

The Impact of Foreign Direct Investment, Economic Growth, Trade, and Covid-19 on Unemployment: Evidences from MENA

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Keywords

*Unemployment,
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Abstract

This study investigates the influence of foreign direct investment (FDI), economic growth, international trade, and the Covid-19 pandemic on unemployment rates in six developing Middle Eastern and North African (MENA) countries, as well as members of the Organization of Islamic Cooperation (OIC), over the period of 2000 to 2021. Quantitative approaches using panel regression fixed effect models are utilized. The study finds that all the variables used – including FDI, economic growth, international trade and the Covid-19 pandemic – simultaneously have a substantial impact on unemployment rates in the six selected MENA countries. FDI, economic growth and international trade all have a strong influence on declining unemployment in six MENA countries, the Covid-19 pandemic variable has a positive relation and insignificant effect on unemployment rates, which indicates that statistically there is no significant difference in unemployment rates in the years before and during Covid-19. Since the MENA countries have long experienced a high concentration of unemployment, particularly among youth, governments should take into consideration youth skill development training to prevent mismatches and encourage the private sector to create new opportunities for job seekers. FDI expansion is anticipated to result in the creation of new employment for job seekers, particularly young people, therefore policies to facilitate access and operation of FDI for foreign investors will also need to be adapted.

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1. Introduction

Unemployment is a key concern that affects the economies of both developed and developing countries, leading to a wide range of socioeconomic problems. A high unemployment rate reflects a chronic labour shortage, which deepens poverty and raises living standards to inadequate levels (Alhdiy *et al.*, 2015). Unemployment can increase a person's vulnerability to crime and criminality in society, potentially disrupting economic stability (Jawadi *et al.*, 2021). Unemployment denotes underused human resources, in effect wasting resources. Existing resources that are not exploited in the production process will result in less than ideal outputs, since full employment is a steady and good economic circumstance (Dornbusch *et al.*, 2011).

Unemployment is essentially a condition of imbalance, with the labour supply exceeding labour demand. It occurs when labour force growth is too rapid or employment growth is too slow (Hjazeen *et al.*, 2021). Economic crises, which are often defined by worsening macroeconomic factors such as economic growth, currency devaluation, and declining purchasing power, also contribute to the occurrence of unemployment, as happened during the crisis caused by the Coronavirus disease-19 (Covid-19) pandemic (OECD, 2020a).

The rapid spread of Covid-19 around the world and its subsequent significant health impact not only disrupted the economic sustainability of developing countries, but also developed countries. Strategies and policies of lockdown and social distancing disrupted the job market ecosystem, leading to high numbers of unemployed, and had major negative impacts on businesses, which in turn led to layoffs. This continuous increase in unemployment resulted in higher rates of poverty and inequality (Kelly, 2020; Ramadani *et al.*, 2022; Su *et al.*, 2022).

Developing countries in the Middle East and North African (MENA) region were challenged with a variety of economic imbalance issues during Covid-19, the most serious of which was unemployment (Alalawneh & Nessa, 2020). Over the past decade, MENA countries have experienced significant problems with high unemployment rates, with the International Monetary Fund (IMF) stating that MENA region countries have some of the world's highest unemployment rates (Ahmed, 2012). The Covid-19 pandemic further worsened this situation.

The pandemic was a major economic shock for the MENA region. Many MENA countries experienced decreases in both local and foreign demand, significant drops in oil prices, disrupted trade and supply, and even loss of trust from foreign investors. The increase in unemployment in MENA countries was also influenced by lockdown policies, in which many business sectors and production units were closed, including the service sector, which employs a large number of employees through tourism (OECD, 2020a).

Data from the World Bank indicated that the MENA region's GDP fell by 10.26% from 2019 to 2020. Thus, as a representative of this data, the trend of GDP in the

six MENA regions before and during the Covid-19 outbreak (2019-2021) can be seen in Figure 1.

