ECONOMICS

PANEL DATA ON THE IMPACT OF FOREIGN DIRECT INVESTMENT AND GOOD GOVERNANCE ON ECONOMIC GROWTH IN THE AMU COUNTRIES – P-ARDL APPROACHE

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Abstract. The advancement and well-being of a nation are closely linked to its economic growth, which serves as a key indicator of the nation's stability and strength. This stability is influenced by a variety of economic and non-economic factors. Among the economic factors, foreign direct investment plays a crucial role in enhancing the GDP, acting as a catalyst for competition and innovation. Conversely, non-economic factors significantly contribute to growth in an indirect manner. The AMU nations, classified as developing countries, experience challenges related to low and unstable GDP levels. Consequently, these countries are actively pursuing strategies to attract substantial foreign direct investment. It is essential to investigate the primary economic and non-economic factors that influence GDP growth. To analyze these factors and their effects on the GDP rates of the Maghreb countries, a Panel Data methodology was employed, utilizing a time series of seven control variables to control their effects on economic growth, covering the period from 1996 to 2022. The findings indicated a direct relationship and a long-term connection between controls variables and the dependent variable. Furthermore, the error correction term was found to be significant and negative (-1.091), suggesting that each year, 109.1% of the discrepancies in economic growth will be rectified over the long term. Based on the study's outcomes, it is evident that the Maghreb countries face significant challenges related to high corruption rates and political instability; thus, it is imperative for them to concentrate on these two indicators by implementing control mechanisms that promote transparency, ultimately enhancing the investment climate.

Keywords: economic growth, foreign direct investment, governance indicators, countries, AMU, Panel Data approach.
JEL Classification: E42, E44, G34, F40.

INTRODUCTION

Economic growth is the primary indicator used to assess the strength of a nation's economy, representing one of the key objectives pursued through the implementation of financial and monetary policies. Numerous theories have emerged in this field, including those proposed by Ramsey in 1928, Young in 1928, and Schumpeter in 1943. Additionally, the model developed by R.

Solow in 1956 aimed to investigate the reasons behind the disparities in wealth and poverty among different countries by examining a simple production function, which posits that an increase in the investment rate will lead to a rise in per capita income growth.
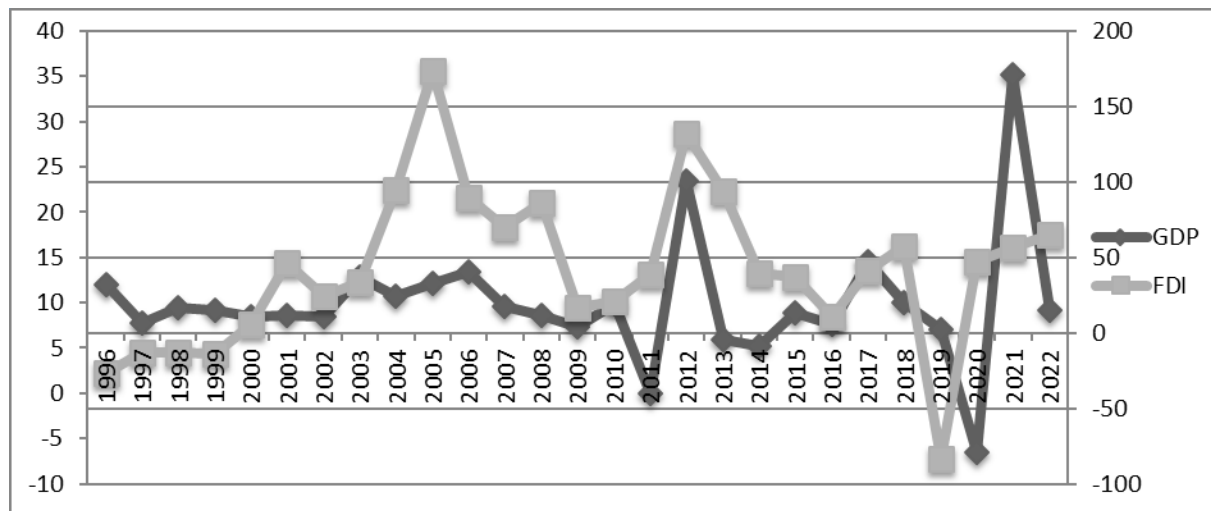

Fig. 1. The evolution of the rate of both GDP and FDI in the Maghreb countries from 1996 to 2022.

