

## The impact of FDI on foreign trade in Arab countries



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### ABSTRACT

This study aims to identify the reality of FDI in Arab countries and analyze the relationship between FDI and foreign trade in Arab countries during the period 2000-2018. Statistical analysis tools such as the correlation coefficient and ANOVA analysis were used to test the significance of the linear regression between the variables, to analyze the relationship between FDI (independent variable) and all of the Arab exports and imports, trade balance, and Arab foreign trade (dependent variable). Despite the rapid liberalization programs of investment systems and the trend towards privatization and liberalization of economic activity and joining the WTO (hence, WTO), and other measures, the flow of foreign investments to Arab countries continues. Only three countries (UAE-Egypt-Oman) accounted for 68.5% of the total FDI coming to Arab countries in 2018. This indicates the weakness of many other Arab countries in attracting FDI. Results showed that the European Union is the leading trading partner of the Arab countries. The UAE and France topped the countries investing in the Arab countries. The statistical analysis results showed that the correlation between FDI (as an independent variable) and Arab foreign trade (as a dependent variable) is a positive, medium-strength. They also proved that (17.8%) of Arab foreign trade could be explained using FDI, while the remaining percentage is attributed to other variables.

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### 1. Introduction

The importance of FDI in financing and advancing the development process is increasing in many countries of the world, especially after the changes and crises that have occurred in the world, as most countries of the world, especially developing and Arab countries, tended to attract FDI to finance economic and social development projects, and then increase development rates in the economic situation in the host country. FDI flows witnessed a negative trend after 2009, reflecting that political and security stability after the Arab Spring revolutions is a significant concern for foreign investors. Informal barriers in Arab countries may be higher than any other region globally, which requires increasing political stability, reducing violence, and combating terrorism, which is of paramount importance to foreign investors. Despite

the rapid liberalization programs of Arab investment systems and the trend towards privatization and liberalization of economic activity and accession to the WTO and other incentives to attract FDI, foreign investments destined for Arab countries, in general, are still modest, as they do not fit with the measures taken by the Arab countries.

The relationship between FDI and export performance depends on FDI type and consumption and production behavior. If the average tendency to consume imported goods increases due to the influx of FDI, the consumption will positively impact the export performance, thus improving the trade balance and increasing the volume of foreign trade. The study's problem emerged: What is the impact of FDI on foreign trade in Arab countries? Furthermore, the study assumes that FDI significantly impacts Arab foreign trade. The study aims to identify the reality of FDI in Arab countries and Arab foreign trade. The study also aims to analyze the impact of FDI on Arab foreign trade. The descriptive approach will be generally used in the theoretical aspect of the impact of FDI on foreign trade in Arab countries, which includes the definition, importance, types, and determinants of FDI and its relationship with Arab foreign trade. The analytical approach will also be

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used through statistical analysis tools to measure the impact of FDI on both exports and imports, trade balance, and Arab foreign trade during the period 2000-2018.

The UAE is the largest investor in the Arab countries, and France came in second place in terms of the value of direct foreign investments, the first in terms of foreign countries investing in the Arab countries. Hong Kong ranked third in terms of the value of FDIs and second in terms of foreign countries investing in the Arab countries, three Arab countries (UAE-Egypt-Oman) had 68.5 % of the total investments received by Arab countries in 2018, which indicates the weakness of many other Arab countries in attracting FDI. The research results also show that the European Union is the leading trading partner of the Arab countries, while China comes in second place, then India in Third place, then the United States in fourth place, then Japan in fifth place. The results of the ANOVA analysis show that the correlation between FDI (as an independent variable) and foreign trade (as a dependent variable) is a positive, medium-strength correlation, as the analysis of the correlation coefficient and coefficient of Specifying that the percentage (17.8%) of Arab foreign trade can be explained using FDI. In contrast, the remaining percentage is attributed to other variables.

FDI means investments owned and managed by foreign investors due to full ownership or partial ownership that guarantees them the right of the management. FDI is also defined as the transfer of the various production factors of capital, technology, and human resources through a legislative and regulatory framework in the host country. Thus achieving interests for both the foreign investor and the host country (Susic et al., 2017).

