To write the                          | As one of the developing countries, Indonesia recorded through its statistical agency (BPS, 2021)           |
|              | what is                                      | impressive                            | that as of August 2020, the number of people without jobs within the country reached 9.76 million           |
|              | already                                      | problem statement                     | persons, accounting for 7.01 percent of the total labor force in Indonesia. Among this group, 70 percent    |
|              | known about                                  | leading to                            | of them live in urban areas while the others live in rural areas. The unemployment rate is relatively       |
|              | this topic?                                  | worthiness of                         | moderate as compared to other developing countries. This percentage can be kept at that level due to        |
|              | 2. Is the research                           | issues you may                        | Indonesia's abundance of micro small medium enterprises (MSMEs). It can be seen in Table 1 that the         |
|              | gap and state-                               | simplify this table                   | number of MSMEs consistently increased every year from 52.7 million units in 2010 to 65 million             |
|              | of-the-art                                   | into one or two                       | units in 2022. According to CNN Indonesia, based on the data released by the Ministry of MSMEs,             |
|              | clearly                                      | sentences being                       | the MSMEs have a major role in strengthening the economy as they absorbed 97 percent of total               |
|              | outlined?                                    | inserted into the                     | workers and contributed to 60.5 percent of GDP in 2019. This phenomenon needs to be proven through          |
|              | 3. Is the research                           | paragraph                             | research whether the effect is significant.   |
|              | question or                                  | somewhere. You                        |   |
|              | aims clearly                                 | may continue                          | <b>Table 1.</b> Number of MSMEs in Indonesia (2010-2021)  |
|              | outlined?                                    | displaying the                        | Year Number of MSMEs (million units)  |
| Introduction |  | statistical data via                  |   |
|              | - 3:7::                                      | table on the first                    |   |
|              | justified                                    | updated basis up                      | 2011 54.1   |
|              | givens what is                               | to 2022 at least.                     | 2012 55.2   |
|              | already                                      | This seems author                     | 2013 56.5   |
|              | khown about<br>the tonic?                    | lost 2 years most recent facts on the | 2014 57.8   |
|              | 5. Is the research                           | MSMEs in                              | 2015 59.2   |
|              | novelty                                      | Indonesia.                            | 2016 61.6   |
|              | justified                                    | Normally the                          | 2017 62.9   |
|              | givens                                       | government                            | 2018 64.1   |
|              | properly?                                    | typical data is                       | 2019 65.4   |
|              |  | bit slow to be                        | 2020 64   |
|              | clearly                                      | updated for several                   | 2021 64.2   |
|              | outlined?                                    | "normative and                        | 2022 65   |

& Rostom, 2013). Such a role has also been recognized by several developed countries as it become a key to the rapid economic growth in China (Kongolo, 2010). Despite the potential of MSMEs, there absorption of labor and increasing unemployment. As a response to this issue, Islamic Finance (IF) is 2019. In addition, it can be seen in **Table 2** that in the period 2010-2019, the total MSMEs financing of Islamic banks in Indonesia shows an upward trend from IDR 52,565 billion in 2010 to IDR 66,333 strengthening MSMEs due to their role in creating job opportunities as well as absorbing labor (Nasr are several constraints faced by MSMEs in developing their business, including the lack of an administrative matters, and most importantly limited funds (Mumani, 2014). These limited funds are faced with the presence of conventional loans that apply interest rates and the difficulty of accessing these loans (Elasrag, 2016). This capital constraint becomes the main issue in developing MSMEs since they have limited access to financial services as compared to the big companies (Benbekhti et There is a huge gap in financial access between big companies and small enterprises in developing constraint may threaten the existence of the MSMEs and hinder their development, leading to lesser expected to be the alternative solution to the accessibility problem in MSMEs. The nature of IF which (Elasrag, 2016). Furthermore, the profit and loss sharing system in the IF allows MSMEs to survive In Indonesia, the growth of IF is relatively slow compared to other Muslim countries in the world although the trend is upward. Nevertheless, the IF industry shows a positive role in supporting MSMEs as can be seen from the data released by the financial service authority (OJK, 2019) that around 51.86 trillion rupiahs were channeled by the Islamic Banking industry to MSMEs in Indonesia in December billion in 2019. In reverse, the trend of the number of unemployed people is downward, starting at 8,319,779 people in 2010 and then ending at 7,045,761 in 2019. Furthermore, when the total MSMEs financing reached a peak at IDR 110,027 billion in 2013, the number of unemployed people fell to 7,338,737 and then it rose again to 7,560,822 as the MSMEs financing declined to IDR 50,146 billion in 2015. And during the Covid-19 period 2020-2022, an increase in the MSMEs financing was people in 2022. These movements raise the question of whether there was a relationship between the Based on this example, unemployment in developing countries can be minimized by integrated accounting system, the lack of trained human resources, limited marketing and countries as approximately 41% MSMEs could not afford their financial necessities. This financial is built based on partnership, provides access to financing for the small enterprises and the poor the loss compared to the conventional loan which burdens all the loss to the entrepreneurs (Kayed & Hassan, 2011). Such a poor-friendly system in IF may contribute to the development of MSMEs and associated with a reduction in the number of unemployed from 9,767,754 people in 2020 to 8,425,931 thus increasing labor absorption and reducing unemployment. Source: Ministry of MSMEs two variables can track down the alike, revealing the year). The readers suggested solution information being suggestion will be systematic review on the topics. The study to conclude say "The number Author may state either continuing being carried out this with proven reasoning". The the table display simplifying into sentences which cited for further economy driver Quote source, with update or sentence more no prior study changing and is to improve growing into andscape of oureaucratic Indonesia is increasingly bibliometric evidence of of SMEs in references. optimistic review or accepted