Source: World Bank World Development Indicators Database + United Nations Conference on Trade and Development (UNCTAD).

The line graph shows a low and unstable growth rate of GDP in the Maghreb countries over the past two decades. We also note that over the long study period, there is a direct relationship between GDP and FDI. In this context, economic theories have agreed on the importance of foreign investment and its role in achieving economic growth. Foreign direct investment is a vital tool for achieving economic development in many countries and a driver of growth and sustainability. Foreign direct investment refers to investment made by a company or individual from another country in the economy of a particular country, where they have direct ownership in a company or project. This contributes to increasing production capacity and creating new job opportunities, which leads to enhancing economic growth and enhancing the added value of the national economy. Accordingly, it is considered one of the most promising opportunities for the economies of the Maghreb countries.

In this context, the Maghreb nations, classified as developing countries, are striving to enhance their economies through the implementation of good governance principles. Numerous theoretical and empirical studies have been conducted to explore the correlation between governance indicators and sustainable development, with notable contributions from Mauro (1995) and Kaufmann et al. (2003). Their findings suggest that effective governance is a fundamental element in mitigating poverty and corruption, thereby facilitating both development and sustainable progress (Kaufmann, 2003). The Maghreb countries have undertaken various initiatives aimed at economic development, including the privatization of institutions and prioritizing the private sector over state-owned enterprises, as well as financial liberalization, to boost performance and attract both direct and indirect foreign investment. Nevertheless, it is observed that the economic growth of the Maghreb nations remains sluggish, largely due to the impact of pervasive non-economic factors typical of developing countries, particularly the inadequate implementation of governance principles, which include political instability, widespread violence, and corruption.

Many studies have not gone into detail in identifying the main factors affecting the GDP rate, so this study came to determine the extent of the impact of economic factors (represented by FDI) and non-economic factors represented by governance indicators (Control of Corruption, Voice and

Accountability, Political Stability and Absence of Violence/Terrorism, Government Effectiveness, Regulatory Quality, Rule of Law) on the GDP rate in the Maghreb countries. This study addresses the question of how effective governance and foreign direct investment influence economic growth in the Maghreb countries.

PAPER OBJECTIVE

The main objective of this study is to know the extent of the impact of economic and non-economic factors on the growth rate of GDP (Gross Domestic Product) during the period (1996-2022), which is a sufficient period to study the development of the various study variables in the Maghreb countries (Algeria, Libya, Morocco, Mauritania, Tunisia). The study was limited to this period to provide complete data for all countries, and also the reason for choosing to study the Maghreb countries is the great similarity in their culture with a slight difference in living standards and in the levels of their application of governance systems.

Governance indicators

The World Bank Institute asserts that there are over 140 sets of indicators available for assessing governance and its quality. However, the most prevalent and commonly utilized indicators are those developed by the World Bank (WGI), particularly following research carried out by Kaufmann and numerous World Bank specialists. (Daniel Kaufmann, 2010), who established the fundamental indicators for measuring governance:

-**Voice, participation and issue**: This indicator measures the percentage of freedom of expression that must be available to develop societies and the extent of participation in choosing their government to increase economic growth rates.

-**Political stability and absence of violence**: This indicator measures the possibility of destabilizing the people's confidence in the government, thus destabilizing political stability and creating violence, which negatively affects economic growth rates.

- **Effectiveness of governance**: This indicator measures the degree of government stability and the quality of both public services and policy formulation within the country.

-**Quality of organization**: This indicator measures the extent of the government's ability to formulate and implement policies and regulations that allow for the encouragement and development of the private sector in order to raise rates of economic growth and achieve development.