FDI refers to a long-term relationship. It leads to the foreign investor or the parent company controlling the assets used in production in the host country (Holsapple et al., 2006). FDI consists of a company or facility investing in projects located outside the borders of the mother country to exert some influence on the operations of those projects. FDI can take many forms, such as establishing a completely new project or owning the assets of an existing establishment, Or through mergers and acquisitions

The importance of FDI in financing and advancing the development process is increasing in many countries worldwide, especially after the changes and crises in the world. Like most countries of the world, especially developing and Arab countries, tended to attract FDI to finance development projects. The relationship between FDI and export performance depends on FDI type and consumption and production behavior. When FDI deepens the technology and production base, it enhances the country's competitive advantage (Hassan, 2017). FDI also contributes to increasing the state's tax revenues and improving both the trade balance and the balance of payments, thus increasing the rates of economic development in the host country.

FDI is a source of job creation, thus reducing unemployment rates, and thus FDI represents a source of income generation for members of society, whether this income is derived from wages for workers in those projects or rents for investors in real estate, or profits from business owners and the organizers, or the interests in exchange for financing those projects. FDI is more than capital transfer. Instead, it transfers technological expertise and develops the skills of national workers (Holsapple et al., 2006).

FDI often results in benefits for the host country that outweigh the benefits that accrue to the investor himself, including transferring technology, innovation, and advanced production methods. These benefits can extend to training local workers on modern technology, increasing their production capabilities, improving the quality of production in local companies, and enhancing their competitiveness. They also encompass raising investment levels to levels of local savings, spreading development models from developed countries to developing countries, and contributing to increasing economic prosperity to members of the community in the host country (Dkhili, 2019).

The types of FDI vary according to the nature of the investment, the extent of investment flows, and how it affects the national economy. There are also many classifications of FDI types, both from the investors' and the host countries' points of view.

According to Hassan (2017), the countries exporting FDI are classified into three types, namely:

- Horizontal investment: Aims to expand investment in the host country to produce the same or similar goods as locally produced goods, called differentiated industries.
- Vertical investment: Aims to exploit raw materials in the host country, and it is called vertical rear investment, or it aims to get closer to consumers through ownership or sales outlets, which is called front vertical investment, and this type is spread in countries rich in raw materials.
- Mixed investment: This type of FDI aims to combine horizontal and vertical investments

In addition to the above, there are some types of foreign direct investment, including FDI through new ventures (Greenfield), joint investment, investment wholly owned by the foreign investor, and ventures or mergers.

The determinants of FDI differ according to countries' policies and the extent of their desire to open their markets for foreign investment. Among the determinants of FDI that work to attract foreign investors to a particular country or region are.

Trade liberalization enhances competition between firms, and trade openness enhances the attraction of foreign direct investment (Immurana et al., 2021). The degree of national economy openness to the world is measured by gross product and the concentration of exports. The greater the degree of openness of the national economy to the world, the

greater the strength of attracting FDI. Diversification of exports and trade openness mitigate the impact of economic shocks, including instability in export earnings (Gnangnon, 2018).

Competitiveness is vital because it is the lifeline of a nation's economy. International competitiveness is defined as the country's ability to increase its share in local and foreign markets and produce goods and services that meet the needs of local and foreign markets. Strengthening the competitiveness of the state requires financial programs to increase savings. Managing exchange rates, taxes, macroeconomic and fiscal policies, and programs to enhance workers' skills, management quality, and educational setting standards. Ethical standards also feature prominently to enhance competitiveness (Bhawsar and Chattopadhyay, 2015).

When the economic system relies on market mechanisms and economic freedom, it can attract FDI. The more the political system is democratic, secure, stable, the more it can attract FDI. When the institutional system and the bodies based on investment management have administrative and organizational efficiency, it is more attractive to FDI. Political instability is considered the biggest challenge in Arab countries because of its negative impact on FDI (Benmamoun et al., 2016).

Monetary policy aims to balance the national economy by balancing aggregate supply and aggregate demand, reducing unemployment, stabilizing the general level of prices, stabilizing the exchange rate, and attracting foreign direct investment (Riache et al., 2020). Studies have shown that multinational companies react negatively to sudden volatility. As for the exchange rate, inflation rates are also reflected in pricing policies and the volume of profit and thus affect the flow of foreign direct investment.

Investment incentives in developing countries differ from those in developed countries. Developing countries and Arab countries are working to increase tax incentives for investors to be more attractive to foreign investors than their

competitors. Lower taxes and lower corruption are crucial for improving infrastructure in attracting foreign direct investment (Rădulescu and Druica, 2014). On the other hand, higher taxes increase costs. Consequently, profits decrease, which negatively affects the flow of FDI. In return, financial support is one of the essential incentives offered to investors, including export support to help exporters develop products, increase market competitiveness, and offer low-interest loans and tax breaks.

