The Impact of Innovation Factors and Macroeconomic Factors on Ease of Doing Business in MENA Region

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ABSTRACT

In recent decades, the rapid expansion of global economies has emphasized the crucial role of a supportive business environment in fostering sustainable growth and development. Although there has been increasing attention on enhancing the ease of doing business, limited research has explored how innovation and macroeconomic factors collectively shape business-friendly environments across nations. This study addresses this gap by examining the interrelationship between innovation, macroeconomic conditions, and the ease of doing business, with a particular focus on their combined role in strengthening national competitiveness.

The research analyzes key aspects of innovation—such as knowledge creation, technological progress, and creative

output—alongside critical macroeconomic indicators, including real interest rates, inflation, and GDP growth. Through a comprehensive analytical approach, the study evaluates how these dimensions influence regulatory frameworks, investment climates, and entrepreneurial ecosystems.

The findings reveal that innovation significantly contributes to institutional development, promotes technology-driven solutions, and fosters vibrant entrepreneurial activities that drive business growth. At the same time, stable macroeconomic conditions—defined by transparent regulations, efficient infrastructure, controlled inflation, and financial stability—create a favourable environment for investment and smoother business operations. Collectively, these factors streamline business startup procedures, reduce administrative and regulatory hurdles, enhance investor confidence, and attract both domestic and international investments.

This research enriches the existing body of knowledge by offering new perspectives on the combined effects of innovation and macroeconomic stability on the ease of doing business. The results emphasize the need for policymakers to adopt innovation-driven strategies while ensuring sound economic management to build sustainable, competitive, and business-friendly environments within an increasingly globalized economy.

Keywords: Ease of Doing Business, Innovation, Macroeconomics Factors, creativity, GDP

المستخلص

في العقود الأخيرة، أكّدت التنمية السريعة للاقتصادات العالمية على الدور الحاسم للبيئة التجارية الداعمة في تعزيز النمو والتنمية المستدامة. ورغم تزايد الاهتمام بتعزيز سهولة ممارسة الأعمال، فإنّ الأبحاث حول كيفية تداخل الابتكار والعوامل الكلية الاقتصادية في تشكيل بيئة ملائمة للأعمال عبر الدول لا تزال محدودة. تتناول هذه الدراسة هذه الفجوة عبر فحص العلاقة المتبادلة بين الابتكار، والظروف الاقتصادية الكلية، وسهولة ممارسة الأعمال، مع التركيز بشكل خاص على دورها المشترك في تعزيز التنافسية الوطنية. يحلل البحث الجوانب الرئيسية للابتكار — مثل خلق المعرفة، والتقدم التكنولوجي، والإنتاج الإبداعي — إلى جانب مؤشرات اقتصادية كلية حرجة، منها أسعار الفائدة الحقيقية، والتضخم، ونمو الناتج المحلي الإجمالي. ومن خلال نهج تحليلي شامل، تقوّم الدراسة كيف تؤثر هذه الأبعاد في الأطر التنظيمية، ومناخ الاستثمار، ونظم ريادة الأعمال. تكشف النتائج أن الابتكار يساهم بشكل كبير في تطوير المؤسسات، ويعزز الحلول التقنية، وينمّي أنشطة ريادة الأعمال النابضة بالحياة التي تُحفّز نمو الأعمال. في المقابل، تخلق الظروف الاقتصادية الكلية المستقرة — المحددة عبر تنظيمات شفافة، وبنية تحتية فعّالة، وتضخم مضبوط، واستقرار مالي — بيئة مواتية للاستثمار وسلاسة في العمليات التجارية. مجتمعةً، تعمل هذه العوامل على تيسير إجراءات بدء الأعمال، وتقليل العقبات الإدارية والتنظيمية، وتعزيز ثقة المستثمرين، وجذب الاستثمارات المحلية والدولية. تثري هذه الدراسة الجسم المعرفي الحالي من خلال طرح آفاق جديدة بشأن الآثار المشتركة للابتكار والاستقرار الاقتصادي الكلي على سهولة ممارسة الأعمال. وتُبرز النتائج ضرورة أن يتبنى صانعو السياسات استراتيجيات مدفوعة بالابتكار ضمن إدارة اقتصادية سليمة لبناء بيئات مستدامة، تنافسية، وملائمة للأعمال في اقتصادٍ عالمي متزايد العولمة.