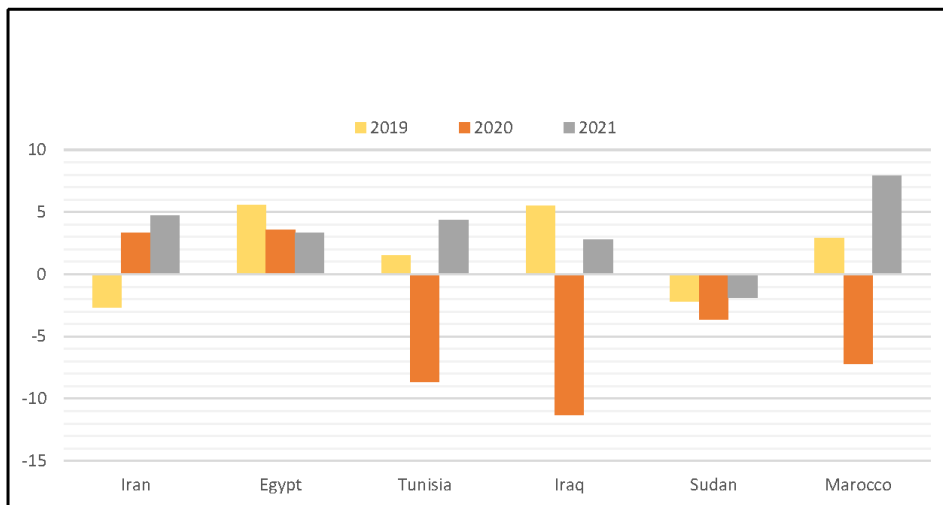


Figure 1. GDP growth of six MENA countries over 2019-2021
Source: World Bank database

From Figure 1, it can be concluded that there was a significant decrease in gross domestic product (GDP) in five out of six MENA countries in 2020. The exception was Iran, which experienced an increase in GDP from -2.65% in 2019 to 3.33% in 2020. The GDP of the other five countries in 2020 was as follows: Egypt 3.56%, Sudan -3.62%, Morocco -7.18%, Tunisia -8.62%, and Iraq -11.32%. Meanwhile, in 2021, the GDP of five of the six countries increased, while Sudan experienced a decrease. This is because 2021 was a year of recovery, with various strict fiscal and monetary policies implemented to improve the post-2020 economic conditions, so that even though countries were still experiencing the pandemic period, GDP had already increased by year 2021.

Meanwhile, in the second quarter of 2020, several MENA countries experienced an increase in unemployment, as happened in many other regions of the world (Krafft *et al.*, 2022). The average unemployment rate in the MENA region increased at twice the amount of the global average between 2010-2021 (Department of United nations, 2022).

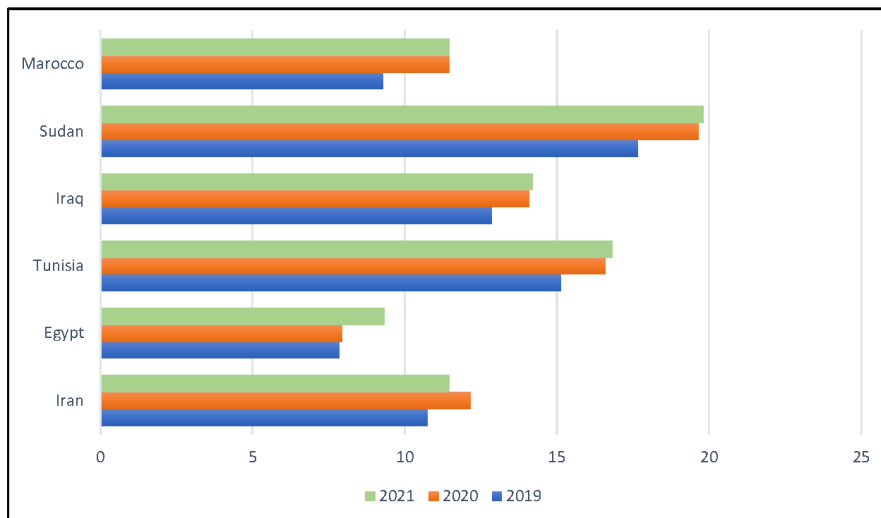


Figure 2. Unemployment rate of six developing countries in MENA (2019-2021)
 Source: World Bank Database

From Figure 2, it can be concluded that there has been an increase in unemployment in the six developing countries of MENA in 2020 and 2021, except for Iran, which experienced a decline in 2021. The unemployment rates for the six countries in 2020 and 2021 were: Iran 12% to 11.5%; Egypt 7.94% to 9.32%; Tunisia 16.5% to 16.8%; Iraq 14% to 14.2%; Sudan 19.6% to 19.8%; and Morocco 11.45% to 11.46%. Thus, Sudan is the MENA country with the worst unemployment rate in 2020 and 2021.