The economic policies, in their entirety, must be attractive to FDI, the fiscal policy must contain tax incentives that attract investors, and the monetary policy is expansionary in line with the volume of economic activity. The public spending policy is characterized by developing the infrastructure to attract investors and a stable exchange rate policy.

Investment laws stimulate and organize work with foreign investment. The more the investment law is unified and does not conflict with other laws, the more it attracts foreign investors. The law must include sufficient guarantees that prevent expropriation or nationalization. It also has to guarantee the freedom to transfer profits abroad and enter and exit the market. Countries with better protection of intellectual property rights strongly attract foreign direct investment (Lin et al., 2019).

## 2. The relationship between FDI and foreign trade

FDI flows witnessed a more positive development during 2000-2008. It declined due to the financial crisis and the Arab Spring in several Arab countries during 2009-2018. Some Arab countries still suffer from a low flow of FDI. The tendency of foreign investors to politically stable countries is affected by the volume of incoming foreign investment flows. The trade balance by FDI incoming to Arab countries affected both exports and imports during the research period. Table 1 shows the evolution of the volume of FDI and Arab foreign trade (2000-2018).

**Table 1:** The evolution of the volume of FDI and Arab foreign trade (2000-2018)

Statement-year	FDI (Billion dollars)	Arab exports (Billion dollars)	Arab imports (Billion Dollars)	Trade Balance (Billion dollar)	Foreign trade (Billion dollar)
2000	5.96	252,60	155,90	96,70	391.50
2001	9.33	237,70	162,70	75,00	400.40
2002	8.36	241,00	175,30	65,70	416.30
2003	15.00	303,38	193,97	109,41	497.35
2004	24.54	407,35	261,42	145,93	668.55
2005	46.69	561,55	316,07	245,48	877.62
2006	71.02	682,86	362,66	320,20	1045.52
2007	80.84	797,89	481,69	316,20	1279.58
2008	96.48	1076,16	629,24	446,92	1705.40
2009	76.30	737,13	547,48	189,62	1284.61
2010	68.58	921,79	602,47	319,32	1524.26
2011	42.93	1199,55	734,75	464,80	1934.30
2012	53.46	1333,09	813,77	518,32	2245.84
2013	48.46	1316,32	860,61	455,71	2176.93
2014	44.29	1250,20	930,10	320,10	2180.30
2015	39.91	862,00	864,30	-2,30	926.30
2016	32.40	798,00	811,10	-13,10	1609.10
2017	31.30	956,40	808,80	147,60	1765.20
2018	31.20	1095,40	824,60	270,80	1920.00

The incoming FDI flows to the Arab countries in the year 2000 were concentrated in Egypt (\$1.24 billion), Saudi Arabia (\$1 billion), Tunisia (\$781 million), Bahrain (\$500 million), and Sudan (\$392 million). However, the Arab countries amounted to less than 1% of the whole world and only about 2% of developing countries. In 2001 FDI flows concentrated in each of Morocco (\$2.66 billion), Algeria (\$1.2 billion), Sudan (\$574 million), and Tunisia (\$486 million). Despite the increase in FDI flows, the Arab countries' share remained less than 1% of the world total, but it rose to 2.94% from Total developing countries. The value of Arab exports declined in 2001 due to the drop in world prices for crude oil export and the September 11 events, which had a severe impact in the last quarter of 2001.3. The share of Arab exports of world exports decreased from 4.1% in 2000 to 3.9% in 2001, which contributed to the decline in the trade balance of Arab countries in the same year.

In 2002, FDI flows to the Arab countries decreased, affected by September 11, 2001. Many countries, especially Arab countries, were affected by the negative repercussions of September 11, 2001, especially concerning the free movement of capital, affected by the high degree of risk associated with political instability. The flows were concentrated in Algeria (\$1.06 billion), Tunisia (\$821 million), Sudan (\$681 million), Egypt (\$647 million), and Morocco (\$428 million). The Arab countries' share declined to 0.7% of the world total, and it decreased to 2.8% of the entire developing countries. The decrease in FDI contributed to an increase in Arab imports at a rate of 7.7%, higher than the rate of increase in global imports that reached 4.6% in the same year. The share of Arab imports from global imports increased from 2.5% in 2001 to 2.6% in 2002.