-**The rule of law**: This indicator measures the extent to which agents and dealers trust and adhere to the rules of society, the protection of property rights, the work of the police and the courts, as well as the likelihood of crime and violence occurring. A high indicator in any country supports mutual trust between the government, individuals and the business sector, which leads to attracting investors and providing a suitable investment climate.

- **Combating corruption**: This indicator measures the extent to which public authority is exercised for private gain, including small and large forms of corruption.

The assessment of these criteria is conducted using a metric known as the Institutional Quality Index (IQI). This index calculates the mean of the six criteria, with a value that falls within the range of (+2.5, -2.5). A higher value signifies the existence of effective governance. (Wide, 2021).

LITERATURE REVIEW

Governance is a broad and multifaceted concept that describes the way in which state affairs (economic, social, etc.) are managed, which is considered an engine for economic growth (World Bank 1994). In the 1990s, studies began to address the relationship between governance indicators and economic growth. For example: a study (Mauro, 1995) addressed the impact of corruption on economic growth using nine indicators, including political and social stability, political and

institutional change, as well as the possibility of opposition, job stability, relations with neighboring countries, terrorism, the legislative system, justice, bureaucracy, and corruption, using a regression relationship. The study concluded that there is an inverse relationship between corruption and investment on the one hand, and economic growth on the other. It also showed that political instability is one of the most important channels through which corruption is transmitted, explaining about 53% of the impact on GDP. Also, a 1% increase in corruption will inevitably lead to a 72% decrease in economic growth. (Mauro, Aug 1995). Ghali (1998) utilized the Co-integrated Vector Autoregressive model to examine the long-term impacts of public investment on private capital formation and economic growth, focusing on the period from 1963 to 1993. This analysis was conducted in the context of a developing country implementing by the International Monetary Fund (IMF) det stabilization programmes. It was found that private investment had a very significant impact on the GDP growth rate in Tunisia. (Ghali, 1998). Also Khan & Kumar (1997) showed in a study applied to 95 developing countries during the period from 1970 to 1990 using the pooled time series model that public and private investment have an impact on the determinants of GDP growth (such as human capital formation, population growth, and technological progress). While private investment had a more positive impact, especially in the eighties. (Khan، 1997) .

Badaoui (2005) also showed that in Sudan, both private and public investment have a positive impact on GDP growth by applying the cointegrated vector autoregressive model during the period 1969-1998. In addition, public sector investment had a negative impact on private investment during the study period and the devaluation policy discouraged private sector capital expansion. (Badaoui, 2005).

Navqi (2002) studied the relationship between economic growth, public investment and private investment in Pakistan by applying the co-integrating VAR Technique. During the period 1964-2000. The results showed that public investment has a significant positive impact on private investment in Pakistan. Moreover, both private investment and public investment are determined by economic growth. (Naqvi N. , 2002). In another study by Emara, al (2014) on explaining the relationship between governance and economic growth for 22 countries in the Middle East and North Africa (MENA) region during the year 2009, using the least squares method. Among the results reached by the study is that although the estimated per capita income levels are higher than those in most countries in the sample, they recorded relatively low performance for most of these countries in almost all six governance measures (Emara N, 2014).

Rani, K., & Batool, Z. (2016), conducted a study examining the relationship between political instability, foreign investment, and economic development in Pakistan from 1980 to 2013, utilizing the ARDL model. The findings indicated that political instability has a detrimental long-term impact on the country's development, contributing to unemployment and poverty; however, it does not appear to have any short-term effects. (Rani K. &., 2016)

Erum K., Naveed A., and Imtiaz A. (2018), conducted a quantitative study utilizing the ARDL model over the period from 1996 to 2016 to examine the relationship between investment, governance indicators, and Gross Domestic Product (GDP) in Pakistan. The findings confirmed a long-term relationship between the dependent variable and the explanatory variables. However, there was a negative impact of both private investment and the political stability index on economic growth in Pakistan. (Erum K.Z.S, 2018). Also Samarasinghe, Tharanga (2018) ,aimed to study the relationship between governance indicators and economic growth for 145 countries during the period (2002-2014), relying on some governance indicators, which are corruption control, political stability, absence of violence, participation and accountability, in addition to the foreign investment variable, government spending, Trade openness and the effects of income level to determine the impact on economic growth, using the Pooled OLS method, the fixed effects (FE) method, and the random effects (RE). The results of the study concluded that there is a smooth relationship between the indicators of corruption control and political stability, especially in the European Union countries and Latin American countries and economic growth. (Samarasinghe, 2018).