الكلمات الافتتاحية: سهولة ممارسة الاعمال، الابتكار، عوامل اقتصادية كلية، الإبداع، الناتج المحلي الإجمالي

Introduction

Our project examines the annual factors influencing the ease of the emergence of new enterprises. **Gaffeo and Santaro (2009)** found a negative correlation between business failure and economic activity. Other studies highlight the impact of macroeconomic variability on business survival. According to the opportunity cost (OC) theory of productivity growth, aggregate economic disturbances may have long-run positive effects on growth, and such activity is empirically advantageous during recessions. Our econometric model is built around this theory. We hypothesize that factors like GDP per capita, income, taxes, new business density, and number of internet users may affect business formation ease.

Each country has its own environment created by unique types of policies, demographics, and economic conditions. Knowing which factors and policies support the growth of new businesses can be very beneficial. Countries aiming to boost innovation and expand their markets can use such insights to guide policymaking. The lack of research on this topic is especially detrimental to developing countries wishing to replicate the success of more advanced economies.

This research is a contribution to literature because it differs from other studies in several important aspects. The present research looks not only at the impact of the World Bank's Doing Business indicators on economic growth but also

considers a more general model that includes innovation (such as knowledge and technology and creative output) and macroeconomic factors (real interest rate, tax revenue, and GDP).

To facilitate this analysis, the research is organized as follows: Section Two reviews the relevant empirical literature, encompassing both past and contemporary studies; Section Three outlines the data sources and provides the necessary definitions; and Section Four presents the panel estimation results alongside the corresponding conclusions.

Research Questions:

1- What are the key dimensions of innovation, macroeconomic factors, and ease of doing business?
2- How does innovation influence the ease of doing business?
3- In what ways do macroeconomic factors affect the ease of doing business?

Research objectives:

1- To identify and define the key dimensions of innovation, macroeconomic factors, and the ease of doing business.
2- To examine the influence of innovation on the ease of doing business.
3- To evaluate the impact of macroeconomic factors on the ease of doing business.

Research Hypothesis:

1- **H_1:** Innovation has a significant impact on the ease of doing business.
2- **H_2:** Macroeconomic factors have a significant impact on the ease of doing business.

Research limitation:

This study examines the impact of innovation and macroeconomic factors on the ease of doing business over the period 2013–2020. It focuses only on three aspects of innovation—knowledge, technological capability, and creative output—as well as three macroeconomic variables: real interest rate, inflation rate, and GDP.

Research Structure:

This Research consists of Four chapters:

Chapter 1: Introduction

Offers a general overview of the study by presenting the background, research problem, objectives, and an outline of the overall structure.

Chapter 2: Literature Review

Examines existing studies and theoretical perspectives relevant to the topic, highlighting research gaps and establishing the basis for the study.

Chapter 3: Research Methodology and Statistical Testing

Describes the research approach, data collection procedures, variables considered, and the statistical methods applied for analysis.

Chapter 4: Results and Discussion

Displays the key findings of the research and interprets them in relation to previous literature, while also providing insights and recommendations for future studies.

Literature Review

The Relationship Between Ease of Doing Business, Innovation, and Competitiveness:

According to the World Bank (**IBRD, 2020**), ease of doing business refers to a regulatory environment that facilitates the establishment and operation of local enterprises. In this sense, entrepreneurship is supported by public policies, the legal system, and bureaucratic efficiency, thereby enhancing a country's global competitiveness.