The period (2003-2008) witnessed successive jumps in incoming FDI flows to Arab countries, incoming flows to 12 Arab countries (Jordan, Bahrain, Algeria, Saudi Arabia, Sudan, Iraq, Tunisia, Djibouti, Syria, Palestine, Qatar, Lebanon) with rates ranging between 0.21% for Jordan and 70.64% for Tunisia, while it declined in 9 countries (Somalia, Kuwait, Morocco, Sultanate of Oman, Libya, Egypt, Mauritania, UAE, Yemen). The Arab countries' share increased to 5.7% of the world total, and it accounted for 36.6% of the total developing countries. Saudi Arabia topped the first place in the Arab countries receiving FDI due to the security stability, political and economic conditions, which represent factors stimulating and attracting FDI in the Arab countries.

The value of Arab total trade increased in exports and imports. So the share of Arab exports in total global exports increased from 4.4% to 6.7% during the period (2004-2008), due to the steady increase in world oil prices, which recorded the highest level in July 2008 (\$131.2 per barrel). The share of Arab imports from total global imports increased from 3.0% to 4.3% during the same period to meet

economic activity needs and support growth in most Arab countries.

While FDI in Arab countries declined during the period 2009-2011, affected by the global financial crisis, the events of the Arab Spring, and the sharp contraction in bank credit, which contributed to the decline in merger and acquisition deals within the Arab region. The lowest rate of decline during 2009 was 11% compared to developing countries, 24.1%, transforming countries 42.9%, developed countries 44.4%, and the world 39.1%. The share of Arab countries reached 7.7% of the world total and 18% of the entire developing countries. The Arab countries were affected by the negative repercussions of the financial crisis, as foreign investment flows and foreign loans declined on the side of financial transactions. Export revenues, tourism, and remittances from workers abroad also declined.

Arab foreign trade in 2009 was affected by the noticeable decline in the growth of the global economy in the wake of the global financial crisis and the contraction in global demand for oil, in addition to the decline in its global prices, which contributed to the decline in oil exports to Arab countries, and Arab imports were also affected by the slowdown in economic growth in most Arab countries. As a result of the global financial crisis, the share of Arab exports of world exports declined to 5.9% in 2009, while the share of Arab imports of world imports rose to 4.8% in the same year. Arab foreign trade was also affected by the positive developments in 2011 in the global energy market. The rise in global crude oil prices contributed to a rise in Arab exports by 30.6% compared to 2010, and imports increased by 12.8% compared to 2010. Consequently, both the trade balance surplus and the total value of Arab foreign trade increased in 2011.

Relatively increased FDIs incoming to the Arab countries in 2012, and their share reached 3.6% of the world total and 6.9% of the total developing countries. Saudi Arabia, the UAE, and Lebanon topped the list of Arab countries in terms of attracting investment by 25.8%, 20.4%, and 7.8%, respectively, followed by Algeria, Morocco, and Egypt with 6.2%, 6.1%, and 5.9%, respectively. Arab exports rose because global oil prices remained at high levels in 2012. Arab imports also increased due to the high levels of government spending in some Arab countries and the impact of high oil prices on petroleum imports in some other countries in the same year. The period (2013-2018) witnessed a decline in FDI into Arab countries until it recorded its lowest level at \$31.2 billion in 2018. One of the most critical factors contributing to this decline was the terrorist crimes that the Arab region witnessed during that period, especially in Iraq, Syria, Yemen, Libya, Egypt, and Saudi Arabia. Political risks negatively affect investment decision-making, and therefore reducing political risks stimulates FDI (King et al., 2021).

In 2018, these investments amounted to 2.4% of the global total of \$1297 billion, and 4.4% of the

developing countries total \$706 billion in the same year. The UAE topped the list with about \$10.4 billion, accounting for 33.3% of Arab countries total. Egypt ranked second with about \$6.8 billion, which accounted for 21.8%. The Sultanate of Oman ranked third with about \$4.2 billion, or 13.4 percent of Arab countries total. Based on the above, it is viewed that three countries (The Emirates-Egypt-Oman) accounted for 68.5% of the total investments received by Arab countries in 2018, which indicates the weakness of many Arab countries in attracting FDI.

