How Governance Indicators Affect Foreign Ownership in the Middle East Equity Markets

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The governance indicators of any country may reflect how safe is it to invest in its markets. The question is whether these indicators are being considered by foreign investors in the stock markets. A quantitative approach was used in this study to answer this question and explore how governance indicators can affect the size of the foreign ownership in the stock markets of the Middle East. The study covered the period from 2010 to 2019 excluding the time of financial crisis and the time of COVID-19. The collected data were analyzed using ordinary least squares method. Study results revealed that foreign investors in the stock markets of the Middle East do not consider governance indicators when taking their investment decisions because the foreign ownership in the equity markets was not affected by the governance indicators even when testing each country and each indicator individually.

Keywords: governance indicators, Middle East, stock market, foreign ownership, foreign investor

INTRODUCTION

Countries with good governance indicators are expected to have a higher direct foreign investment which leads to a higher economic growth for these countries (Kayani & Ganic, 2021). This means that good governance indicators can improve the economic performance and enhance the image of the country in the eyes of foreign investors who want to invest in the country's stock market. In other words, a country with good governance indicators is more attractive for foreign investors than other countries with lower indicators. The problem is that the level of foreign investment may affect the economic growth of a given country without being noticed by that country. The financial system of any country represents one part of its economic system (Hala, 2021) and the stock market is part of the financial system (Elshqirat, 2021), this means that anything that affect the stock market can affect also the economy. As foreign investment or ownership in stock market of a country can affect the performance of that market, it can affect the entire economy of that country. The specific problem is that countries cannot control the effect of foreign investment (ownership) in stock markets on their economies because it's unknown what factors do foreign investors consider when taking their investment decisions. The purpose of this study was to determine whether the governance indicators are being considered by the foreign investors in taking their decisions of investment in the stock markets; this purpose was achieved by studying the relationship between the governance indicator and the size of the foreign investment in the stock markets.

Direct foreign investment (FDI) is a term that includes only the foreign investment in shares intended to generate returns that last for long time and to obtain the control of management of the companies invested in (Husain, Javed, & Araimi, 2021). Based on this, FDI constitutes one part of the total foreign ownership

in stock markets; the relationship between this part and the governance indicators was studied by many researchers including Ross (2019); Carril-Caccia, Milgram-Baleix, and Paniagua (2019); Kayani and Ganic (2021); Younsi, and Bechtini (2019); and Awadhi, James, and Byaro, (2022). No studies were conducted to explore the effect of the governance indicators on the entire foreign investment in the stock markets and that was the main reason behind conducting this study. The objective of this study was to determine whether governance indicators affect the foreign investment in the stock markets. Exploring this effect can benefit the management of stock markets in identifying opportunities to increase foreign investments by observing governance indicators and try to estimate the expected size of foreign investment in its markets. In addition, this study can benefit investors and economic analysts by providing them with a reasonable base to estimate the economic growth expected to be achieved as a result of foreign investment in the stock markets. The purpose of the study was achieved through testing the hypothesis that foreign investment in the stock markets is significantly affected by the level of the governance indicators in the Middle East region and the hypothesis that each indicator has a different effect on that foreign investment.

LITERATURE REVIEW

Effect of Foreign Investment on the Economy

Most researches who studied foreign investment used the term "foreign direct investment". Foreign direct investment (FDI) is said to be in place when an investor from one country invest in the capital of a company in foreign country and gain control or have a high effect over the management of that company, the ownership percentage at which the direct foreign investment is assumed to exist is 10% or more (Foreign, 2022). Because FDI can enhance the economic growth of the host countries, these countries should continue developing its policies to attract more foreign investors to its markets. The positive effect of the FDI on the economic growth of the host country was detected in many countries including Vietnam (Nguyen, 2020), West African countries (Onuoha, Okonkwo, Okoro, & Okere, 2018), in addition to the United States, Japan, Canada, Russia, Turkey, Iran, Saudi Arabia, Italy, and France (Okwu, Oseni, & Obiakor, 2020) while it had an insignificant effect on the economic growth of some other countries like Ukraine (Getzner & Moroz, 2020). In the Middle East region, however, it was concluded that FDI has an insignificant effect on the economic growth; this conclusion was because of some reasons related to high level of corruption, lack of political stability, and low spending on education and infrastructure (Hussain, Bashir, & Shahzad, 2021). FDI in the Middle East region decreased from about 81 billion in 2010 to about 66 billion in 2020 (Foreign direct investment, 2022). This may be because of war and instability in the region during this period.