It is not nations themselves that hold power, but the companies operating within their borders. Thus, national competitiveness depends on the capacity of domestic firms to innovate more rapidly than international rivals. Several scholars have similarly underscored innovation as a key determinant of productivity improvements and, consequently, of a nation's competitive position (**Barrichello et al., 2020; Feldmann et al., 2019; Schreiber et al., 2016**). Supporting this view, **Gordon**

(2016) demonstrated that economic growth is not solely linked to innovation but also to rising productivity levels. This understanding explains why many governments prioritize innovation in their growth agendas, often through industrial strategies and investments in research and development (R&D).

In examining the link between innovation and productivity, various models have been proposed. One perspective highlights the absorption of external knowledge and its integration into internal processes, allowing firms to generate innovative products (**Armstrong & Lengnick-Hall, 2013; Brettel et al., 2011; Cohen & Jacomossi & Feldmann, 2021; Najafi-Tavani et al., 2014; Ritala & Hurmelinna-Laukkanen, 2013; Zahra & George, 2002**).

Osuna-Alarcón and Rodríguez-Hernández (2020) emphasize the importance of education and entrepreneurial attitudes in driving successful business development, arguing that innovation should serve as the foundation for enhancing firms' competitiveness. Within this context, fostering a culture of innovation becomes essential, with research and development (R&D) recognized as a key antecedent of innovation diffusion. Investments in R&D have been consistently associated with stronger performance outcomes (**Bae, 2016; Barrichello et al., 2020; Bertrand & Mol, 2013; Spezamiglio et al., 2016**).

Nevertheless, for firms to strengthen and advance their innovative capabilities, it is essential to operate within a business environment that actively supports and encourages such practices (**Melo et al., 2017**).

The World Bank's Ease of Doing Business ranking serves as a tool for both public and private decision-makers to evaluate countries' regulatory performance over time. It reflects the distance of each economy from the best regulatory practices across the indicators that constitute the index, while also allowing comparisons of performance gaps among nations by tracking regulatory changes (**IBRD, 2020**).

Both innovation and the ease of doing business significantly influence national economies, as they affect information exchange, the advancement of information and communication technologies (ICT), and citizens' per capita income (**Alderete, 2020). Jerbashian and Kochanova (2016)** highlight that business regulations shape ICT investments, which tend to decline when the costs of business entry, operation, and property registration rise, but increase when legal rights are well protected. Similarly, **Dougherty (2007)** established a clear link between ease of doing business and innovation, emphasizing that governments should primarily focus on improving the business environment to reinforce this relationship.

From the perspective that ease of doing business shapes innovation, the increasingly digitalized world introduces regulatory challenges linked to technological progress. In the context of digitization and the rapid transformation of cross-border digital trade, technological innovation increasingly demands enhancements in international trade frameworks. These include the regulation of cross-border data flows, the harmonization of national data exchange standards, frameworks for the export of digital goods and services, and data privacy and security requirements (**Smirnov & Karelina, 2020**).

The interplay between innovation and the ease of doing business underscores their joint importance for competitiveness, which will be further examined in the following section.

Canare et al. (2019) investigated the link between the ease of doing business and business setup costs in the Philippines. Their findings indicated that a more favourable environment for starting a business positively influences business creation, with this relationship being more evident when analyzing separately the costs of starting and maintaining operations.

Moreover, the ease of doing business plays a significant role in attracting foreign direct investment (FDI). Elements such as starting a business, registering property, obtaining electricity, and resolving insolvency act as critical drivers for investors. Conversely, factors like dealing with construction permits,

accessing credit, paying taxes, and protecting minority shareholders were found to negatively affect FDI inflows **Haliti et al., 2020**).

A significant shift was noted in the Doing Business Report 2019 (**Mudaliar et al., 2019**). The country was ranked 146th out of 190 economies, showing progress in several areas. These improvements included the streamlining of pre-registration and registration procedures for new businesses, the introduction or enhancement of online services, a simplified approval process for obtaining electricity, the implementation or improvement of electronic systems for submitting export documents, and the strengthening of border infrastructure for imports, among other regulatory reforms.