Arab trade data revealed a decline in the share of Arab exports from global exports from 6.6% to 5.7% during the period 2014-2018, and the share of Arab exports recorded its lowest value, which is 4.7% in 2016, affected by the decline in international oil prices, which did not witness an improvement. Except in 2018, the share of Arab imports from global imports also declined from 4.9% to 4.2% during the same period, due to the low levels of domestic demand and the reduction of some countries' levels of domestic spending, especially countries facing terrorism and suffering from internal power struggles. Therefore, the total Arab trade value increased at the end of the period, and the surplus of the Arab trade balance increased. Both Arab exports and imports witnessed a remarkable improvement due to the rise in international oil prices in 2018.

The year 2018 witnessed the establishment of 876 new foreign investment projects in the Arab countries, and these projects belong to 701 companies, which provided more than 134,000 job opportunities in the same year. The Sultanate of Oman topped the list of countries receiving foreign investment projects with 23.5% of the total foreign investment projects in 2018, Saudi Arabia came in second place with 18.6%. The UAE ranked third with 16.9% of the total foreign investment projects in the same year. At the same time, the UAE topped the list of the most influential investors in the Arab region with 19.2 billion dollars, representing 23.1% of the total investments. France came in second place with a value of 15.4 billion dollars, representing 18.5%. Hong Kong ranked third with 6.9 billion dollars, representing 8.3% of the total investments in the Arab Region Investment Climate.

The trends of Arab foreign trade in 2018 indicate the rise in the volume of Arab exports to various trading partners, as intra-Arab exports reached 9.9%, the USA by 5.5%, the European Union by 15.5%. Asia witnessed a remarkable improvement to reach 53.2%, where 12.5% for China, 9.7% for India, and 8.2% for Japan. However, Arab exports with the rest of the world amounted to 15.5%. In contrast, inter-Arab imports amounted to 13.5%. Arab imports from Europe reached 26.4% and from China 12.5%, from the USA 7.5%, from India 6.1%, from Japan 2.6%, from the rest of Asia 14.7%, and the rest of the world 16.8% in the same year.

Within each of these findings, it is identified that the European Union is the leading trading partner of the Arab countries. However, China comes in second place, then India in third place, then the United States in fourth place, then Japan in fifth place. While comparing the results, it became evident that Asian countries are the largest trading partner of countries Arabia, especially as it is the largest importer of Arab exports, especially Arab oil. The UAE is the largest investor in the Arab countries. France ranked second in FDI value and the first in foreign countries investing in Arab countries. Hong Kong ranked third in FDI value and the second in foreign countries invested in Arab countries.

### 3. Analysis of the impact of FDI on Arab exports

It is clear from [Table 2](#) that the correlation between FDI (as an independent variable) and Arab exports (as a dependent variable) is a positive, medium-strong correlation. It is also clear from [Table 1](#) that the value of the adjusted (interpretive) determination coefficient is 0.239. It is a predictive value, showing that 23.9% of Arab exports can be explained using FDI, while the remaining percentage is attributed to other variables, such as the change in world oil prices and the change in global demand for raw materials. Arab countries that depend on oil exports suffer from economic fluctuations. They may lead to a decline in government revenues. A decline in the trade balance. An increase in the budget deficit. A deterioration in the balance of payments, and an increase in monetary and financial instability ([Gaies et al., 2020](#))

**Table 2:** Correlation coefficient and coefficient of determination to explain the relationship between FDI and Arab exports during the period (2000-2018) in billions of dollars

Model	Correlation coefficient (R)	Coefficient of determination (R2)	Coefficient of determination	Modified error Standard for estimation
Values	0.530	0.281	0.239	326.552

It is clear from [Table 3](#) and from extrapolating the value (P) and statistical significance (0.05), which shows the explanatory power of the linear regression model in studying the correlation between the FDI variable (as an independent variable) and Arab countries' exports (as a dependent variable). There is also a significant effect at the significance level 0.05 of FDI on Arab exports

during the period 2000-2018. Along with the increase of FDI value from (6: 96.5) billion dollars during the period (200-2008), the value of exports increased from (252.6: 1076.2) billion dollars during the same period. When the value of FDI declined from (96.5: 32) billion during the period (2008-2016), the value of exports decreased from (1076.2: 798) billion dollars during the same period. It should

be noted that most. FDIs are directed towards the oil and gas sectors or real estate, which do not contribute to the sustainable development process (OCED, 2018). The last decades witnessed a reduction in economic fluctuations for many countries of the world through trade openness and

diversification of exports (Caselli et al., 2020). Economic history indicates that the stages of growth witnessed by most Western European countries were led by exports. The focus on investment in the industrial sector explains the growth in Europe (Boltho, 2020).