Foreign investment in the stock market tested in this study, however, is different from FDI in that it includes the percentage of foreign ownership of equity in the stock market despite the existence of control or significant effect on the management of the investee. This means that FDI represents one part of the foreign investment tested in this study. Furthermore, foreign portfolio investment is also different from foreign investment in stock market because it includes foreign investment in shares and in other financial assets as well (Ezeanyeji, & Maureen, 2019). As FDI can affect the economic growth of hosting countries, foreign ownership in equity markets can also affect the economic growth of those countries because FDI represents one part of foreign ownership in equity markets. In fact, opening the domestic stock markets to foreign investments can enhance the economy of the hosting countries (Prabheesh, 2020). Many countries are opening its equity markets for foreign investors but many of them also are limiting this ownership to a given levels as can be noticed in many Arabic countries for example. Foreign ownership percentages are published in many markets as a sign of market openness and to attract more foreign investors by showing that these markets are safe and that many foreign investors are investing there.

Foreign Investment in the Equity Markets of the Middle East

Middle East region includes many countries like Bahrain, Iraq, Iran, Syria, Turkey, Jordan, Palestine, Israel, Yemen, United Arab Emirates, Egypt, Kuwait, Lebanon, Oman, Qatar, and Saudi Arabia (Middle East countries, 2022). Yemen and Syria are suffering from civil war or what is called the Arab spring which

isolates it politically and economically from the rest of the world and move it out from the list of options for the foreign investors. Foreign ownership in the equity markets is currently allowed in many countries in the Middle East including Israel (Wizman & Arnon, 2021), Saudi Arabia (Qualified, n.d.), Turkey (Solmaz Law & Consultancy, 2021), Qatar (Become, n.d.), Bahrain (Trading, n.d.), and many other Middle East countries (MCSI, 2021). One limitation for foreign ownership is that some Arabic countries in the Middle East are prohibiting Israelis investors from invest in their equity markets like Lebanon (MCSI, 2021). Another limitation for foreign investment is the foreign ownership limit imposed by regulations of some countries. In many Middle Eastern countries, foreign investors can own 100% of the shares of listed companies; these countries include Qatar (A new, 2022), Bahrain (Foreign, 2021), Oman (A new, 2022), and Jordan (Al-Khalidi, 2020); in other countries, however, there are some limitation on foreign ownership in the stock markets like Saudi Arabia in which an individual foreign investor can own no more than 10% of the shares of a listed company and the total foreign ownership in one listed company should not exceed 49% of shares of that company (Qualified, n.d.).

Removing limitations and barriers from the way of foreign investors in the equity market is a sign of economic openness and a sign of the intent for liberation and development of the economic and commercial activity in the host country. Some countries in the Middle East, however, seem to be conservative to allow foreign investors to own large share in its local companies like Saudi Arabia but this may be changed in the near future as many countries are opening its market for the international trade and investment. In addition, historical data about foreign ownership in the equity markets of some Middle Eastern countries are not available within the websites of their markets which may indicate the low level of transparency in these markets. The average of the foreign ownership percentage in the countries included in this study was about 40% in 2008 and declined to 34% in the year 2019 which may indicate that these countries need to make more efforts to encourage foreign investment in their equity markets. This study may help countries in increasing foreign investment in its equity markets by clarifying the relationship between foreign investment and country-level governance indicators. If the relationship does exist, then Middle Eastern countries can increase foreign investment in equity markets by enhancing governance indicators.