METHODOLOGY

Through this study, we will try to determine the relationship between the good application of governance indicators, foreign direct investment, and the growth rate of the gross domestic product. This study relied on a time series of data for a period of 22 years from 1996 to 2022 consisting of 135 observations covering five countries from the Maghreb: Algeria, Libya, Morocco, Mauritania, and Tunisia. Data related to economic variables were collected from the World Development Indicators database at the World Bank in addition to the United Nations Conference on Trade and Development (UNCTAD) database; GDP growth rate (% of GDP growth rate and net foreign direct investment flows (% FDI of GDP).

While data related to non-economic variables (governance indicators) were taken from the World Bank Governance Indicators (WGI) database. E-views 9 was used to analyze the data and present the results.

The time series of data were tested using the Augmented Dickey-Fuller (ADF) unit root test, then the order of integration of all variables was determined and based on the results of the ADF test, the Autoregressive Distributed Time Lag (ARDL) Panel Data modeling method was used.

The ARDL (Autoregressive Lag Distributed Model) cointegration methodology has become popular in recent years. This model was published by Smith and Pesaran (1999) and Pesaran et al. (2001). According to this methodology, the autoregressive models and the lag distributed models are combined into one model so that the time series is a function of lags of its values and the values of the current explanatory variables and lags them by one or more periods.

The ARDL test does not necessitate that the variables be integrated of the same order (either 1 or 0). Additionally, this test allows for the application of co-integration analysis for both the long-term and short-term (Pesaran, Shin, and R. Smith, 2001).
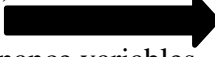
In general, the conditions for applying the ARDL model are:
- Some variables must be at level 0 and others at level 1
- There must be a joint integration between the variables (Test Cointegration)
- Determine the optimal lag periods.

The form is written as follows:
ARDL(p,q,q,…..q) :yi= p λik 1=k k-t,yi Σ + q δik 0=k x k-t,i ωi + ε.

Study variables
--:GDP(Gross Domestic Product) Dependent variable .
-FDI(Foreign Direct Index) Control variable.
Non-economic variables - governance variables Control variables
-CC : Control of Corruption
-VA: Voice and Accountability
-PA: Political Stability and Absence of Violence/Terrorism
-GE: Government Effectiveness
-RQ: Regulatory Quality
-RL: Rule of Law

Therefore, the model can be formulated in its mathematical form as follows:
$$GDP_t = \beta_0 + \beta_1 CC_t + \beta_2 VA_t + \beta_3 PA_t + \beta_4 GE_t + \beta_5 RQ_t + \beta_6 RL_t + \varepsilon_t$$

-Statistical description of study variables

It is clear from Table 1 that the skewness coefficient for most of the study variables was positive (Skewness), which means that they are affected by positive shocks compared to negative shocks, except for the anti-corruption variable (CC) and the governance effectiveness variable (GE), which had a negative skewness coefficient, which is explained by their being affected by negative shocks compared to positive shocks.

Table 1.

Statistical description of study variables

	GDP	FDI	CC	PV	VA	GE	RQ	RL
Mean	5.382263	3.110169	35.79712	42.47414	24.48261	37.83378	37.18739	34.62640
Median	3.679270	1.930005	35.48000	27.36000	23.65000	40.48000	35.87000	31.84000
Maximum	153.4926	27.65204	65.61000	1401.000	56.52000	72.68000	588.0000	76.73000
Minimum	-17.99796	-11.19173	1.420000	2.830000	2.400000	3.810000	2.370000	2.380000
Std.Dev	16.76450	4.536937	14.63500	131.2520	12.58415	17.17371	55.64085	15.58292
Skewness	7.303735	2.454515	-0.197977	10.12217	0.570054	-0.058591	8.824007	0.147190
Kurtotis	61.04999	565.2578	2.336692	105.2908	3.778436	2.015180	88.12494	1.924618
Jaque-Bera	16572.21	565.2578	2.760006	50288.72	3.778436	2.015180	34954.40	5.749368
Probability	0.0000	0.0000	0.251578	0.0000	0.012189	0.102840	0.00000	0.056434
Sum	597.4311	345.2288	3973.480	4714.630	2717.570	4199.550	4127.800	3843.530
Oobservations	111	111	111	111	111	111	111	111