Several studies have researched the reasons behind unemployment in a country, but very few have examined unemployment in MENA countries, especially in recent years and in the context of the Covid-19 pandemic. Alalawneh & Nessa (2020)'s earlier study on unemployment in the Middle East and North Africa over the period 1990-2018 revealed that foreign direct investment (FDI), inflation rates, and exports influence unemployment in MENA nations. Several other studies find similar results, including Febryastuti (2019); Kukaj *et al.* (2022); Marzan *et al.* (2020); and Zeb *et al.* (2014). Nonetheless, there are also a number of contradicting and divergent studies, such as Aktar & Ozturk (2009); Johnny *et al.* (2018); and Tegep *et al.* (2019), which find that these macroeconomic factors have no effect on the unemployment rate.

As a response to current issues and an update that differentiates it from previous research, the purpose of this study is to analyse and revisit the factors that influence the dynamics of unemployment in six developing MENA countries that are members of the Organisation of Islamic Cooperation (OIC) by adding the Covid-19 variable as an independent variable to determine whether there were statistical differences

in the unemployment rate before and during the pandemic. FDI, economic growth, international trade, and Covid-19 are the variables used in this study to investigate the cause of unemployment rates in Egypt, Iran, Iraq, Morocco, Sudan, and Tunisia from 2000 to 2021 using a panel regression approach.

The six countries were selected because all six have the following characteristics: all are developing countries in the MENA region, all have had a relatively high unemployment rate over the past decade, and all are members of the OIC.

2. Literature Review

According to the International Labour Organization, persons who are not working but are prepared to work and actively seeking for a job at some point in the future are considered to be unemployed. The percentage of jobless people in the labour force, or unemployment rate, is the metric used to define unemployment. Those who are employed and unemployed together compose the labour force. The stability of a nation may be impacted by its unemployment rate, which is one of the macroeconomics' key topics (Hailu Demeke, 2022)

For a considerable amount of time, the IMF has cited developing nations in the MENA as having the worst unemployment rates in the world. Young people and women in MENA nations frequently encounter structural unemployment, which is a particular sort of unemployment. Structural unemployment is a type of unemployment brought on by a mismatch among the structure of the labour force based on the type of skill, job, industry, or geographic location and the structure of labour demand. Structural unemployment is also brought on by wage inflexibility and job rationing, so that the wage mismatch offered by employers leaves some people without employment and the supply of labour outpaces the demand (Aljileedi Mustafa Rayhan *et al.*, 2020)

2.1. Influence of FDI on Unemployment

In the economic development of a country, especially developing countries, FDI is one of the driving factors because it relates to investment that can boost a country's economy. The presence of FDI is capable of reducing high unemployment rates in the host country because FDI can help the developing economic sector to create jobs in countries with open economies (Kukaj *et al.*, 2022).

Zeb *et al.* (2014) study, which uses multiple regression analysis, states that FDI, corruption, size of population, and inflation on Pakistan's unemployment rate from 1995 to 2011 statistically significant affected unemployment reduction. Greater employment prospects also emerge as a result of FDI; this result is also in line with Muhd Irpan *et al.* (2016).

Recent research by Kukaj *et al.* (2022) shows that the influence of FDI and economic growth on unemployment in developing countries, including Albania, Montenegro, North Macedonia, Bosnia, Serbia, and Croatia, in 2015-2019

significantly supported the countries' declines in unemployment. The study utilized one-way variance analysis of Anova.

Research conducted by Mehmet Mucuk (2013) shows a significant relationship between FDI and unemployment in Argentina, Colombia, Chile, Philippines, Thailand, Turkey, and Uruguay. The research was estimated using panel regression through the unit root test then cointegration, and testing on causality. The results show that there is a relationship between unemployment and FDI in the long run. In Turkey and Argentina, the result was that FDI increased unemployment, but the relationship was the other way around in Thailand. This research also concludes that brownfield investment, which includes acquisitions and mergers, is one of the reasons of the negative impact of FDI on unemployment, suggesting that policy makers should prioritize greenfield investment in order to increase employment opportunities.