Worldwide Governance Indicators

Governance is a term used to describe who is involved in exercising the authority in a country and how that authority is exercised; it covers many processes including the process of selecting and monitoring governments, policies issued by governments, and the process of managing the economic and social relations between citizens of the country (Worldwide, n.d.). The worldwide governance indicators are issued by the world bank and contain six dimensions: voice and accountability, political stability and absence of violence/terrorism, government effectiveness, regulatory quality, rule of law, and control of corruption (Worldwide, n.d.). These dimensions are explained in Table 1; dimensions or indicators are given numerical values ranges from -2.5 (worst) to 2.5 (best) (Worldwide, n.d.). Researchers have tested the relationship between these indicators and many variables including the level of trust in governments (Spiteri & Briguglio, 2018), sustainable development (Barbier & Burgess, 2021), poverty (Hassan, Bukhari, & Arshed, 2020), Tourism industry performance (Detotto, Giannoni, & Goavec, 2021), and many other variables. Regarding variables related to economics and finance, governance indicators have been found to be positively affecting many variables like FDI inward flow (Kayani & Ganic, 2021), financial development (Sayılır, Doğan, & Soud, 2018), and economic growth (Kraipornsak, 2018). Till the date of writing this article, no researchers have studied the effect of worldwide governance indicators on the foreign ownership in the equity markets. This study may add value to the literature by clarifying how foreign ownership in equity markets can be enhanced through enhancing the country-level governance indicators using the Middle East countries as an example.

TABLE 1
WORLDWIDE GOVERNANCE INDICATORS AND ITS DEFINITIONS

Indicator	Definition
Voice and accountability	Reflects the ability of citizens to involve in choosing the government and express their opinions through free media and formal or informal groups
Political stability and absence of violence/terrorism	Reflects the possibility of political instability and terrorism
Government effectiveness	How good public services are and whether it's free of political interventions in addition to the quality of policies issued by government and whether government is abiding by these policies.
Regulatory quality	Whether governments are able to issue and implement good policies that enable and encourage the improvement of the private sector
Rule of law	Reflects the level of trust in the level of conformity with rules and regulations including the enforcement of contracts, the police, and the courts of the country
Control of corruption	Related to the level of using the public power for private interests, the level of corruption, and the level of controlling of the state by private interests

Because no studies were conducted to explore how the foreign ownership percentage in the equity markets are being affected by the governance indicators, decision makers in each country may not know whether they can use these indicators to increase the percentage of foreign ownership in their equity markets and thus, they may be unable to enhance the performance of these markets and gain the benefits of foreign investments in it. The main purpose of this study was to fil the gap in the literature by testing how worldwide governance indicators may affect the foreign ownership in the equity markets. By doing so, this study will be the first study to explore that relationship in the Middle East region and in the world. If the governance indicators play a vital role in enhancing the foreign ownership percentage, then foreign investment in equity markets can be attracted by improving the indicators for each country side by side with other efforts aiming at increasing that foreign investment. The Middle East region was selected by the researcher because it collectively represents very attracting markets for foreign investors as its economies are very promising and rich with oil and gas and because that most equity markets in the region are trying to open its doors for foreign investors and to do that, it's trying to show more transparency and openness to foreign investors. Not all Middle Eastern countries were included in this study because of some reasons like data unavailability, civil war and economic siege in some of the countries.

Hypothesis

It was claimed by many researchers that worldwide governance indicators can affect economic and financial variables like FDI, financial development, and economic growth. Because FDI represents one part of the foreign ownership in the equity market and because this foreign ownership is a financial variable, its hypothesized that it's affected by the worldwide governance indicators following other financial variables that were concluded to be affected by the indicators. The main hypothesis of this study can be stated as follows:

H1: *The worldwide governance indicators are predictors of the foreign ownership percentage in the equity markets of the Middle East, or:*

H1: ß₁ in the following model ≠ 0:
$FOP = ß_0 + ß_1(WWGI) + ß_2(GDP) + ß_3(AIR) + \varepsilon$

where FOP is the foreign ownership percentage in the equity market, WWGI is the worldwide governance indicators, GDP is the growth rate of gross domestic product, and AIR is the annual inflation rate, the last two variables were added to the model to control for its effect as a positive growth rate and a negative inflation rate may indicate a good status of economy and thus, may attract foreign investors and affect foreign ownership in the equity markets.