Source: Prepared by the researcher based on Eviews 9 outputs.

Empirical findings
- Unit root test (ARDL-P) Fuller Dicky Adjusted Panel
Testing the stability of the study variables and determining their degree of integration. The most important tests will be used, which are:

Table 2.

Augmented Dickey Fuller (ADF) Test Result

veribles	At Level							
	GDP	FDI	CC	PV	VA	GE	RQ	RL
LLC	-9.30788 (0.0000)	-2.60367 (0.0000)	-4.97176 (0.0000)	-1.73332 (0.0415)	-0.00268 (0.4989)*	-1.00722 (0.1569)*	-2.72961 (0.0032)	-2.50810 (0.0061)
IPS	-9.05952 (0.0000)	-3.42405 (0.0003)	-4.47284 (0.0000)	-2.37076 (0.0089)	-1.88697 (0.0296)	-0.54717 (0.2921)*	-1.97996 (0.0239)	-2.631158 (0.0036)
ADF	-7.26482 (0.0000)	-3.39600 (0.0003)	-4.13870 (0.0000)	-2.17390 (0.0149)	-1.85582 (0.0317)	-7.35833 (0.0000)	-1.86664 (0.0310)	-2.63470 (0.0042)
PP	-8.17841 (0.0000)	-4.65633 (0.0000)	-3.75579 (0.0001)	-2.50180 (0.0062)	-2.47280 (0.0067)	-0.41335 (0.3397)*	-3.23262 (0.0006)	-2.68159 (0.0037)

Source: Prepared by the researcher based on Eviews 9 outputs.

Values in parentheses ( ) Indicates probabilities and * indicates probability is > 5%. Lag lengths.Variables used are defined as: GDP= Gross Domestic Product annual growth rate, FDI = Foreign Direct Index, CC= Corruption and PV= PV: Political Stability and Absence of Violence/Terrorism, VA: Voice and Accountability, ,GE: Government Effectiveness, RQ: Regulatory Quality, RL: Rule of Law. Test types: Levin, Lin & Chu t(LLC), Im, Pesaran and Shin W-stat (IPS), ADF - Fisher Chi-square(ADF), PP - Fisher Chi-square(PP).

The findings presented in Table 2 reveal that the variables GDP growth, foreign direct investment (FDI), control of corruption (CC), political stability and absence of violence/terrorism (PV), regulatory quality (RQ), and rule of law (RL) exhibit stability at level (I0). In contrast, voice

and accountability (VA) and government effectiveness (GE) demonstrate stability after first differences (I1). Consequently, the data series comprises a combination of variables that are stable at level and those that stabilize after first differences, thereby satisfying the initial requirement for the application of the ARDL model.

   - co-integration tests

   In our study, we rely on the Panel-ARDL methodology, and to estimate this model, we use the Pooled Mean Group Estimator (PMG) method, developed by (Pesaran and al 1999).

Table 3.