However, several studies provide different results. For example, research conducted by Johnny *et al.* (2018) from 1980 to 2015 studied the influence of explanatory variables, (FDI and capital formation) using the ordinary least square on unemployment rate as a response variable. The result indicated that FDI has insignificant effect on unemployment in Nigeria.

Similarly, Tegep *et al.* (2019) investigate macroeconomic variables to explain the relationship between FDI and the unemployment rate in Indonesia, using path analysis to analyze more than thirty provinces in Indonesia over seventeen years. They find that in fact FDI was unable to explain the unemployment rate in Indonesia directly, but succeeded by using economic growth and the provincial minimum wage as the middle variable.

Meanwhile, Aktar and Ozturk (2009) evaluate the correlation between FDI, exports, unemployment, and GDP in Turkey from 2000 to 2007. The VAR approach, describing variance decomposition and impulse response, is utilized in this investigation. This study determined that the existence of FDI had no statistically significant effect on lowering the rate of unemployment in Turkey.

2.2. The Influence of GDP on Unemployment

The growth of a country's economy indicates the amount by which economic activity will provide more finances for a society within a specified time frame. As economic activity is essentially a process of employing production factors to generate output, this process will result in a flow of compensation for community-owned production factors. With economic expansion, it is anticipated that the community's revenue as the owners of production factors will also rise (Garaika *et al.*, 2019).

There is a widely held belief in economics that GDP growth can increase employment and reduce unemployment. Known as 'Okun's Law', this theory implies the relationship between total output of a country and unemployment

(Alhdiy *et al.*, 2015). The objective of Arthur Okun's 1962 study was to facilitate the implementation of macroeconomic policy modifications. Despite the fact that the coefficient had been recalculated, the originality of Okun's paper suggests that if unemployment rate decreased by one percent, there will be an increase in output of around three percent. This correlation has been through a long and regular analysis flow, and tested with a high level of accuracy to produce the level of dependence between these variables (Farsio & Quade, 2003).

Several studies have verified Okun's rule and showed the influence of economic growth on a country's rate of unemployment, including a study by Kukaj *et al.* (2022) that examined the influence of growth of economy on unemployment in developing states located at the Western Balkans for the period of 2015-2019. They examined the differences between those countries in terms of FDI, GDP, and unemployment by utilizing a one-way analysis of variance to test the data. The research found that the growth of an economy has a significant influence on reducing unemployment in developing countries. These findings also align with a studied conducted by Johnny *et al.* (2018).

Similarly, investigation conducted by Muhd Irpan *et al.* (2016) find the causality between economic growth on the unemployment rate in Malaysia between 1980 and 2012. They utilize the autoregressive distributed lag (ARDL) to measure the relationship of the long-run between variables. This analysis reveals that economic growth has a substantial influence on unemployment in Malaysia. In contrast, other studies say that economic growth does not influence unemployment, as stated by Umair & Ullah (2018) who examine the influence and relationship of inflation on economic growth and unemployment in Pakistan over 2000-2010.

2.3. The Influence of Trade on Unemployment

It is considered that international trade can increase the resource allocation for the production of goods and services, hence utilizing additional labour and reducing unemployment. Theories about international trade and unemployment are still being debated. There are two theories on this: the Ricardian theory and the Hecksher-Ohlin (H-O) theory. According to the Ricardian hypothesis, international trade will create jobs, reducing unemployment, while the H-O theory asserts that international trade will increase unemployment.

Febryastuti's (2019) study on the association between international trade and unemployment rate in ASEAN countries over 1980-2010 found a negative correlation between unemployment and the trade balance in Malaysia, meaning that when the trade balance improves, unemployment drops. Marzan *et al.* (2020) found similar results after analyzing the influence of open economies on unemployment for 34 OECD nations, as more commerce inside a country will result in a lower unemployment rate. Conversely, a decline in commerce will push unemployment up. According to this study's findings, international trade has a

strong and substantial long-term association with the unemployment rate. The greater a country's trade openness, the more jobs it generates and the lower its unemployment rate. This is in line with Felbermayr *et al.* (2011), who find that increased trade is related to lower unemployment rates. The study included the methods of panel data regression from 20 OECD countries with cross-sectional data.