METHOD

Research Data

Data of the study variables included data about foreign ownership percentage in the equity markets of the included countries, data about the worldwide governance indicators, GDP growth data, and annual inflation rate data. this study was conducted using the case of Middle East region which included Bahrain, Iraq, Iran, Syria, Turkey, Jordan, Palestine, Israel, Yemen, United Arab Emirates, Egypt, Kuwait, Lebanon, Oman, Qatar, and Saudi Arabia (Middle East countries, 2022). Not all of these countries, however, were included in the study because data about foreign ownership percentage in the equity market for the study period (2010-2019) were not available for some countries including Saudi Arabia, Bahrain, United Arab Emirates, Kuwait, Iran, Egypt, Iraq, and Lebanon. In addition, countries of Syria and Yemen were excluded because of civil war happening in these countries during the study period. Stat of Qatar was excluded also because there was a blockade on the country imposed by some neighboring countries in 2017. To summarize, Middle East region includes 16 countries from which 11 countries were excluded for many reasons and five countries were included in the study namely: Oman, Jordan, Israel, Palestine, and Turkey. The study was originally designed to covered the period from 2008 to 2021 but the years 2008 and 2009 were excluded because of the financial crisis occurred during these years, the year 2020 was excluded because of the COVID-19 pandemic, and the year 2021 was excluded because no data about governance indicators were available for this year; by this the period covered was from 2010 to 2019. Data about governance indicators, GDP growth rate, and the annual inflation rate for the period of the study were downloaded from the world bank website (https://databank.worldbank.org) while data about foreign ownership percentage in the equity markets were collected from the website of the stock exchange of each included country; some stock markets are issuing the data of foreign ownership percentage as a ready to download tables and some others are including the data in its annual report as a single number for each year. Collected data were tested using the ordinary least squares method (OLS).

RESEARCH DESIGN

To test if the worldwide governance indicators can affect the foreign ownership percentage in the equity markets, a quantitative method of research was followed in this study. The dependent variable in this study was the average foreign ownership percentage in the included Middle Eastern countries for each year from 2010 to 2019 while the independent variables were the governance indicators, GDP growth rate, and the annual inflation rate for each year in the study period. The relationship between these variables was tested using the OLS method by utilizing a main regression model as follows:

$$\overline{\mathrm{FOP}} = \beta_0 + \beta_1(\overline{\mathrm{WWGI}}) + \beta_2(\overline{\mathrm{GDP}}) + \beta_3(\overline{\mathrm{AIR}}) + \varepsilon \quad (1)$$

where for each year, $\overline{\text{FOP}}$ is the average foreign ownership percentage in the equity markets, $\overline{\text{WWGI}}$ is the average worldwide governance indicators, GDP is the average growth rate of gross domestic product, and AIR is the average annual inflation rate.

Another regression model was tested using the same dependent and independent variables except for the governance indictors which were included as six variables for each one of the six indicators rather than its average like in the first main regression model:

$$\overline{\text{FOP}} = \beta_0 + \beta_1(\overline{\text{VAC}}) + \beta_2(\overline{\text{PSAV}}) + \beta_3(\overline{\text{GE}}) + \beta_4(\overline{\text{RQ}}) + \beta_5(\overline{\text{RL}}) + \beta_6(\overline{\text{CC}}) + \beta_7(\overline{\text{GDP}}) + \beta_8(\overline{\text{AIR}}) + \varepsilon \quad (2)$$

where for each year, $\overline{\text{FOP}}$ is the average foreign ownership percentage in the equity markets, $\overline{\text{VAC}}$ is the average governance indicator of voice and accountability for the five countries, PSAV is the average of the indicator of political stability and absence of violence/terrorism, $\overline{\text{GE}}$ is the average of the indicator government effectiveness, RQ is the average of the indicator of regulatory quality, $\overline{RL}$ is the average of the indicator rule of law, $\overline{\text{CC}}$ is the average of the indicator of control of corruption, GDP is the average growth rate of gross domestic product, and AIR is the average annual inflation rate.