| efficiently, for instance with         | Table 2. Comparison between the                                   | Table 2. Comparison between the Number of Unemployed and MSMEs Financing of Islamic Banks                  |
|--|---|--|
| similar modified                       | 0   |  |
| sentence by adding                     | Year Number of Unemployed   | Total MSME Financing (in IDR billion)  |
| the phrase, to the                     | 2010 8,319,779  | 52,565   |
| best of author's                       | 2011 7,700,086  | 71,810   |
| knowledge. In                          | 2012 7,244,956  | 90,856   |
| addition, the tar                      | 2013 7,388,737  | 110,027  |
| revised sentence                       | 2014 7,244,906  | 669'65   |
| can be rewritten                       | 2015 7,560,822  | 50,146   |
| like "There is a                       | 2016 7,031,775  | 54,411   |
| urgent need to                         | 2017 7,040,323  | 58,980   |
| study, conduct,                        | 2018 7,000,691  | 62,231   |
| and reveal the                         | 2019 7,045,761  | 66,333   |
| enect of mancing<br>in Islamic bankinα | 2020 9,767,754  | 57,318   |
| on unemployment                        | 2021 9,102,052  | 76,009   |
| through MSMEs                          | 2022 8,425,931  | 87,140   |
| financing."and                         | Source: BPS and OJK   |  |
| adding the                             |   |  |
| reasoning is driven                    | According to Hassanein & Mo                                       | According to Hassanein & Mostafa (2023) through their bibliometric analysis, in the last 30 years,         |
| by the                                 | the discussion of the MSMEs in Isl                                | le discussion of the MSMEs in Islamic bank research is quite limited since the popular discussion is       |
| proliferating                          | on the performance, efficiency, an                                | on the performance, efficiency, and consumer behavior of Islamic Bank. To the best of the author's         |
| argumentation                          | knowledge, there is only limited                                  | knowledge, there is only limited study conducted to reveal the effect of Islamic banking on                |
| about banking,                         | unemployment through MSMEs fi                                     | unemployment through MSMEs financing. Khairina et al. (2020) analyzed the relationship between             |
| Ilhance and                            | financing in Islamic Bank and labo                                | financing in Islamic Bank and labor absorption in real sectors in Indonesia and found that third-party     |
| unemployment                           | fund allocation through profit and                                | fund allocation through profit and loss-sharing financing had a significantly positive impact on labor     |
| opportunity.<br>Amono few              | absorption in real sectors. Unfortun                              | absorption in real sectors. Unfortunately, their findings end at labor absorption without further analysis |
| studies for                            | of the impact on unemployment. It                                 | 1 I urkey, bendeknu et al. (2021) discovered unat Sivies infancing   |
| instance                               | findings did not cover the empirical                              | findings did not cover the empirical impact of MSMEs financing on unemployment in urban and rural          |
|  | areas. Such an investigation is urge                              | areas. Such an investigation is urgently needed since there is a gap between the urban and rural areas     |
| Author may                             | in terms of financial access and unemployment reduction programs. | employment reduction programs.   |
| emphasize with                         | This paper will be the first to                                   | This paper will be the first to discuss one of the supporting attempts at unemployment reduction           |
| the uniqueness and                     | through financial access provided b                               | through financial access provided by Islamic Banks for MSMEs in Indonesia as one of the developing         |
| novelty on why                         | countries by decomposition of the                                 | countries by decomposition of the impact in urban and rural areas since both areas are important for       |
| the study 1s                           |   |  |