Long Run Results & Short Run Results

Variables	Coefficient	Std-Error	T Statistic *prob
FDI	0.483825	0.102654	4.713152 0.0000
CC	0.188156	0.045846	4.**104113** 0.0001
PV	0.000455	0.003217	0.14138 0.8878
GE	2.243923	0.206340	10.87488 0.0000
RL	0.141727	0.076457	1.853680 0.0666
RQ	0.048983	0.015641	3.131805 0.0028
VA	0.275451	0.129085	2.133879 0.0375

Short Run Equation

COINTEQ01	-1.091433	0.116505	-9.368147	0.0000
D(FDI)	0.1165578	0.417981	0.278908	0.7808
D(CC)	-0.316973	0.178675	-1.774021	0.0795
D(PV)	0.182794	0.183203	0.997766	0.3207
D(GE)	0.589310	0.520079	1.133117	0.2623
D(RL)	0.469226	0.591294	0.793557	0.4293
D(RQ)	-0.421842	0.111002	-3.800311	0.0004
D(VA)	-0.609870	0.213027	-2.862878	0.0060

   *Panel- ARDL :Pooled mean group regression:(PMG)

   Source: Prepared by the researcher based on Eviews 9 outputs.

   The results of the long-term co-integration shown in Table 3 show that foreign direct investment and all governance indicators have a positive impact on the GDP growth rate in the Maghreb countries. While the results of the short-term co-integration showed that the error correction term was significant and negative (-1.091433), which means that in each year the deviations from the short-term to the long-term will be adjusted by approximately 109.1433% of the economic growth imbalance, which means that there is a co-integration between all the study variables. (Hassler U. &., 2006)

   And that there is a causality relationship between both foreign investment and governance indicators on the GDP growth rate in the long-term.

Table 4.

Causality test – Wald Test

Variables	Test Statistic	Value	Prob
Variables			
FDI	F-Statistic	22.21381	0.0000
	Chi-Square	22.21381	0.0000
CC	F-Statistic	16.84375	0.0001
	Chi-Square	16.84375	0.0000
PV	F-Statistic	0.019990	0.8878
	Chi-Square	0.019990	0.8876
GE	F-Statistic	37.18137	0.0000
	Chi-Square	37.18137	0.0000
RL	F-Statistic	3.436131	0.0666
	Chi-Square	3.436131	0.0638
RQ	F-Statistic	7.739340	0.0064
	Chi-Square	7.739340	0.0054
VA	F-Statistic	20.12684	0.0000
	Chi-Square	20.12684	0.0000

Source: Prepared by the researcher based on Eviews 9 outputs.

The data presented in the table reveals that all examined variables significantly impact the GDP growth rate, as evidenced by a probability value below 5%.This suggests a positive causal relationship ,both in the long and short term, among the variables analyzed. However, the indicator for political stability and absence of violence and terrorism(PV) is an exception, as it shows a probability value exceeding 5% indicating a lack of short-term causal influence on GDP growth.

CONCLUSION

This study focused on a critical area concerning the empirical relationship between economic and non-economic factors, which serve as indicators for assessing a nation's economic activity and its influence on economic growth. Many countries frequently implement policies aimed at managing foreign direct investment, recognized as a primary source of external financing, particularly in the context of limited financial resources prevalent in most Maghreb nations. Additionally, these countries adopt various strategies to foster economic growth. Our findings indicate that governance exerts a more significant influence on the growth rate of the Gross Domestic Product (GDP) than other economic factors, as it establishes the fundamental framework necessary for creating a productive environment that attracts private sector investments.

Through this study, we tried to analyze the relationship between the six governance indicators issued by the World Bank, namely the control of corruption index, the government effectiveness index, the political stability and absence of violence index, the participation and accountability index, the rule of law index and the regulatory quality index, foreign investment and economic growth in the Maghreb countries. The autoregressive distributed lag (ARDL) model was used to determine the long-term and short-term relationship between the dependent variable and the independent variables during the period from 1996 to 2022.

The findings indicated that while efforts to combat corruption yielded a modest positive effect on long-term outcomes, they simultaneously resulted in a significant adverse effect on the GDP growth rate in the short term within the Maghreb nations. Specifically, a 1% increase in corruption correlates with a short-term decline in GDP growth of (-0.31). Regrettably, all Arab nations, including those in the Maghreb region, have not achieved favorable rankings regarding corruption

prevalence. This situation is largely attributed to widespread bribery, entrenched interests, bureaucratic inefficiencies, and the marginalization of impoverished communities. Collectively, these factors, along with others, have adversely affected the economies of the Maghreb countries and, as a result, hindered GDP growth.