In addition to the above regression models, five sub regression models were tested for the five countries included in the study. The dependent variable in each sub-regression was the foreign ownership percentage for each country and for each year while the independent variables were the average of governance indicators, GDP growth rate, and annual inflation rate for each country and for each year in the study covered period. Each sub-regression model can be expressed as follows:

$$\text{FOP}_i = \beta_2 + \beta_2(\overline{\text{WWGI}_\text{i}}) + \beta_2(\text{GDP}_\text{i}) + \beta_3(\text{AIR}_\text{i}) + \varepsilon \quad (3)$$

where FOP_i is the foreign ownership percentage in the equity markets of country i, $\overline{\text{WWGS}}\text{i}_\text{i}$ is the average of worldwide governance indicators for each year for country i, GDP_i is the growth rate of gross domestic product in country i for each year, and AIR is the annual inflation rate for each year in country i. In addition, another five sub-regression models were tested to determine the relationship between the foreign ownership percentage and the independent variables of GDP, inflation rate, and the six governance indicators separately. Each one of the new five sub-regressions was as follows:

$$\text{FOP}_\text{i} = \beta_2 + \beta_1(\text{VAC}) + \beta_2(\text{PSAV}_\text{i}) + \beta_3(\text{GE}_\text{i}) + \beta_4(\text{RQ}_\text{i}) + \beta_5(\text{RL}_\text{i}) + \beta_6(\text{CC}_\text{i}) + \beta_2(\text{GDP}_\text{i}) + \beta_3(\text{AIR}_\text{i}) + \varepsilon \quad (4)$$

where FOP_i is the foreign ownership percentage in the equity markets of country i for each year, VAC_i is the value of governance indicator of voice and accountability for country i for each year, PSAV_i is the indicator of political stability and absence of violence/terrorism, GE_i is the indicator of government effectiveness, RQ_i is the indicator of regulatory quality, RL_i is the indicator of rule of law, CC_i is the indicator of control of corruption, GDP_i is the growth rate of gross domestic product, and AIR_i is the annual inflation rate.

RESULTS

Descriptive Statistics

Descriptive statistics summarized in Table 2 indicated that the worst country in terms of the average of governance indicators was Palestine and the country with the best average of governance indicators was Israel. The country with most volatile indicators was Turkey as the standard deviations for all of its individual indicators were the highest of all countries. The country with the highest foreign ownership percentage during the covered period was Turkey and the country with the lowest percentage was Oman. The most volatile foreign ownership percentage during the study covered period was for Israel.

Furthermore, the best country in terms of voice and accountability was Israel and the worst country was Oman. Regarding the indicator of political stability and absence of terrorism, the country with the highest average was Oman while the country with the lowest average was Palestine. The state of Israel was in the top of the included countries in terms of government effectiveness, regulatory quality, rule of law, and control of corruption while Palestine was in the last place for all of these indicators. In addition, the highest GDP growth rate during the covered study period was for Turkey while the lowest GDP growth rate was for Jordan. The lowest average of annual inflation rate was in the state of Israel and the highest rate was in Turkey.

TABLE 2
DESCRIPTIVE STATISTICS OF THE STUDY VARIABLES FOR THE INCLUDED COUNTRIES

Details	Oman		Jordan		Israel		Palestine		Turkey	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Foreign ownership %	27.040	0.021	50.180	0.013	34.000	0.045	40.130	0.038	63.830	0.018
All governance indictors	0.163	0.577	-0.095	0.392	0.686	0.807	-0.670	0.659	-0.251	0.586
Voice and accountability	-1.063	0.037	-0.751	0.040	0.677	0.062	-0.963	0.081	-0.438	0.288
Political stability and absence of violence/terrorism	0.621	0.136	-0.470	0.117	-1.024	0.177	-1.914	0.137	-1.341	0.347
Government effectiveness	0.228	0.077	0.081	0.061	1.312	0.072	-0.591	0.148	0.220	0.160
Regulatory quality	0.448	0.156	0.119	0.091	1.248	0.053	0.107	0.078	0.243	0.173
Rule of law	0.475	0.057	0.308	0.107	1.025	0.076	-0.410	0.088	-0.088	0.166
Control of corruption	0.267	0.095	0.145	0.084	0.880	0.124	-0.248	0.137	-0.100	0.170
GDP growth rate %	3.052	2.970	2.394	0.450	4.183	1.067	4.261	3.351	5.862	3.094
Inflation rate %	1.610	1.351	2.814	2.276	1.067	1.325	1.567	1.339	9.838	3.361