| Literature | 7. Is the manuscript demonstrate an adequate understanding of the relevant literature in the field and cite an appropriate range of literature sources? Is any significant work ignored?  8. Is the manuscript's argument built on an appropriate base of theory, concepts, or other ideas? | supposed to be done.  Excellent grouping for hypothesis development | human development programs. This study aims to reveal the effect of Islamic financing on MSMEs on unemployment in urban and rural areas.  On MSMEs on unemployment in urban and rural areas. |
|------------|---|---|--|
|            | research or<br>equivalent   |   |  |
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| Dlease add the         |
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| expert. The idea is to gauge the MSMEs financing being served by Islamic banking on the Unemployment in Indonesia? | Good abstract   | Excellent paper for publication   |
|--|---|---|
|  | 26. Now that you have read the whole manuscript, does the abstract clearly summarise what the aims, results, and conclusion are, implications, and the methodology used | 27. What did this study add to what was already known (novelty and contribution) on this topic? 28. Does the manuscript |
|  | Abstract  | Overall   |

| contain new and significant information adequate to justify publication?  29. Is the manuscript consistent within itself?  30. Is the anything that stands out in the author or funder statement(s) |  |
|---|--|
| that makes you question the objectivity of the study? 31. What are the strengths and the weakness of the manuscript?  |  |

| 2nd REVIEWER | 3.R   |                 |   |
|--------------|---|-----------------|---|
| Section      | Ask yourself these questions while reviewing each section | Review Comments | Responses (Please copy and paste the revised content from your manuscript in this column using Indonesian or English) |

| Introduction         |  | quite clear, however have not capture/ telling more about unemployment in urban and rural area, as the goal of the research want to capture that phenomenon. Please add more information regarding these issues | As one of the developing countries, Indonesia recorded through its statistical agency (BPS, 2021) that as of August 2020, the number of people without jobs within the country reached 9.76 million persons, accounting for 7.01 percent of the total labor force in Indonesia. Among this group, 70 percent of them live in urban areas while the others live in rural areas. This happened due to the massive migration from rural to urban areas in response to the gap in economic opportunities between the two areas, despite low-level of skill and social networking of the migrants (Lyu et al., 2019) |
|----------------------|--|---|---|
| Literature<br>Review | <ol> <li>Is the manuscript demonstrate an adequate understanding of the relevant literature in the field and cite an appropriate range of literature sources? Is any significant work ignored?</li> <li>Is the manuscript's argument built on an appropriate base of theory, concepts, or other ideas? Has the research or equivalent intellectual work on which the paper is based been well designed?</li> </ol> | adequate  |   |
| Methodology          | <ul> <li>9. Is the study design appropriate to answer the aim?</li> <li>10. Are the study methods valid and reliable?</li> <li>11. Is there enough detail in order to replicate the study</li> <li>12. If applicable, is the process of subject selection clear?</li> <li>13. Are variables defined and measured appropriately?</li> </ul>   | quite appropriate. why have to use GMM? please explain more. why did not use the usual data panel?  | This research uses a quantitative approach employing the Generalized Method of Moments (GMM) as a tool for dynamic panel data analysis. This method is the most appropriate since the data of the cross-sectional unit (N) is greater than the period (T) (Siddiqui & Ahmed, 2013). 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 and unobserved individual heterogeneity (Apergis & Ozturk, 2015)                                 |