An empirical test was carried out by Jin *et al.* (2019) to see whether exports and imports affect the unemployment rate using 66 cross-sectional data from 2006 to 2016. The findings indicate that in the case of developing countries, countries with a high ratio of industry and countries with a low ratio of services, an increase in imports has the potential to reduce unemployment. In addition, in the case of developed countries, countries with low industrial ratios and countries with relatively high ratios of services, increased exports have a positive and significant effect on the unemployment rate. This study explicitly states that exporting industrial goods that have a comparative advantage in developed countries with a lower industry ratio and higher service ratio will have the potential to increase labour productivity and reduce employment.

Research conducted by Nwaka *et al.* (2015) measured the openness of economies and trade, education expenditures, shocks and fluctuations in foreign prices, and income per capita in correlation with the unemployment rate in Nigeria from 1970 to 2010 using vector error correction. The result indicated that the presence of trade and economic openness policies will increase unemployment in the long term. In addition, Helpman *et al.* (2010) found that more open international trade will create wage inequality and imbalances in employment, increasing aggregate unemployment. The research was written under the title *The Impact of International Trade on Unemployment* with the aim of examining the impact of international trade on aggregate unemployment in 20 OECD member countries from 1961 to 2008. The explanatory variables chosen are the total amount of international trade including total imports, and the total trade pooled from low and high-income economies as a proportion of GDP.

2.4. The Influence of Covid-19 on Unemployment

According to the ILO (2020), even prior to the Covid-19 pandemic, there was an imbalance of employment, with unemployment rates especially high for youth. After the pandemic occurred, the phenomenon of lockdown-influenced layoffs worsened the fate of unemployed youth, closing off their opportunities to work.

Several studies have found that the Covid-19 pandemic contributed significantly to the increase in unemployment. Research by Su *et al.* (2022), using five different countries to test unemployment rates after the pandemic crisis from 2019 to December 2020, concluded that Germany, Spain, the United Kingdom (UK), and Italy were hit hard by the pandemic and experienced a significant increase in the

unemployment rate. Likewise Farayibi & Asongu (2020) find that the Covid-19 pandemic had an impact not only on health but also on important macroeconomic variables, such as economic growth, inflation rate and job growth in Nigeria.

In Indonesia, Ramadani *et al.* (2022) conducted research that evaluates the growth in jobless during the Covid-19 outbreak. According to his study, the number of employees impacted by layoffs in 2020 is one of the causes of the rise in unemployment. The number of unemployment in Indonesia increased from 7.1 million in August 2019 to 9.77 million in August 2020.

Meanwhile, ElBehairy *et al.* (2022) find that Covid-19 does have a significant effect on decreasing employment and worsening unemployment. They conducted an analysis of several MENA countries and concluded that there was a significant difference in the number of unemployed before and during the Covid-19 pandemic, with the rate during the pandemic much higher than before, especially for women who worked in the service and private sectors.

3. Research Methodology

This study uses a quantitative approach to examine the influence of FDI, economic growth, international trade, and the Covid-19 pandemic on unemployment in MENA countries. The sample of population used includes six developing MENA countries that are also members of the OIC over period 2000 to 2021. These countries are Iran, Egypt, Tunisia, Iraq, Morocco, and Sudan. Data for all variables and countries were obtained from the World Bank database. While the Covid-19 pandemic variable is presented as a dummy variable with the following categories: 0 = indicates the years before the Covid-19 pandemic (2000-2019) and 1 = indicates the years during the Covid-19 pandemic (2020-2021).

Table 3. Description of Variables

Variables	Description	Data Sources
Unemployment	Unemployment (% of Total Labour Force)	World Bank
Foreign Direct Investment	Total net investment (% of GDP)	World Bank
Gross Domestic Product	The percentage rate of annual economic growth	World Bank
International Trade	Total amount of exports and imports including goods and services (% of GDP)	World Bank
DCovid-19	Dummy Variable: 0= years before the Covid-19 pandemic: 1= years during the Covid-19 pandemic	Dummy Variable