Hypotheses Testing

Testing the Main Hypothesis

Downloaded data were arranged first in Microsoft excel and then tested for the linear regression assumptions of normality, multicollinearity, and homoscedasticity; the test results indicated that none of these assumptions was violated; stationarity was not tested because the sample size was small (10 observations for each variable). The main hypothesis in this study was that the world wild governance indicators affect the foreign ownership percentage in the equity markets or in other words, do foreign investors in the equity markets consider governance indicators when deciding to invest?. this hypothesis can be expressed as follows:

H1: *The worldwide governance indicators are predictors of the foreign ownership percentage in the equity markets of the Middle East*

To test this hypothesis, the following model was formulated and tested:

$$\overline{\text{FOP}} = \beta_0 + \beta_1(\overline{\text{WWGI}}) + \beta_2(\overline{\text{GDP}}) + \beta_3(\overline{\text{AIR}}) + \varepsilon$$

where for each year, $\overline{\text{FOP}}$ is the average foreign ownership percentage in the equity markets, WWGI is the average worldwide governance indicators, $\overline{\text{GDP}}$ is the average growth rate of gross domestic product, and AIR is the average annual inflation rate. GDP and AIR were added to the model to control for their effect on the foreign ownership percentage. The results of testing the model are summarized in Table 3 . It can be noticed from these results that p values or the three variables are greater than the signfincae level of 5% and thus, its concluded that the average of governance indicators is not a predictor of foreign ownership in the equity markets of the included countries collectively or the foreign investors do not consider this average in taking their decisions of investing in the host countries. In addition, it can be said that neither the GDP nor the inflation rate are considered by the foreign investors when taking investment decisions in equity markets.

TABLE 3
REGRESSION RESULTS FOR THE MAIN HYPOTHESIS

Details	Value	*t* statistics	*P* value
ß$_0$	0.435	18.106	.000
ß$_1$	0.238	1.517	.180
ß$_2$	0.288	0.760	.476
ß$_3$	-0.232	-0.539	.609
Adjusted R square	.270		

Testing Additional Models

Testing First Additional Model. The first additional regression expressed in equation 2 was formulated to determine which of the world-wide governance indicators (if any) is a predictor of foreign ownership percentage in the equity markets and to answer the questions of whether foreign investors consider any of the governance indicators in their decisions about investing in the equity markets. The first additional regression model was as follows:

$$\overline{\text{FOP}} = \beta_0 + \beta_1(\overline{\text{VAC}}) + \beta_2(\overline{\text{PSAV}}) + \beta_3(\overline{\text{GE}}) + \beta_4(\overline{\text{RQ}}) + \beta_5(\overline{\text{RL}}) + \beta_6(\overline{\text{CC}}) + \beta_7(\overline{\text{GDP}}) + \beta_8(\overline{\text{AIR}}) + \varepsilon$$

where for each year, $\overline{\text{FOP}}$ is the average foreign ownership percentage in the equity markets, $\overline{\text{VAC}}$ is the average governance indicator of voice and accountability for the five countries, PSAV is the average of the indicator of political stability and absence of violence/terrorism, $\overline{\text{GE}}$ is the average of the indicator government effectiveness, RQ is the average of the indicator of regulatory quality, RL is the average of the indicator rule of law, $\overline{\text{CC}}$ is the average of the indicator of control of corruption, GDP is the average growth rate of gross domestic product, and AIR is the average annual inflation rate. The results of testing this regression model were as shown in Table 4. Because *p* values for all of the variables ar greator than 5%, its concluded that foreign investors do not consider any of the individual govrenance indicators, the GDP, and the inflation rate in theier investment decisions in the included countries collectivly.

TABLE 4
REGRESSION RESULTS FOR THE FIRST ADDITIONAL REGRESSION

Details	Value	t statistics	P value
ß0	0.989	1.164	.452
ß1	0.743	1.286	.421
ß2	0.036	0.078	.951
ß3	-0.039	-0.259	.838
ß4	0.000	0.000	1.000
ß5	-0.488	-0.912	.529
ß6	0.154	1.184	.447
ß7	-0.626	-0.589	.661
ß8	-0.514	-0.239	.851
Adjusted R square	.360		