| 15. Is the data presented in a clear and appropriate way? 16. Are the results discussed from multiple angles and placed into context without being over-interpreted? 17. Are the research finding supported by the data and previous studies? If not, a they supported by references or theory biscussion  Results and Discussion | 14. Are the results stated crearly:         | the basis of the comparative analysis is | Furthermore, MSME financing has a negative              |
|---|---|--|---|
| 16.   | ted in a clear and                          | not yet clear.                           | impact on urban unemployment. This finding also         |
| 16.   |   |  | supports the theory of Schumpeter entrepreneurship. In  |
| 17.   | 16. Are the results discussed from multiple |  | urban areas, more people were hired by MSMEs            |
| 17.   | angles and placed into context without      |  | because the demand for various goods is high (Baumol    |
| 17.   | reted?                                      |  | et al., 2011) triggering better growth of MSMEs which   |
|   | finding supported by                        |  | are innovative, self-employed, and generating jobs      |
|   | the data and previous studies? If not, are  |  | (Faggio & Silva, 2014). The growth of MSMEs in          |
| Results and Discussion  | they supported by references or theory?     |  | urban areas was also supported by a high level of       |
| Results and Discussion  |   |  | Islamic financial inclusion which allows them to get    |
| Results and Discussion  |   |  | better access to financial support to increase their    |
| Results and Discussion  |   |  | performance (Saifurrahman, 2021). As MSMEs grew         |
| Results and Discussion  |   |  | with good performance in urban areas, more people       |
| Discussion  |   |  | were hired, and therefore unemployment decreased.       |
| Discussion  |   |  | Unfortunately, MSMEs financing in Islamic               |
|   |   |  | banks does not affect rural unemployment. This can be   |
|   |   |  | explained by (Faggio & Silva, 2014) view that most of   |
|   |   |  | the inhabitants in the rural area are self-employed and |
|   |   |  | Baumol et al. (2011) view that the MSMEs grow mostly    |
|   |   |  | in urban area which has a high population as compared   |
|   |   |  | to the rural area. Furthermore, MSMEs in rural areas    |
|   |   |  | have low levels of financial inclusion and literacy     |
|   |   |  | which allows them to get financial support for better   |
|   |   |  | growth (Saifurrahman & Kassim, 2021). Hence, as         |
|   |   |  | MSMEs financing in Islamic Bank increases, MSMEs        |
|   |   |  | in rural areas are more likely to remain unchanged      |
|   |   |  | because they have very limited access to financing. As  |
|   |   |  | a result, rural unemployment will also be unchanged.    |
|   |   |  |   |

| 3rd REVIEWER | ${f z}_{f R}$   |                 |   |
|--------------|---|-----------------|---|
| Section      | Ask yourself these questions while reviewing each section | Review Comments | Manuscript Change by Author (Please copy and paste the revised content from your manuscript in this column using Indonesian or English) |

|                | <u>-</u> | . Is it clear what is already known about   | - The problem of the research is not    | Based on this example, unemployment in developing          |
|----------------|----------|---|---|--|
|                |          | this topic?                                 | clear. Provide more explanation on      | countries can be minimized by strengthening MSMEs          |
|                | 5        | . Is the research gap and state-of-the-art  | unemployment in Indonesia and the       | due to their role in creating job opportunities as well as |
|                |          | clearly outlined?                           | need to overcome this issue. The        | absorbing labor (Nasr & Rostom, 2013). Such a role         |
|                | 33.      |   | author can relate to SDG's as well.     | has also been recognized by several developed              |
|                |          | outlined?                                   |   | countries as it become a key to the rapid economic         |
|                | 4        | . Is the research question justified givens | - The paper doesn't explain how         | growth in China (Kongolo, 2010). Despite the               |
|                |          | what is already known about the topic?      | Islamic Banking can contributes to the  | potential of MSMEs, there are several constraints          |
|                | 5.       | . Is the research novelty justified givens  | major issue as compared to              | faced by MSMEs in developing their business,               |
|                |          | properly?                                   | conventional banks.                     | including the lack of an integrated accounting system,     |
|                | 6.       |   |   | the lack of trained human resources, limited marketing     |
|                |          | outlined?                                   | - The paper gives an overrated claim,   | and administrative matters, and most importantly           |
|                |          |   | "These limited funds are faced with the | limited funds (Mumani, 2014). These limited funds are      |
|                |          |   | presence of conventional loans that     | faced with the presence of conventional loans that         |
|                |          |   | apply high interest rates and the       | apply interest rates and the difficulty of accessing       |
|                |          |   | difficulty of accessing these loans",   | these loans (Elasrag, 2016). This capital constraint       |
|                |          |   | and cannot provide the counter          | becomes the main issue in developing MSMEs since           |
|                |          |   | argument on Islamic Banking side.       | they have limited access to financial services as          |
| Tachandar      |          |   |   | compared to the big companies (Benbekhti et al.,           |
| IIILLOGUCIIOII |          |   | - Are Islamic Banks give cheaper        | 2021).   |
|                |          |   | price? Or easier assessment?            |  |
|                |          |   | Are Islamic Banks perform               | There is a huge gap in financial access between big        |
|                |          |   | mudharabah and musyarakah contract      | companies and small enterprises in developing              |
|                |          |   | to MSMEs?                               | countries as approximately 41% MSMEs could not             |
|                |          |   |   | afford their financial necessities. This financial         |
|                |          |   | Just emphasize the social function of   | constraint may threaten the existence of the MSMEs         |
|                |          |   | Islamic Banks or other advantages       | and hinder their development, leading to lesser            |
|                |          |   | rather than pointing out on             | absorption of labor and increasing unemployment. As        |
|                |          |   | conventional banks' performance         | a response to this issue, Islamic Finance (IF) is          |
|                |          |   | without proper justification.           | expected to be the alternative solution to the financial   |
|                |          |   |   | accessibility problem in MSMEs. The nature of IF           |
|                |          |   |   | which is built based on partnership, provides access to    |
|                |          |   |   | financing for the small enterprises and the poor           |
|                |          |   |   | (Elasrag, 2016). Furthermore, the profit and loss          |
|                |          |   |   | sharing system in the IF allows MSMEs to survive the       |
|                |          |   |   | loss compared to the conventional loan which burdens       |
|                |          |   |   | all the loss to the entrepreneurs (Kayed & Hassan,         |
|                |          |   |   | 2011). Such a poor-friendly system in IF may               |