Source: World Bank

Data is analyzed using panel data regression. According to Gujarati (2004), regression using panel data combines cross-sectional and time-series data, resulting in more observations and a more comprehensive assessment than using solely cross-sectional and time-series data. A fixed effect model was utilized which

can be formulated as follows:

$$UNE_{it} = \alpha_i + \beta_1FDI_{it} + \beta_2GDP_{it} + \beta_3TRADE_{it} + \beta_4DCOV19_{it} + \varepsilon_{it}$$

Where:

UNE : Rate of unemployment (%)

FDI : Net FDI (%)

GDP : Economic growth (%)

TRADE : Total exports and imports of goods and services (%)

DCOV19 : 0 = Years before pandemic Covid-19

: 1 = Years during pandemic Covid-19

α : The Constant

ε : Error term

4. Result and Discussion

Table 4. Descriptive Statistics

	UNE	FDI	GDP	TRADE	DCOV19
Mean	12.223	1.933	3.486	61.426	0.085
Median	12.015	1.615	3.805	59.599	0.000
Maximum	19.649	9.424	53.381	154.234	1.000
Minimum	7.850	-4.541	-36.658	0.756	0.000
Std.Dev	2.873	2.174	7.212	29.055	0.279
Skewness	0.440	0.480	1.037	0.236	2.985
Kurtosis	2.266	5.808	26.583	3.183	9.901
Observation	130	130	130	130	130

Table 4 indicates the results of statistics descriptive of all five variables, including dependent and independent variables. The mean of unemployment is 12.22, with a minimum value of 7.85 and a maximum value of 19.65 over the period 2000 to 2021. This result shows that the six MENA countries have a high rate of unemployment, while the standard deviation of unemployment is 2.873.

To determine the selected panel regression model, Redundant and Hausman tests are analysed, with the following results:

Table 5. Redundant Fixed Test

Effects Test	Statistics	d.f.	Prob
Cross-Section F	73.502	(5,61)	0.0000**
Cross Section Chi-square	182.237	5	0.0000**

1. ** means reject null hypothesis at alpha 5% of significant level
2. The null hypothesis is Common Effects Model.
3. The alternative hypothesis Fixed Effects Model.

Table 6. Hausman Test

Test Summary	Chi-Sq. Statistics	Chi-Sq. d.f.	Prob
Cross-Section Random	143.823	4	0.000**

1. ** means reject null hypothesis at alpha 5% of significant level
2. The null hypothesis Random Effects Model.
3. The alternative hypothesis Fixed Effects Model

A redundancy test is used to see the best model between the common effect model and the fixed effect model, with the null hypothesis as the common effect model. The data above shows that the redundancy test results have a probability value of $0.000 < 0.05$. This rejects the null hypothesis or the common effect model and accepts the fixed effect model.

The authors then run a Hausman test to choose the best model between the fixed effect model and the random effect model, with the null hypothesis as the random effect model. From the results of the Hausman test, it can be seen that the probability value is $0.000 < 0.05$, meaning the random effect model is rejected and the fixed effect model accepted. Therefore, the model used in this study is the fixed effect model. Table 7 shows the estimation results of the fixed effect model:

Table 7. Fixed Effect Model Result

Variable	Coefficient	Std.Error	t-statistic	Sig.
C	15.084	0.543	27.729	0.000
FDI	-0.159	0.075	-2.086	0.039**
GDP	-0.042	0.016	-2.534	0.012**
TRADE	-0.040	0.009	-4.381	0.000***
DCOV19	0.633	0.439	1.442	0.151
R2	0.799	F-Statistic	53.165	
Adj R2	0.784	Prob (F.stat)	0.000***	

Notes: *, **, *** refer to the level of significance at 10%, 5%, 1% respectively.

Table 7 shows the estimated parameters for the independent variables in the long term. The results show that the probability value of F-statistic is $0.000 < 0.05$, meaning that all the independent variables simultaneously affect the dependent

variable. The value of the adjusted-R square (adj-R²) was 0.784, therefore all independent variables are able to explain the dependent variable by 78.4%, while the remaining 21.6% is explained by other variables outside this study. We can see the significance of each variable from the sign value. Table 4.4 shows that the variables which significantly affect unemployment are FDI at a significant level of 5%, GDP at a significant level of 5%, and trade at a significant level of 1%. Covid-19 has a probability value greater than alpha, meaning the results are not significant.