**Table 3:** Results of ANOVA to test the significance of linear regression in studying the impact of FDI on Arab exports during the period (2000-2018)

Source of variance	Sum of squares	Degrees of freedom	Mean of squares	Value (P)	Statistical significance
Between groups (regression)	707995.489	1	707995.489	6.639	0.020*
Within groups	1812817.555	17			
Total variance	2520813.043	18			

\*0.01 level

#### 4. The impact of foreign investment on Arab imports

Table 4 shows that the correlation between FDI (as an independent variable) and Arab countries' imports (as a dependent variable) is a weak positive correlation. The value of the modified (interpretive) determination coefficient is (0.073), which is a

predictive value, showing that (7.3%) of Arab imports can be explained using FDI. In comparison, the remaining percentage is attributed to other variables such as the increase in Arab imports of manufactured goods and the increase in imports of production requirements for foreign companies investing in Arab countries.

**Table 4:** Correlation coefficient and coefficient of determination to explain the relationship between FDI and Arab imports during the period (2000-2018) in billions of dollars

Model	Correlation coefficient (R)	Coefficient of determination (R <sup>2</sup> )	Coefficient of determination	Modified error Standard for estimation
Values	0.352	0.124	0.073	269.791

Based on extrapolating the Univariate Analysis value (P) in Table 5, it has become apparent that there is no statistical significance at both levels 0.01 or 0.05. This insignificance shows the explanatory weakness of the linear regression model in the study

of the correlation between the FDI variable (As an independent variable), Arab imports (as a dependent variable), and the absence of a significant effect at the significance level of 0.05 of FDI on Arab imports during the period 2000-2018 in billions of dollars.

**Table 5:** The results of the analysis of variance ANOVA to test the significance of linear regression in the study of the impact of FDI on Arab imports during the period (2000-2018)

Source of variance	Sum of squares	Degrees of freedom	Mean of squares	Value (P)	Statistical significance
Between groups (regression)	175491.159	1	175491.159	2.411	0.139
Within groups	1237389.344	17	72787.608		
Total Variance	1412880.503	18			

Following the increase in FDI from 6 billion dollars in 2000 to 96 billion dollars in 2008-the highest value of FDI during the research Period-Arab imports rose from 156 billion dollars in 2000 to 629 billion dollars in 2008. Nevertheless, with FDI declining from \$96 billion in 2008 to \$31 billion in 2018, Arab imports rose from \$629 billion in 2008 to \$825 billion in 2018, which consists with the results of the statistical analysis that indicates a weak positive correlation between the independent variable and the dependent variable.

explained using FDI. In contrast, the remaining ratio is due to other variables such as political and security stability and the spread of terrorist operations in some Arab countries.

#### 5. The impact of FDI on the Arab trade balance

Table 6 identifies that the correlation between FDI (as an independent variable) and the trade balance (as a dependent variable) is a positive, medium-strength correlation close to a substantial degree (0.341), a significant predictive explanatory value, shows that the trade balance (33.4%) can be

Despite the decline in FDI from (9.3: 8.4) billion dollars in the period (2001-2002), Arab exports rose from (237.7: 241.0) billion dollars in the same period. Arab countries' imports also rose from (162.7: 175.3) billion dollars during the same period. The trade balance surplus declined from (75.0: 65.7) billion dollars during the same period. At the same time, FDI decreased from (96.5: 76.3) billion dollars during the period (2008-2009). Both Arab exports and imports decreased from (1076: 737) billion and (926: 547) billion dollars, respectively, during the same period. These results further supported the statistical analysis results, which indicate a medium positive correlation between independent and dependent variables.

**Table 6:** Correlation coefficient and coefficient of determination to explain the relationship between FDI and trade balance during the period (2000-2018) in billions of dollars

Model	Correlation coefficient (R)	Coefficient of determination (R <sup>2</sup> )	Coefficient of determination	Modified error Standard for estimation
Values	0.609	0.371	0.334	133.375

Table 7 and the extrapolation Univariate Analysis value (P) showcase the statistical significance at the level 0.01, which shows the explanatory power of the linear regression model in studying the correlation between the FDI variable (as an independent variable) and the trade balance (as a dependent variable). There is a significant effect at the level of

significance (0.01) of FDI on the trade balance (2000-2018). This is consistent with the study of Malawi and Nawarha (2020), which indicated that foreign investment positively and statistically impacts the trade balance. The influx of FDI increases exports and decreases imports in the long run.

