# Mapping the current state of financial inclusion and its impact on economic growth in the MENA region

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## ABSTRACT

**Purpose:** This study aims to provide a comprehensive descriptive analysis of financial inclusion levels in the MENA (Middle East and North Africa) region and its impact on economic growth indicators.

**Design/Methodology/Approach:** Utilizing panel data regression models, including Fixed Effects and Random Effects, the research assesses how financial inclusion influences economic growth.

**Findings:** The results reveal that financial inclusion has a notable negative impact on economic growth in the MENA region, largely attributed to ongoing conflicts and political instability that disrupt economic activities. Additionally, variations in financial regulations and banking practices across the region complicate the assessment of financial inclusion's effects on growth.

**Research Limitations/Implications:** This analysis serves as a valuable resource for policymakers, researchers, and practitioners by illustrating the distribution of financial inclusion across MENA countries and its observable effects on economic growth. However, the study is limited by its inability to incorporate key indicators such as religion, digital banking, and corruption levels due to data constraints, and its exclusive focus on banks.

**Contribution to Literature:** This review enhances the literature on financial inclusion by offering an in-depth examination of its current status, providing insights for targeted policy interventions, and assisting financial institutions in identifying growth opportunities and areas needing support.

**Conclusion:** Financial inclusion's impact on economic growth varies based on measurement methods, leading to discrepancies in studies. Despite strong growth indicators driven by the energy sector in the region, structural rigidities and insufficient financial intermediation have limited the benefits of this growth.

***Keywords:*** *Economic growth, Financial inclusion, MENA countries, Panel data, Policy makers, Regression models.*

## 1. INTRODUCTION

Access to financial services supports daily living and enables families and businesses to strategize for future objectives and manage unforeseen challenges. When individuals have bank accounts, they are more inclined to utilize supplementary financial products such as savings accounts and loans. This access is crucial for launching and expanding businesses, investing in education and healthcare, managing risks, and handling financial setbacks, ultimately enhancing their overall quality of life. The World Bank emphasizes that by fostering financial inclusion, stakeholders have availability to valuable and cost-effective financial solutions catered to their specific needs, all provided responsibly and sustainably.

The financial system plays a vital role in the functioning of an economy as it handles resource distribution. Levine (2005) proposes that effective financial institutions enhance economic development by lowering transaction expenses through improved intermediation, better resource allocation, increased savings, and the creation of risk-sharing markets. Despite the crucial function of the financial sector in promoting resource allocation and stimulating economic growth, the MENA region continues to lag behind due to persistent regional conflicts, political corruption,



***Nurture****: Volume 18, Issue 4, 911-923,* ***2024***
***Online ISSN****: 1994-1633/* ***Print ISSN****: 1994-1625*
***DOI****: 10.55951/nurture.v18i4.918|* ***URL****:* www.nurture.org.pk
***Publisher:*** *Nurture Publishing Group*

and instability. Although the link between financial inclusion and economic growth is clear, economists frequently debate the direction of causality. However, Mckinnon (1973) and Schumpeter (1911) argue that the advancement of the financial system is essential for driving sustained growth. Their work underscores the requirement for a strong financial infrastructure that not only supports economic activities but also aids stakeholders to thrive in a dynamic environment. Eventually, strengthening financial systems is crucial for unlocking the full potential of economies, particularly in regions facing significant obstacles.

Research on the impact of financial inclusion on economic growth has grown significantly in recent years. Before 2017, the literature was sparse, with only a few studies focusing on specific regions (Ozili, Ademiju, & Rachid, 2023), and the financial inclusion indices in these studies often failed to capture the full range of variations, leading to inconsistent results. While many studies report a positive impact, others document a negative relationship. Therefore, the ongoing theoretical debate about the nature of the relationship between financial inclusion and growth indicates that research remains inadequate, as there is no consensus on the link between these two variables (Ozili et al., 2023).

While existing studies have primarily explored the association between financial inclusion and growth, the goal of this research article is to recommend policy measures to advance the region's financial sector, which has generally fallen behind the progress seen in other regions. This study makes several valuable contributions to the existing literature. First**,** it delivers a thorough descriptive interpretation of the current status of financial inclusion in the MENA region and its effects on economic growth. Second, it serves as a foundation for legislators to understand regional disparities and suggest specific measures to improve financial inclusion, which in turn boosts economic growth. Finally, the study aims to help financial organizations identify areas with growth potential and countries requiring specialized support.

The rest of the paper is structured in the following manner: Section 2 examines key theoretical and empirical research and establishes the hypotheses for study. Section 3 details the data and variables used, along with the methodological approach. Section 4 presents the main findings, and Section 5 wraps up with a summary of the major insights and their implications for policy.