The literature reviewed demonstrates a close link between innovation, ease of doing business, and national competitiveness. Innovation—driven by R&D and organizational capabilities—emerges as a key factor for boosting productivity and economic growth. Yet, its impact is strongly influenced by the presence of a business environment that minimizes bureaucratic obstacles and supports entrepreneurship. In this regard, ease of doing business not only stimulates firm creation and attracts foreign direct investment but also fosters technological advancement and digital transformation. Collectively, these dynamics form a mutually reinforcing cycle, where regulatory efficiency enables

innovation, which in turn enhances competitiveness and promotes sustainable economic development.

The Relationship Between Macroeconomic factors and Ease of doing Business:

Nangpiire, Rodrigues, and Adam (2018) examined the relationship between the business environment in Sub-Saharan African countries and foreign direct investment (FDI) inflows. Their study assessed whether well-structured market processes were positively associated with attracting FDI. They evaluated these countries using the World Bank's ease of doing business indicators, incorporating all ten sub-indicators into the analysis.

Hassan and Basit (2018) examined the impact of the Ease of Doing Business (EODB) on inward Foreign Direct Investment (FDI) during the period 2011–2015 across the globe. The study assessed factors such as business start-ups, compensation, land ownership, tax payments, and contract enforcement. Findings revealed that effective contract compliance positively influences inward FDI, while challenges related to property registration and cash handling have a significant negative impact. The research concludes that enhancing processes like lease execution, loan approvals, and property registration facilitates doing business and attracts more FDI. Moreover, the study highlights that international companies can better understand the advantages of

investing in foreign markets through FDI by recognizing the importance of streamlined business operations.

Canare (2018) investigated the impact of business ease on company formation. Using nine-year panel data from approximately 120 countries based on the World Bank's ease of doing business reports, the study revealed that overall EODB positively contributes to market growth. Among the indicators, the process of starting a business has the strongest effect, while tax payment procedures also play a crucial role.

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Several factors are considered to influence or be influenced by entrepreneurial activity. Among the most examined in literature are Gross Domestic Product (GDP), inflation, unemployment, loan rates, and the difficulty of starting a business.

Key indicators of a stable macroeconomic environment include low and stable inflation, a reduction in the budget deficit, and an increase in the share of national savings within the gross domestic product. According to the World Economic Forum's Global Competitiveness Report (2018), Serbia has achieved the

greatest progress in improving its macroeconomic environment within the region. For the third consecutive year, the country has advanced in its competitive position, ranking 65th out of 140 countries.

Entrepreneurship plays a vital role in job creation, making it a key focus for policymakers in developed economies. Entrepreneurs and small and medium-sized enterprises (SMEs) are also a significant source of innovation, as innovation is inherently linked to entrepreneurial activity. Many SMEs emerge because of commercializing innovations and are characterized by greater flexibility, dynamism, and responsiveness to changes in market demand compared to larger firms. Moreover, entrepreneurship contributes to the diversification of economic structures and serves broader social purposes by promoting entrepreneurial values, creativity, and a culture of innovation.

The implementation of macroeconomic policy instruments and measures can significantly facilitate the development of entrepreneurship. Key support measures include the provision of business infrastructure, encouragement of cluster development, promotion of GDP growth, and government-backed funding initiatives. Business infrastructure refers to a network of specialized organizations and institutions dedicated to assisting entrepreneurs and supporting small and medium-sized enterprises (SMEs) through various forms of guidance, resources, and services.