Testing Second Additional Regression. The second additional regression was developed to test whether the average of governance indicators is a predictor for the foreign ownership percentage in the equity market of each included country rather than all included countries collectively. The regression model in Equation 3 was used to test whether foreign investors consider the average governance indicators in their investment decisions in equity market of each included country. The following model were run for each of the five included countries:

$$\mathrm{FOP}_i = ß_0 + \beta_2(\overline{\mathrm{WWG_i}}) + \beta_2(\mathrm{GDP}_i) + \beta_3(\mathrm{AIR_i}) + \varepsilon$$

where $\mathrm{FOP_i}$ is the foreign ownership percentage in the equity markets of country i, $\overline{\mathrm{WWG_i}}$ is the average of worldwide governance indicators for each year for country i, $\mathrm{GDP_i}$ is the growth rate of gross domestic product for each year in country i, and $\mathrm{AIR_i}$ is the annual inflation rate for each year in country i. Results of testing this model for each of the five included countries were as illustrated in Table 5. These results revealed that the average of governance indicators is not considered by foreign investors in all of the included country because all *p* values were greater than 5% while GDP and inflation rate are considered by foreign investors only in Oman as the *p* values of these variables were less than 5% for this country.

TABLE 5
REGRESSION RESULTS FOR THE SECOND ADDITIONAL REGRESSION

Details	Value	t statistics	P value
Oman			
ß0	0.250	11.949	.000
ß1	0.143	1.328	.232
ß2	0.398	2.465	.049
ß3	-0.959	-2.630	.039
Adjusted R square	.549		

Jordan			
ß0	0.501	15.048	.000
ß1	-0.254	-0.905	.401
ß2	-0.986	-0.939	.384
ß3	0.024	0.094	.928
Adjusted R square	-.126		
Israel			
ß0	0.362	1.086	.319
ß1	0.031	0.064	.951
ß2	-1.125	-0.493	.639
ß3	0.645	0.229	.827
Adjusted R square	-.439		
Palestine			
ß0	0.497	4.419	.004
ß1	0.191	1.161	.290
ß2	0.209	0.634	.549
ß3	1.508	1.799	.122
Adjusted R square	.334		
Turkey			
ß0	0.616	13.451	.000
ß1	0.012	0.230	.826
ß2	.149	0.427	.685
ß3	.175	0.540	.609
Adjusted R square	-.410		

Testing Third Additional Regression. The third additional regression presented in Equation 4 was used to determine whether any individual governance indicator is considered by foreign investors in the equity market of each of the included countries. The model was as follows:

$$\mathrm{FOP}_i = \beta_0 + \beta_3(\mathrm{VAC_i}) + \beta_2(\mathrm{PSAV_i}) + \beta_3(\mathrm{GE_i}) + \beta_4(\mathrm{RQ_i}) + \beta_s(\mathrm{RL_i}) + \beta_6(\mathrm{CC_i}) + \beta_2(\mathrm{GDP_i}) + \beta_3(\mathrm{AIR_i}) + \varepsilon$$

where $\mathrm{FOP_i}$ is the foreign ownership percentage in the equity markets of country i for each year, $\mathrm{VAC_i}$ is the value of governance indicator of voice and accountability for country i for each year, $\mathrm{PSAV_i}$ is the indicator of political stability and absence of violence/terrorism, $\mathrm{GE_i}$ is the indicator of government effectiveness, $\mathrm{RQ_i}$ is the indicator of regulatory quality, $\mathrm{RL_i}$ is the indicator of rule of law, $\mathrm{CC_i}$ is the indicator of control of corruption, $\mathrm{GDP_i}$ is the growth rate of gross domestic product, and $\mathrm{AIR_i}$ is the annual inflation rate. The results of this model are illustrated in the appendix. From these results it can be said that foreign investors do not consider any governance indicator or GDP or the inflation rate in their investment decisions in the equity market of any included country because the *p* value of all variables for all countries were more than 5%.