Also, the Voice and Issue (VA) and Regulatory Quality (RQ) indexes had a very small positive impact in the long term, but in contrast, they had a large negative impact in the short term on the GDP growth rate. This indicates that an increase in both of them by 1% leads to a decrease in the GDP rate by (-0.60, -0.42) respectively. This means that the level of freedom of expression required to develop societies and the extent of participation in choosing their government is very low, in addition to the government's inability to formulate and implement policies and regulations that allow for the encouragement and development of the private sector in order to raise economic growth rates and achieve development within most Maghreb countries.

The rule of law index had a positive impact in the long and short term on GDP growth, which explains the long-term positive relationship between FDI and GDP growth (Figure 01), which is in complete agreement with economic theory. However, there was a small impact in the short term. This explains the lack of trust among agents in the rules of society, and the lack of mutual trust between the government, individuals and the business sector... The existence of unclear laws within the country (negative RQ) is considered an obstacle to economic development, which prevents attracting investors, whether foreign or local.

To summarize, it can be concluded that governance, characterized by its six indicators, significantly influences economic growth. Effective management of each indicator is essential, especially in terms of controlling corruption at all levels—political, administrative, economic, and ethical—as well as ensuring political stability and the absence of violence, as these factors contribute positively to rapid economic development. This process enhances democracy, improves living standards, decreases unemployment and poverty rates, and supports justice and equality. Additionally, it will have a beneficial effect on institutional quality and foster trust among stakeholders and investors, all of which are integral to the goals of sustainable development. Consequently, there is a positive and direct long-term correlation between governance quality and foreign direct investment, as the effective application of governance principles forms the essential basis for promoting and facilitating foreign direct investment, thereby achieving economic growth.

RECOMMENDATIONS

1. To enhance the quality of governance indicators and maximize macroeconomic indicators, thereby achieving financial stability and economic growth in the Maghreb countries, the following measures should be implemented:

- Mitigating corruption by establishing new plans and stricter laws to reduce its risks to the economy.

- Digitizing public administration to monitor management procedures, reduce bureaucracy, and address information asymmetry, thus attracting both local and foreign investments.

- Creating a conducive environment for the effective implementation of good governance through appropriate laws and regulations, ensuring that these are not linked to political issues, while involving sectors and non-governmental organizations in applying governance principles (participation and accountability) to encourage community investment.

- Building investor confidence through political stability.

- Promoting a culture of governance within the societies of the Maghreb countries, while lifting all state-imposed restrictions and minimizing government intervention to foster a healthy environment conducive to attracting foreign investments.

2. In order to improve the quality of governance indicators and enhance macroeconomic indicators, ultimately leading to financial stability and economic growth in the Maghreb region, it is essential to undertake the following actions:

- Reduce corruption by implementing new strategies and more stringent laws aimed at minimizing its economic impact.

- Transition to digital public administration to oversee management processes, decrease bureaucracy, and resolve information disparities, thereby encouraging both domestic and international investments.

- Establish a supportive framework for the proper execution of good governance through relevant laws and regulations, ensuring that these are not entangled with political challenges, while engaging various sectors and NGOs in the application of governance principles (participation and accountability) to motivate community investment.

- Foster investor confidence through the maintenance of political stability.

- Cultivate a governance culture within the communities of the Maghreb nations, necessitating the removal of all state-imposed restrictions and limiting government interference to create a favorable environment for attracting foreign investments.

REFERENCES

Badaoui, A. (2005). Private capital formation and macroeconomic policies in Sudan:application of a simple cointegrated Vector autoregressive model. *http://www.mafhoum.com/press7/233E12.pdf*, 11.

Daniel Kaufmann, K. a. (2010). «The World Wide Governance Indicators: Methodology and Analytical Issu ». *World Bank Washington DC*, 4.

Emara N, E. J. (2014). overnance and Economic Growth: The Case of Middle East and North African Countries. *Journal of Development and Economic Policies, 16(1),* 47-71.