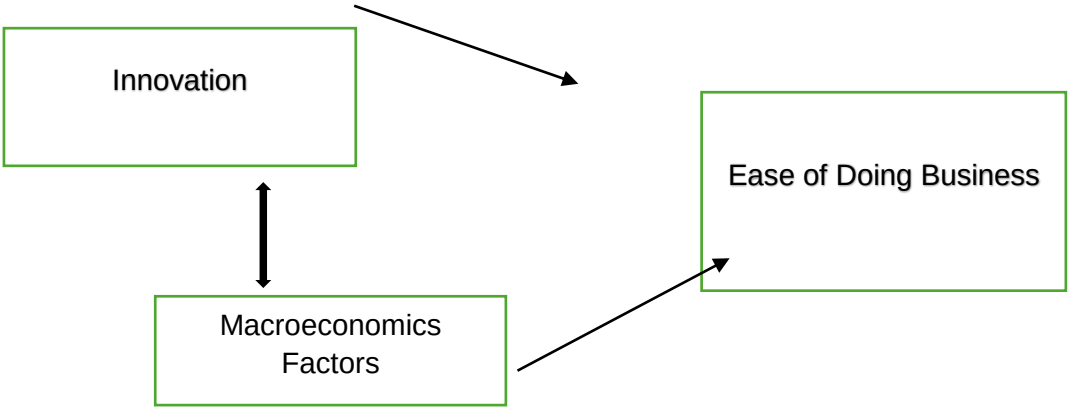
Business infrastructure comprises networks of various organizations and institutions dedicated to supporting entrepreneurs and small and medium-sized enterprises (SMEs). These include business incubators, industrial zones, technology Parks, and regional and local development agencies, as well as institutions such as branches of the National Employment Service, the Development Fund of the Republic of Serbia (including the AP Vojvodina Development Fund), regional chambers, and agencies for regional development.

To foster the establishment of new enterprises and support the growth and development of existing ones, several activities are undertaken, including:

• Adopting strategies for the development of SMEs and entrepreneurship aimed at job creation.
• Encouraging the formation, operation, and expansion of micro, small, and medium enterprises by providing assistance, advisory services, training, and consulting.
• Building long-term capacities for sustainable SME and entrepreneurial development through projects designed to enhance efficiency, improve competitiveness, ensure quality, support internationalization, and promote IT integration, while also raising awareness of entrepreneurship's importance.

Conceptual Framework:

Independent variables **Dependent Variables**



Research Methodology and Statistical Testing:

Data Analysis Techniques

Dependent Variables

The author uses the aforementioned *Ease of Doing Business Score* variable as the dependent variable. https://archive.doingbusiness.org/en/rankings.

Independent Variables

The data that are used in this study are secondary sources. Global Innovation Index (https://www.wipo.int/web-publications/global-innovation-index-2024/en/gii-2024-results.html) report that published by Cornell University,

INSEAD and WIPO is the source that is used for collecting data of the Innovation output (knowledge and technology and creative output).

Macroeconomic variables data are obtained from the world bank database. The data is collected for 8 years from January 2013 to December 2020 for different countries worldwide.

The statistical methods that are used in this research are:

Descriptive Statistics

The descriptive statistics provide an overview of the key variables in the study. For each variable, measures such as the mean, minimum, maximum, and standard deviation were calculated to assess central tendency and dispersion. The mean indicates the average value across observations, while the minimum and maximum reflect the range of values. The standard deviation shows the extent of variability around the mean.

Mixed Effect Regression Model

The Mixed effects model can be defined as:

$$\boldsymbol{Y_i = X_i\beta + Z_i b_i + \varepsilon_i}$$

where Y_i is an $t_i \times 1$ vector of observations for ith market takes the form $[y_{i1}, \ y_{i2}, \ldots\ldots \ y_{it}]^T$, X is an $t_i \times p$ matrix of covariates, β is vector of covariates, and $Z_i, a\ t_i \times q$ (number of unknown variables) is a subset of X_i,

modeling how the response evolves over time for the ith market. Furthermore, $b_i = [b_{io}, b_{i1}, \dots\dots\dots\dots, b_{i(q-1)}]^T$ is a $q \times 1$ vector of random effects for the ith market describing unknown market characteristics. ε_i is a vector of residual components, it is usually assumed that the errors $\varepsilon_i's$ are independent and normally distributed with mean vector 0 and covariance matrix $\sigma_\varepsilon^2 \, I_{m_i}$, and the random effects $b_i's$ are independent of $\varepsilon_i's$, and normally distributed with mean vector 0 and covariance matrix V_b.