**Table 7:** Results of ANOVA to test the significance of linear regression in studying the impact of FDI on the trade balance during the period (2000-2018)

Source of variance	Sum of squares	Degrees of freedom	Mean of squares	Value (P)	Statistical significance
Between groups (regression)	178504.500	1	178504.500	10.034	0.005*
Within groups	302411.700	17	17788.92		
Total Variance	480916.20	18			

\*0.01 level

### 6. The impact of FDI on Arab foreign trade

It is clear from Table 8 that the correlation between FDI (as an independent variable) and foreign trade (as a dependent variable) is a positive, medium-strong correlation. Table 8 also states that the value of the modified (interpretive) determination coefficient is 0.178. It is an explanatory predictive value, showing that 17.8% of foreign trade can be explained using FDI. In comparison, the remaining percentage is attributed to other variables. Such as political instability and

fluctuations in exchange rates and inflation rates, and the limited trade openness in Arab countries.

The high risks faced by investors in the Arab region, especially in the tensest economies, negatively reflect FDI flow. In order to attract more FDI in stable Arab countries, business behavior must be strengthened in coordination with governments and the private sector (OCED, 2018), as well as work on diversification of exports and trade openness to mitigate the impact of internal and external economic shocks on investment (Gnangnon, 2018).

**Table 8:** Correlation coefficient and coefficient of determination to explain the relationship between FDI and foreign trade during the period (2000-2018) in billions of dollars

Model	Correlation coefficient (R)	Coefficient of determination (R <sup>2</sup> )	Coefficient of determination	Modified error Standard for estimation
Values	0.473	0.224	0.178	588.698

It is viewed from Table 9 and the extrapolation of the Univariate Analysis value (P) the statistical significance at the level of 0.05, which shows the explanatory power of the linear regression model in studying the correlation between the FDI variable (as an independent variable) and foreign trade (as a dependent variable). There is also a significant effect at the significance level 0.05 of FDI on foreign trade during the period 2000-2018.

The results of the investor protection index indicate that it is an essential component of the business environment index. The group of Arab countries provides less protection than the average, except the Gulf countries that provide better protection to the investor, especially the foreigner, which is consistent with the results of the analysis statistician.

**Table 9:** Results of ANOVA analysis to test the significance of linear regression in studying the impact of FDI on foreign trade during the period (2000-2018)

Source of variance	Sum of squares	Degrees of freedom	Mean of squares	Value (P)	Statistical significance
Between groups (regression)	170,1117.802	1	170,1117.802	4.908	0.041*
Within groups	5891617.129	17	346565.713		
Total Variance	7592734.931	18			

\*0.01 level

### 7. Results

The share of FDI incoming to the Arab countries in the year 2000 was less than 1% of the world total and only about 2% of the entire developing countries. The Arab countries were affected by the

negative repercussions of the events of September 11, 2001, especially concerning the free movement of capital, affected by the high degree of risk associated with political instability. The share of foreign exports decreased from 4. % in 2000 to 3.9% in 2001. The FDI decline increased Arab imports at a

rate of 7.7%, higher than the increase in global imports, which amounted to 4.6% in the same year. The share of Arab imports increased compared to world imports from 2.5% in 2001 to 2.6% in 2002.

The period 2003-2008 witnessed successive jumps in the incoming FDI flows to the Arab countries. The share of the Arab countries rose to 5.7% of the world total, and it accounted for 36.6% of the total developing countries. Saudi Arabia ranked first in the Arab countries receiving FDI due to the stability of the security, political and economic conditions, which stimulate and attract FDI to the Arab countries. The value of Arab total trade achieved an increase in both exports and imports during that period, so the share of Arab exports in total global exports increased from 4.4% to 6.7% during the period 2004-2008, due to the steady increase in world oil prices, which recorded the highest level in July 2008, which is (131.2 dollars per barrel). The share of Arab imports from total global imports increased from 3.0% to 4.3% during the same period to meet economic activity needs and support growth in most Arab countries.