|                        |  |   | contribute to the development of MSMEs and thus increasing labor absorption and reducing unemployment.   |
|------------------------|--|---|--|
| Literature<br>Review   | 7. Is the manuscript demonstrate an adequate understanding of the relevant literature in the field and cite an appropriate range of literature sources? Is any significant work ignored?  8. Is the manuscript's argument built on an appropriate base of theory, concepts, or other ideas? Has the research or equivalent intellectual work on which the paper is based been well designed? | "Islamic Banks are business entities guided by shariah board". please use more appropriate terms Please use graph to explain data so the reader able to learn the dynamic of historical data (also in introduction part)  The contribution of Islamic Banking to unemployment is overrated. Please justify the statement:  1. IF is friendly to MSMEs as there is a profit and loss sharing (PLS) system 2. Although this system (PLS system) generate small profit for the Islamic bank compared to the conventional | IF is friendly to MSMEs as there is a profit and loss sharing (PLS) system which creates fairness for MSMEs as borrowers and Islamic Banks as lenders (Chapra, 2011). Although this system generates small profit for the Islamic bank compared to the conventional, MSMEs will be helped a lot as their resilience against loss can be maintained (Fajri et al., 2022). Better development in MSMEs indirectly results in better provision of job opportunities which can finally contribute to the fall of unemployment cases. |
| Methodology            | <ul> <li>9. Is the study design appropriate to answer the aim?</li> <li>10. Are the study methods valid and reliable?</li> <li>11. Is there enough detail in order to replicate the study</li> <li>12. If applicable, is the process of subject selection clear?</li> <li>13. Are variables defined and measured appropriately?</li> </ul>   |   |  |
| Results and Discussion | <ul><li>14. Are the results stated clearly?</li><li>15. Is the data presented in a clear and appropriate way?</li><li>16. Are the results discussed from multiple angles and placed into context without being over-interpreted?</li></ul>   | - FDI as control var: is this good control var? especially in rural area? Please provide more relevant control var  | - There are three models formulated that distinguish the analysis of unemployment as a whole and unemployment in rural and urban areas. These models are developed from the models used by Folawewo & Adeboje (2017) and Benbekhti et al. (2021)   |