Our study finds that the coefficient of FDI is negative (-0.158), meaning that if the FDI goes up by 1%, the unemployment goes down by 0.158%, holding other variables constant. This is related to a report by OECD (2020) which states that the majority of MENA economies implemented swift investment policy solutions to confront the crisis of the Covid-19 pandemic. Governments used strategies to provide sectoral stimulus and boost production levels, adopting fiscal and budget measures approach to reduce shocks and pressures on key industries and support disrupted economic activity; and broadening access for foreign investors to enter the domestic market, as happened in Tunisia and Egypt. For example, Tunisia bills itself as a destination for investors, particularly auto component makers who are typically delocalised from the United States and China to the Southern Mediterranean.

Thus, OECD (2020) shows that the presence of FDI in the six selected developing countries in the MENA region can significantly reduce the unemployment rate. This is in line with the research by Kukaj et al. (2022); Mehmet Mucuk (2013); Muhd Irpan et al. (2016); and Zeb et al. (2014) and contradicts with the research results of Aktar & Ozturk (2009); Johnny et al. (2018); and Tegep et al. (2019) who argue that FDI is not capable of reducing of unemployment.

Our study finds that the coefficient of GDP is negative (-0.042), meaning that if the GDP goes up by 1%, the unemployment rate will go down by 0.042%, holding other variables constant. The results of this study accept Okun's law on the relationship between economic growth and unemployment. The increase in GDP in the six MENA countries was in fact able to reduce unemployment. This is in line with research by Hjazeen et al. (2021) but not with Umair & Ullah (2018). In general, economic growth and unemployment have a negative relationship; when one goes up, the other goes down. The level of sustainable economic growth is one indicator in improving living standards, and all the efforts made by these six MENA countries through economic fiscal and/or monetary policies increased GDP and reduces unemployment.

The study identifies the coefficient of trade is negative (-0.040), meaning that if the trade balance increases by 1%, the unemployment rate will decrease by 0.04%, holding other variables constant. This supports Ricardian theory, that the presence of international trade will increase jobs and reduce unemployment, and rejects the Hecksher-Ohlin theory. This result is also supported by research by

Febryastuti (2019); Jin et al. (2019); Marzan et al. (2020); and Nwaka et al. (2015) but contradicts research by Helpman et al. (2010).

Lastly, the DCOV19 variable has a positive link with the unemployment rate but has an insignificant impact. According to the findings of statistical analyses, there was no significant difference in the unemployment rate between the pre-pandemic and Covid-19 pandemic periods.

5. Conclusion and Policy Recommendations

The purpose of this study is to investigate the influence of FDI, economic growth, international trade, and the Covid-19 pandemic on unemployment in six developing MENA countries over 2000-2021. The findings indicate that FDI, GDP, and trade can reduce the unemployment rate in the six selected MENA countries, while the Covid-19 pandemic demonstrates a positive but insignificant correlation with unemployment.

In the case of developing countries in the MENA region, women and young people are more likely to be unemployed and structural unemployment is most common. Given the countries' long histories of high unemployment rates and the impact of Covid-19 on job losses, many households lost earnings, decreased consumption, and youth became (or continued to be) unemployed.

FDI is one of the resources that can help MENA countries' economies, but not all nations implement appropriate policies to ensure the sustainability of FDI. Too many procedures and restrictions for carrying out FDI in a nation are one of the obstacles to slow FDI development, so policymakers need to take this into consideration when creating policies to open up access to foreign investors.

Additionally, it is anticipated that governments will support young people's emphasis on skill development in order to reduce structural unemployment caused by a mismatch between the skills required by employers and the skills possessed by young people. By providing facilities for skill training, it is expected that youth have the opportunity to develop the skills, confidence, and value added benefits that will allow them to work in various sectors, including being absorbed by FDI. Thus, in aggregate, if youth can get out of unemployment and boost production, that country's GDP will also increase.

Individuals undertaking research on unemployment in MENA nations will find this paper useful. However, the limitation of this research is that it only uses six countries, due to several considerations and data availability, so it is expected that further research can add more MENA countries and include more factors to assess the impact of FDI, GDP, trade, and Covid-19 on unemployment. It is also possible to add new variables beyond the variables already used to predict unemployment factors, and investigate and demonstrate their interrelationships. Other research methods are also expected to make more accurate comparisons over longer periods of time.

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