As with any model, the regression model has some assumptions, which are:

a- Normality of Dependent Variables Assumption: it must be checked before fitting the model. Normality assumption, a one of the most important assumptions of regression analysis assumptions. To test this assumption a one-sample Kolmogorov-Smirnov Test which is a non-parametric test for testing the normality of data is used, where the null hypothesis of this test is "variable follows normal distribution", so if p-value is greater than 0.01 or 0.05 then we do not reject the normality of the dependent variable.

b- No Multicollinearity Assumption: it is defined as a linear relation between explanatory variables and can be checked through Variance Inflation Factor (VIF). Multicollinearity is suspected if the VIF value is greater than 10.

c- Linearity Assumption: it is also one of the assumptions of the regression model. The linearity can be checked using the RESET test.

d- Homogeneity of Residuals: this will also be checked and if the residuals are not homogeneous, then robust estimation will be used.

The selection between the fixed effects and random effects models is based on the outcome of the Hausman test.

We will estimate 2 models for the dependent variable (Y). Each model will be specified in the following form:

$$Y_i = b_o + \sum_i \beta_i x_i + \varepsilon$$

where; β_0: is the constant term; β_i : is the regression coefficient for ith independent variable; ε: is the regression residual term.

For each model, we first present the Hausman test to determine whether the fixed effects or random effects model is more appropriate. Next, we apply the RESET test to assess whether the linear form is suitable for estimating the model. We also conduct a heteroscedasticity test to examine whether the residuals are homoscedastic. If heteroscedasticity is detected, robust estimation methods are employed.

First Model (Base Model): The Impact of Innovation Factors Ease of Doing Business

- **Descriptive Statistics**

This subsection presents descriptive statistics, including the mean, standard deviation, minimum, and maximum values, for all the variables used in the study.

Table (1.1): Descriptive statistics of the key variables

Variable	Obs.	Mean	Std. Dev.	Min	Max
Ease Doing Business	712	4.237	0.1542	3.713	4.464
Knowledge And Technology Outputs (Ln Score)	712	3.648	1.0015	0	4.942
Creative Outputs (Ln Score)	712	3.667	0.9484	0	4.905

Table (1.2): Frequency distribution of TIME-EFFECT

Time-Effect	Frequency	Percentage
1	89	12.5%
2	89	12.5%
3	89	12.5%
4	89	12.5%
5	89	12.5%
6	89	12.5%
7	89	12.5%
8	89	12.5%
Total	712	100.0%

Table (1.3): Frequency distribution of NORTH AMERICA COUNTRIES

North America Countries	Frequency	Percentage
0	624	87.6%
1	88	12.4%
Total	712	100.0%

Table (1.4): Frequency distribution of Asian Countries

Asian Countries	Frequency	Percentage
0	568	79.8%
1	144	20.2%
Total	712	100.0%

Table (1.5): Frequency distribution of European Union Countries

European Union Countries	Frequency	Percentage
0	424	59.6%
1	288	40.4%
Total	712	100.0%

Table (1.6): Frequency distribution of MENA Countries

MENA Countries	Frequency	Percentage
0	624	87.6%
1	88	12.4%
Total	712	100.0%

Table (1.7): Frequency distribution of African Countries

African Countries	Frequency	Percentage
0	608	85.4%
1	104	14.6%
Total	712	100.0%

Regression Analysis

A mixed effects model is employed to evaluate the impact of the independent variables on the dependent variable. Additionally, multiple regression analysis is conducted to rank the independent variables based on the significance of their effects.

As previously noted, it is essential to verify the normality of the data before estimating the regression model.

Multicollinearity Test

Before estimating the model, multicollinearity was assessed. As shown in the table below, all independent variables exhibit acceptable Variance Inflation Factor (VIF) values, each below the commonly accepted threshold of 10, indicating no serious multicollinearity concerns. However, the variable North American Countries will be omitted from the model due to their perfect collinearity.