|             | 17. Are the research finding supported by the data and previous studies? If not, are | - Do you use lag for smoothing the big amount in the variable?     | - Lag is the given result of GMM as it always includes the lagged dependent variable                                 |
|-------------|--|--|--|
|             | they supported by references of theory?  | - Why you prefer to use nominal value                              | <ul> <li>Because so tar, I omy managed to get normal value<br/>of the data</li> </ul>                                |
|             |  | rather than ratio to explain the                                   | - In model 2, lagged 1 dependent variable (URBANit-  |
|             |  | financing amount?  | <ol> <li>and GDP are significant at 1 percent while both<br/>lagged 3 dependent variables (URBANit-3) and</li> </ol> |
|             |  | - On Table 4, UNEM and RURAL                                       | FINBUS are significant at 0.1 percent. Furthermore,  |
|             |  | coefficient are positive. It means the                             | both lagged 2 dependent variables (URBANit-2) and  |
|             |  | MSME financing significantly increase innemployment please explain | FDI are significant at 5 percent. This shows that all lagged urban unemployment financing to MSMFs                   |
|             |  |  | in Islamic banks, economic growth, and foreign   |
|             |  | - Please explain the interpretation of                             | investment influence urban unemployment. It can be   |
|             |  | lag (URBANit-1, it-2, etc) in this                                 | seen that FINBUS and all lagged dependent  |
|             |  | context, what does it imply?                                       | variables have a significantly negative relationship   |
|             |  | - Please elaborate on the result: use                              | percent incline in financing to MSMEs in Islamic   |
|             |  | more analytical interpretation rather                              | banks can decrease urban unemployment by 0.1   |
|             |  | than technical explanation   | percent. Similarly, a 1 percent rise in lagged 1,  |
|             |  |  | lagged 2, and lagged 3 of urban unemployment   |
|             |  |  | reduced urban unemployment by 0.07 percent, 0.03   |
|             |  |  | percent, and 0.01 percent respectively. On the other   |
|             |  |  | hand, GDP and FDI show positive and significant  |
|             |  |  | effects on urban unemployment. This means that a 1   |
|             |  |  | percent increase in both economic growth and   |
|             |  |  | foreign investment results in a hike in urban  |
|             |  |  | unemployment by 0.12 percent and 0.1 percent   |
|             |  |  | respectively. Meanwhile, CF1 is not significant implying that there is no relationship between                       |
|             |  |  | inflation and urban unemployment   |
|             |  |  | - Analytical interpretation is available at discussion   |
|             |  |  | section  |
|             | 18. Do the conclusions answer the aims of  | The recommendation is very   | The implication of this finding for Islamic banks is the   |
|             | the study?   | normative, please improve.   | provision of a foundation for increasing the amount of   |
| Conclusions | 19. Are the conclusions supported by the   |  | financing channeled to MSMEs in Indonesia since it is  |
|             |  |  | proven to be effective in reducing unemployment. The   |
|             | 20. Are the research finding stated clearly?   |  | tund can be channeled to the grocery, food and drink,  |

6. Bukti konfirmasi artikel accepted (26 September 2023)



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#### [JESTT] Editor Decision

2 messages

Puji Sucia Sukmaningrum <puji.sucia@feb.unair.ac.id>

Tue, Sep 26, 2023 at 8:51 AM

To: Mohammad Zen Nasrudin Fajri <mzennasrudin@unida.gontor.ac.id>, Azidni Rofiqo <azidnirofiqo@unida.gontor.ac.id>, Abdul Latif Rizgon <a href="mailto:Abdul Latif">Abdul Latif Rizgon <a href="mailto:Latif">Latif Rizgon <a href="mailto:Latif">Mailto:Latif Rizgon <a href="mailto:Latif">Latif Rizgon <a href="mailto:Latif">Latif Rizgon <a href="mailto:Latif">Mailto:Latif Rizgon <a href="mailto:Latif">Mailto:Latif Rizgon <a href="mailto:Latif">Mailto:Latif Rizgon <a href="mailto:Latif">Mailto:Latif Rizgon

Mohammad Zen Nasrudin Fajri, Azidni Rofigo, Abdul Latif Rizgon, Raditya Hasan':

We have reached a decision regarding your submission to Jurnal Ekonomi Syariah Teori dan Terapan, "The Impact of MSMEs Financing in Islamic Bank on the Unemployment in Indonesia'.

Our decision is to accept your article submission. Thank You

Best Regards,

dan Terapan http://e-journal.unair.ac.id/index.php/JESTT

Jurnal Ekonomi Syariah Teori

Muhammad Zen Nasrudin Fajri <mzennasrudin@unida.gontor.ac.id> To: Puji Sucia Sukmaningrum <puji.sucia@feb.unair.ac.id>

Fri, Sep 29, 2023 at 9:49 AM

Thank you for the opportunity, all the best for JESTT (Quoted text hidden)

## 7. Bukti artikel published online (30 September 2023)