DISCUSSION

The results of the statistical analysis in the previous section indicate that the world-wide governance indicators have no effect on the foreign ownership percentage in the equity markets of the Middle East countries. Furthermore, these results were the same for all indicators and for all countries when tested individually. There are no studies about the effect of the governance indicators on the foreign ownership in the equity markets but some studies were conducted to test the effect of the indicators on the FDI which is part of the foreign ownership. An example of these studies is the study of Kayani and Ganic (2021) who concluded that the indicators have a positive effect on the FDI inward flow and the study of Seth (2018) who claimed that some indicators have a positive effect on the FDI while others do not have any effect. In addition, some researchers concluded that worldwide governance indicators positively affect some economic aspect like financial development (Sayılır et al., 2018), and economic growth (Kraipornsak, 2018), in this study, however, the effect was absent. The reason behind the insignificant effect of the indicators on the foreign ownership percentage in the equity markets of the Middle East may be phycological as foreign investors may feel that their investment in the region is not safe because of what they hear in the news and because of the presence of war in some countries of the region. These reasons may decrease trust in the equity markets of the Middle East even when the governance indicators are high. More research is needed to explore the variables that prevent foreign investors from investing in the equity markets of Middle Eastern countries that have good governance indicators.

The generalization of the results of this study to other equity markets that have the same attributes is justifiable because the study included all middle East countries for which data were available and were free from civil war. This study is the first study about the effect of the worldwide governance indicators on the foreign ownership percentage in the equity markets and because of this, it can add value to the current literature by clarifying that governance indicators cannot be used in the current time to enhance the foreign ownership percentage in the equity markets of the Middle East. Study results can be of high importance to the financial decision makers in the Middle East countries because it can help them understand that enhancing governance indicators alone cannot lead to increase the foreign ownership percentage, the image and reputation of the Middle East equity markets should be enhanced also especially after the period of political instability experienced by the region. Future research, however, is needed to determine what exactly is affecting foreign ownership in the equity markets of the Middle East and whether it's the image of these markets, its reputation, or other variables. In addition, more research may be conducted to compare the relationship of governance indicators with the foreign ownership in other regions and then analyze the reason behind any differences.

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APPENDIX: REGRESSION RESULTS FOR THE THIRD ADDITIONAL REGRESSION

Details	Value	*t* statistics	*P* value
Oman			
ß$_0$	-0.179	-0.496	.707
ß$_1$	-0.195	-0.512	.699
ß$_2$	0.195	2.296	.262
ß$_3$	-0.134	-0.388	.764
ß$_4$	0.042	0.595	.658
ß$_5$	0.382	1.472	.380
ß$_6$	-0.202	-1.330	.410
ß$_7$	0.382	0.798	.571
ß$_8$	-0.361	-0.405	.755
Adjusted R square	.932		

Jordan			
ß$_0$	0.740	5.868	.107
ß$_1$	0.306	1.640	.349
ß$_2$	-0.270	-1.936	.304
ß$_3$	0.248	1.342	.408
ß$_4$	-0.016	-0.189	.881
ß$_5$	-0.101	-0.776	.580
ß$_6$	-0.372	-2.155	.277
ß$_7$	-2.759	-1.123	.463
ß$_8$	-0.103	-0.369	.775
Adjusted R square	-.125		
Israel			
ß$_0$	0.127	0.572	.669
ß$_1$	1.793	3.458	.179
ß$_2$	-0.364	-3.746	.166
ß$_3$	-0.262	-1.524	.370
ß$_4$	0.613	1.881	.311
ß$_5$	-1.406	-3.920	.159
ß$_6$	-0.246	-1.609	.354
ß$_7$	-2.661	-2.630	.231
ß$_8$	-2.233	-1.382	.399
Adjusted R square	.768		
Palestine			
ß$_0$	0.591	1.184	.446
ß$_1$	0.313	1.406	.394
ß$_2$	-0.086	-0.721	.602
ß$_3$	0.087	0.922	.526
ß$_4$	0.016	0.042	.974
ß$_5$	0.052	0.132	.917
ß$_6$	-0.016	-0.054	.966
ß$_7$	0.470	1.112	.466
ß$_8$	-0.377	-0.313	.807
Adjusted R square	.588		

Turkey			
$ß_0$	0.186	0.498	.706
$ß_1$	0.312	1.155	.454
$ß_2$	-0.182	-1.286	.421
$ß_3$	0.004	0.012	.992
$ß_4$	0.121	0.377	.770
$ß_5$	0.124	0.264	.836
$ß_6$	-0.166	-0.719	.603
$ß_7$	0.619	0.865	.546
$ß_8$	2.773	1.417	.391
Adjusted R square	-1.529		