Table (1.8): Variance inflation factors (VIF) and tolerance levels for independent variables

Variable	VIF	Tolerance (1/VIF)
Knowledge And Technology Outputs (Ln Score)	2.24	0.446
Creative Outputs (Ln Score)	2.35	0.426
Time-Effect	1.00	0.999
MENA Countries	1.76	0.567
Mean VIF	2.04	

Hausman Test

Table (1.9): Hausman test results for model selection between fixed and random effects

Test:	H_0: difference in coefficients not systematic
$\chi^2(7)$	$= (b - B)'[Var(b) - Var(B)]^{-1}(b - B)$
	$= 9.63$
Prob > chi	$= 0.2193$

Based on the results presented in the table above, the most appropriate model for estimating the first model is the **random effects model**, as the p-value of the Hausman test exceeds 5%,

indicating no significant difference between the fixed and random effects estimators.

RESET Test

Table (1.10): RESET test results for model specification validity

Ramsey RESET test using powers of the fitted values of Ease of doing business score (ln Score)	
H_0: model has no omitted variables	
$F(3, 80)$	$= 1.13$
Prob > F	$= 0.342$

Based on the results above, at the 95% confidence level, we fail to reject the null hypothesis of the RESET test, indicating that the linear specification of the model is appropriate.

Heteroskedasticity Test

Table (1.11): Results for Breusch-Pagan/Cook-Weisberg test for heteroskedasticity

Breusch-Pagan/Cook-Weisberg test for heteroskedasticity	
H_0: constant variance	
Variables: fitted values of Ease of doing business score (ln Score)	
$\chi^2(1)$	$= 29.71$
Prob > chi2	$= 0.0000$

Based on the results presented in the above table, we reject the null hypothesis of the Breusch-Pagan/Cook-Weisberg test for heteroskedasticity at the 95% confidence level. This indicates that the variance of the residuals is not constant, suggesting the presence of heteroskedasticity. Therefore, robust estimation methods will be used to estimate the model parameters.

According to the reported values, the p-value is 0.000, which is statistically significant at the 5% level. This indicates that at least one of the independent variables has a significant effect on the ease of doing business score (ln Score). Furthermore, the adjusted R^2 value of 0.711 suggests a moderate model fit, meaning that the proposed model explains approximately 71.1% of the total variance in the dependent variable.

Table (1.12): Summary of the first model

Number of Observations	**= 80**
Wald Chi2(7)	**= 759.32**
Prob > chi2	**= 0.0000**
R-squared	**= 0.398**

Results and Discussion

First Model: The Impact of Innovation Factors Ease of Doing Business

Table (1): Regression coefficients

Variables	Ease of doing business score (ln Score)
Knowledge and Technology Outputs	-1.9376***
	(0.002736)
Creative Outputs (Ln Score)	-0.9934***
	(0.00472)
Time-Effect	0.2193***
	(0.007845)
Country Effect (Dummy; 10 countries)	0.01893
	(0.006321)
Constant	.7832***
	(0.927)
Number Of Observations	80
Number Of Years	8
Robust Standard Errors in Parentheses	
*** P<0.01, ** P<0.05, * P<0.1	

(Table 4.1) Findings show a negative relationship between innovation as measured by knowledge, technology, creative output and ease of doing business.

However, **Al-Ansari, Y., Altalib, M., & Sardoh, M. (2013)** show that innovation will have a significant positive effect on a firm's business performance because innovation is an important determinant of business performance in a changing competitive environment. Business performance is related to the ability of the firm to gain profit and growth to achieve its general strategic objectives.

Munene and Byukusenge (2017) highlight that innovation plays a crucial role in enhancing an organization's performance, long-term survival, and overall competitiveness. In a similar vein, **Kuratko, Ireland, Covin, and Hornsby (2005)** emphasize that innovation equips firms with a strategic approach necessary for achieving a lasting competitive edge.

According to **Arand Baki (2011)**, both product and process innovations contribute positively to organizational performance, as measured by indicators such as sales growth, market share, and profitability. Among these, product innovation emerged as a stronger predictor of performance outcomes compared to process innovation.