Erum K.Z.S, N. S. (2018). Empirical analysis of relationship between investment, goodgovernance and GDP growth rate in Pakistan (1996-2016). *Journal of Economics Library .http://www.kspjournals.org/*, 1-10.

Ghali, K. (1998). Public investment and private capital formation in a vector error correction model of growth. *Applied Economics. 30(6), doi. 10.1080/000368498325543*, 837-844.

Hassler, U. &. (2006). Autoregressive distributed lag models and co-integration. *Allgemeines Statistisches Archiv, 90(1), 59-74. doi. 10.1007/s10182-006-0221-5*, 22.

Kaufmann, D. M. (2003), « Governance matters III, Governance indicators for 1996-2002». *The World Bank*, 1-60.

Khan, M. &. (1997). Public and private investment and the growth process in developing countries. *S Oxford Bulletin of Economics and Statistics, 59(1). doi. 10.1111/1468-0084.00050*, 69-88.

Mauro, P. (Aug 1995). Corruption and growth. *Vol. 110, No. 3, the Quarterly Journal of Economics*, pp. 681-712 (32 pages.

Naqvi, N. (2002). Crowding-in or crowding-out? Modelling the relationship between public and private fixed capital formation using co-integration analysisThe case of Pakistan 1964. *Pakistan Development Review, 41(3)*, 255-276.

Rani, K. &. (2016). Impact of political instability and foreign direct investment on economic development In Pakistan. *Asian Economic and Financial Review, 6(2), 83-89. doi https://doi.org/10.18488/journal.aefr/2016.6.2/102.2.83.89*, 83-89.

Samarasinghe, T. (2018). IMPACT OF GOVERNANCE ON ECONOMIC GROWTH. *Munich Personal RePEc Archive.* https://mpra.ub.uni-muenchen.de/89834/, 1-51.

Worldbank, 2021. https://www.worldbank.org/en/home

ПАНЕЛЬНІ ДАНІ ПРО ВПЛИВ ПРЯМИХ ІНОЗЕМНИХ ІНВЕСТИЦІЙ ТА НАЛЕЖНОГО ВРЯДУВАННЯ НА ЕКОНОМІЧНЕ ЗРОСТАННЯ В КРАЇНАХ САМ: ПІДХІД P-ARDL

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Розвиток і добробут країни тісно пов'язані з її економічним зростанням, яке слугує ключовим показником стабільності та сили держави. На цю стабільність впливають різноманітні економічні та неекономічні фактори. Серед економічних факторів прямі іноземні інвестиції відіграють вирішальну роль у збільшенні ВВП, виступаючи каталізатором конкуренції та інновацій. І навпаки, неекономічні фактори роблять значний внесок у зростання опосередковано. Країни, що належать до категорії країн, що розвиваються, стикаються з проблемами, пов'язаними з низьким і нестабільним рівнем ВВП. Як наслідок, ці країни активно впроваджують стратегії, спрямовані на залучення значних обсягів прямих іноземних інвестицій. Важливо дослідити основні економічні та неекономічні фактори, які впливають на зростання ВВП. Для аналізу цих факторів та їхнього впливу на темпи зростання ВВП країн Магрибу було застосовано методологію панельних даних з використанням часових рядів семи контрольних змінних для контролю їхнього впливу на економічне зростання, що охоплює період з 1996 по 2022 рік. Отримані дані вказують на прямий зв'язок і довгостроковий зв'язок між контрольними змінними та залежною змінною. Крім того, було виявлено, що термін виправлення помилок є значним і від'ємним (-1,091), що свідчить про те, що кожного року 109,1% розбіжностей в економічному зростанні буде виправлено в довгостроковій перспективі. Виходячи з результатів дослідження, очевидно, що країни Магрибу стикаються зі значними проблемами, пов'язаними з високим рівнем корупції та політичною нестабільністю; таким чином, для них вкрай важливо зосередитися на цих двох показниках, впроваджуючи механізми контролю, які сприяють прозорості, що в кінцевому підсумку покращить інвестиційний клімат.

Ключові слова: економічне зростання, прямі іноземні інвестиції, індикатори управління, країни, Союз арабського Магрибу, метод панельних даних.