The decline in FDI in Arab countries during the period 2009-2011, affected by the global financial crisis, the events of the Arab Spring, and the sharp contraction in bank credit, which contributed to the decline of merger and acquisition deals within the Arab region, and despite that, the Arab region witnessed The lowest rate of decline during 2009 at a rate of 11% compared to developing countries 24.1%, transforming countries 42.9%, developed countries 44.4% and the world 39.1%, and the share of Arab countries reached 7.7% of the world total, and 18% of the total developing countries, Arab foreign trade was affected in 2009 marked a significant decline in the growth of the global economy in the wake of the global financial crisis, and the contraction in global demand for oil, in addition to the decline in its global prices, which contributed to the decline in oil exports to Arab countries, and Arab imports were also affected by the slowdown in economic growth in most Arab countries as a result of the global financial crisis, and declined The share of Arab exports from global exports to 5.9% in 2009, while the share of Arab imports from global imports rose to 4.8% in the same year.

The period 2013-2018 witnessed a decline in FDI in Arab countries until it recorded its lowest levels at \$31.2 billion in 2018. One of the most critical factors contributing to this decline was the terrorist crimes that the Arab region witnessed during that period, especially in Iraq, Syria, Yemen, Libya, Egypt, and Saudi Arabia, which indicates an inverse relationship between terrorist operations and the flow of FDI. Those investments in 2018 amounted to 2.4% of the global total of 1297 billion dollars, and 4.4% of the total developing countries of 706 in the same year, three countries (UAE-Egypt-Oman) accounted for 68.5% of the total investments received by Arab countries in 2018, which indicates the weakness of many Arab countries in attracting FDI.

The share of Arab exports in global exports declined from 6.6% to 5.7% during the period 2014-2018, and the share of Arab exports recorded its lowest value, which is 4.7% in 2016, affected by the decline in international oil prices, which did not witness an improvement except in 2018. The share of Arab imports from global imports also declined from 4.9% to 4.2% during the same period, due to the low levels of domestic demand and the reduction of some countries' levels of domestic spending, especially countries facing terrorism and suffering from internal power struggles. The value of the total Arab trade at the end of the period and the surplus of the Arab trade balance increased, and both Arab exports and imports witnessed a remarkable improvement due to the rise in international oil prices in 2018.

The European Union is the leading trading partner of the Arab countries, while China comes in second place, then India in third place, then the United States in fourth place, then Japan in fifth place. It can also be deduced that Asian countries are the largest trading partner of Arab countries, especially. It is the largest importer of Arab exports, especially Arab oil. The UAE is the largest investor in the Arab countries. France ranked second in terms of the value of FDI and first in terms of foreign countries investing in Arab countries. Hong Kong ranked third in terms of the value of FDI and second in terms of foreign countries investing in Arab countries.

- The correlation between FDI (as an independent variable) and Arab exports (as a dependent variable) is positive, medium-strong.
- The correlation between FDI (as an independent variable) and Arab imports (as a dependent variable) is a weak positive correlation.
- The correlation between FDI (as an independent variable) and the trade balance (as a dependent variable) is a positive, medium-strong correlation that approaches an intense degree.
- The correlation between FDI (as an independent variable) and foreign trade (as a dependent variable) is positive, medium-strong.

## 8. Recommendations

The need to expedite the achievement of a peaceful settlement of armed conflicts in the Arab region, especially in Syria, Yemen, and Libya, which are negatively reflected on indicators of economic development, especially in attracting FDI and developing foreign trade, as well as coordination between Arab countries to eliminate the phenomenon of terrorism and extremist groups, in order to achieve political, security and institutional stability, which is of paramount importance to foreign investment.

Developing laws and legislations regulating FDI and ensuring their continuity and consistency with international laws and overall monetary and financial policies to give the foreign investor



confidence when evaluating the options of the geographical area targeted for investment.

The need to develop and develop human resources, through the development of education and training policies to provide qualified workers, meets the labor market's needs and keeps pace with modern global developments.

Developing the infrastructure in general, especially the infrastructure of internal and external trade, international transport and shipping, and customs policies, attracts FDI and develops foreign trade.

The necessity of coordination between Arab countries to attract FDI, especially in the sectors in which each country enjoys a comparative advantage, provides tax and customs incentives and credit facilities to develop exports and improve the trade balance, thus increasing foreign trade volume.

The need to target qualitative foreign investments to develop the Arab industries sector. This could be done by applying the strategy of producing substitutes for imports, then applying the strategy of production directed to export since most Arab imports are industrial imports, especially from the European Union and China. In contrast, most Arab exports are raw materials.

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## Compliance with ethical standards

## Conflict of interest

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

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