Numerous studies across various business sectors, especially within SMEs, have also confirmed the strong and positive relationship between innovation and firm performance. For example, **Hajar (2015)** found that innovation had a significant positive impact on the performance of small and medium-sized wooden furniture manufacturers in Indonesia. Similarly, research by **Rhee, Park, and Lee (2010)** revealed that innovative South Korean SMEs were better equipped to adapt to competitive market changes and achieved superior performance.

Therefore, innovation is closely linked to ease of doing business, as it enables the transformation of knowledge into enhanced performance, streamlined operations, and expanded market access.

Lestari et al. (2020) demonstrated a clear positive link between innovation and the ease of doing business. Innovation contributes significantly to improving internal management processes, marketing efforts, customer satisfaction, product quality, and strategic planning.

Similarly, **Rajapathirana and Hui (2018)** identified key factors that drive innovation success, including innovation capability, types of innovation, innovation performance, market performance, and financial outcomes. In assessing market innovation, they emphasized the use of technology-driven promotional methods and fulfilment strategies to track sales

trends. They also highlighted the importance of enhancing original products through added features (exploitative innovation) and automating processes with machines to boost efficiency. Their findings support the idea that innovation enhances management effectiveness and helps businesses achieve higher productivity and improved performance.

Furthermore, strong business performance requires more than integrated strategies, innovation, entrepreneurship, and knowledge-sharing; it also depends on a market-oriented approach. In an era of growing global competition and evolving customer expectations, market orientation is critical for delivering superior customer value. According to **Distanont and Khongmalai (2018)**, market orientation encompasses customer, supplier, and industry perspectives.

Customer orientation focuses on developing innovations that meet customer needs. Supplier orientation highlights the importance of knowledge sharing between suppliers and retailers, which is vital for the innovation of products and services. This includes sharing insights and suggestions regarding raw materials that can foster innovation. Industry orientation reflects the collaborative synergy between suppliers and the broader industry.

In conclusion, innovation and the ease of doing business are strongly interrelated and mutually reinforcing.

Conclusions and Recommendations

Conclusions

This study examines how innovation factors—like research and development, education, and state–business relations—and broader macroeconomic conditions influence the ease of doing business across the MENA region. It finds that investment in R&D and better education systems strengthen innovation capacity and productivity, while formal collaboration between governments and businesses fosters innovation more effectively than informal, crony-based networks, which often hinder progress.

On the macroeconomic side, regulatory burdens, weak infrastructure, corruption, and political instability significantly complicate business operations, and economies that rely on narrow sectors are especially exposed to external shocks that reduce economic resilience.

Empirical analysis also shows that enabling factors such as e-government services, simplified registration processes, accessible bank financing, supportive infrastructure, and gender-inclusive policies consistently improve the business environment, while high tax rates, administrative delays, and GDP growth pressures often hinder it.

Overall, the findings underscore that improving the ease of doing business in the MENA region requires a balanced

approach: boosting innovation through education, finance, and institutional reform, alongside strengthening economic foundations via regulatory simplification, infrastructure upgrades, and economic diversification.

Recommendations

Governments in the MENA region can significantly improve the business climate by first streamlining legal and institutional systems—this includes simplifying regulations, enforcing contracts effectively, modernizing labour laws, and ensuring fair taxation to reduce uncertainty and encourage investment.

Equally critical is enhancing SME access to finance, which can be achieved through reducing collateral burdens, promoting equity-based financing, and encouraging financial sector reforms that introduce greater competition and transparency.

Fostering a skilled, innovative workforce is also essential; governments should invest in education, vocational training, and digital literacy—and actively promote women's and youth participation in the labour market—to raise productivity and drive inclusive economic growth.

To boost competitiveness, supporting innovation through R&D incentives, establishing innovation clusters, and building institutional capacity—including sound governance and anti-corruption frameworks can help create a more predictable environment for private investment.

Additionally, embracing digital transformation—such as e-government solutions, digital SME support hubs, and fintech-led services—can reduce bureaucratic hurdles and improve access to markets.

Finally, enhancing regional integration—by breaking down trade barriers and collaborating on shared innovation platforms—can unlock economies of scale and strengthen resilience across the region.

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