## 2. RELATED LITERATURE AND HYPOTHESES

### *2.1. Financial Inclusion and Economic Growth*

This section reviews the existing literature, covering both theoretical and empirical studies on financial inclusion and economic growth. The analysis of economic growth was initially highlighted by Solow (1956) whose growth model posits that the amount of capital stock is largely influenced by the economy's savings rate, which in turn affects its output level. Furthermore, developing countries can significantly boost their economic growth by raising their savings rates. Patrick (1966) subsequently described the potential connections between financial expansion and economic growth through the hypotheses of “supply-leading” and “demand-following.” The "supply-leading" theory suggests that financial system growth fosters real economic growth by channeling resources from savers to investors. Patrick's theory posits that effective financial development enhances fund supply, reduces transaction costs, and mobilizes savings for efficient resource allocation, thereby promoting economic growth. Supporting this perspective, Mckinnon (1973) and Shaw (1973) emphasize that a well-functioning financial sector encourages savings and investments, thereby driving economic expansion. Additionally, Beck, Levine, and Loayza (2000) reinforce this idea by highlighting the importance of financial development as a catalyst for economic stability and progress. Whereas the “demand-following” theory emphasizes that growth stimulates the advancement of the financial system (Robinson, 1952). Cobb, Halstead, and Rowe (1995) highlight the significance of Gross Domestic Product (GDP) and GDP per capita in assessing a nation's economic welfare, arguing that these metrics are crucial for improving social well-being. Many studies utilize GDP per capita as a key indicator of economic growth rates. For instance, Kim, Yu, and Hassan (2018) employ this metric as a proxy for economic growth. Similarly, Van, Vo, Nguyen, and Vo (2021) use GDP per capita to analyze growth dynamics in their research. Researchers often favor GDP per capita because it provides a clear measure of the average economic output per person, enabling them to assess the standard of living and economic productivity within a country.

Financial inclusion has garnered significant focus from policymakers and scholars as a crucial approach for advancing the United Nations' Sustainable Development Goals (Demirgüç-Kunt, Klapper, Singer, Ansar, & Hess, 2018; Sahay et



***Nurture**: Volume 18, Issue 4, 911-923, **2024***
***Online ISSN**: 1994-1633/ **Print ISSN**: 1994-1625*
***DOI**: 10.55951/nurture.v18i4.918| **URL**: www.nurture.org.pk*
***Publisher:** Nurture Publishing Group*

al., 2015). It involves incorporating unbanked adults into the formal financial system and guaranteeing their access to essential financial solutions (Dev, 2006; Ozili, 2020).

The finance and growth theory underscores the crucial role of financial intermediaries in enhancing financing circumstances, which subsequently affect investment and productivity levels, ultimately influencing economic output and growth. Gurley and Shaw (1955) highlight the importance of financial intermediation in this context. Levine (2005) concludes that financial intermediaries are more effective at directing credit toward activities that boost productivity and growth. In his theoretical study, Ozili (2020) posits that financial inclusion can be realized via diverse components of the economic sector, including formal financial entities, leading to positive outcomes for the economic system.

Previous research on financial inclusion has explored various themes, including its contribution to advancing development. Mandira Sarma and Pais (2011) investigate this aspect, highlighting the role of financial inclusion in fostering progress. Hannig and Jansen (2010) examine its impact on financial stability, emphasizing the importance of inclusive financial systems. Mohan (2006) and Kim et al. (2018) both analyze the correlation between financial inclusion and real growth. Mitton (2008) focuses on national approaches to financial inclusion, while Ghosh (2013) discusses the role of microfinance services and financial entities. Lastly, Ozili (2018) explores the influence of technological advancements in finance on promoting financial inclusion. Sharma (2016) suggests a favorable connection between various aspects of financial inclusion and economic growth, signifying that as financial inclusion expands, economic growth is likely to follow. Musembi and Chun (2020) highlight the beneficial effects of financial inclusion on future economic growth, indicating that enhancing access to financial services can lead to favorable economic outcomes in the future. Mustafa and Rahman (2015) establish that the growth of the Gross State Product is positively impacted by financial inclusion through banking services.

However, Hariharan and Marktanner (2012) acknowledge that empirical literature on this relationship is still limited, although they propose a causal connection from financial inclusion to growth, particularly in enhancing productivity. However, some studies suggest that financial inclusion could negatively impact economic development. For example, Barajas, Chami, and Yousefi (2013) indicate that the relationship between financial systems and economic progress is not universally positive and that financial inclusion may not always lead to favorable outcomes. Consequently, a few studies support the idea that financial inclusion may have a detrimental rather than a beneficial effect on growth.

### *2.2. Financial Inclusion and Economic Growth in the MENA Region*

Regarding access to financial services in the MENA region, Pearce (2011) highlights its critical role in enhancing competitiveness, creating jobs, and reducing poverty, advocating for it as a key objective for financial regulators. Pearce notes that, despite having efficient financial systems, they still fail to reach low-income and disadvantaged groups. Akhtar and Pearce (2010) identify aspects that enhance financial inclusion in the MENA region, such as the role of mobile banking and electronic payment systems. They also highlight challenges like weak infrastructure, a lack of robust regulation, and NGO reluctance due to regional conflicts. However, the studies reviewed in the literature lack specific cross-country comparisons, particularly within the MENA region. Much work remains to enhance financial inclusion. Mehrotra and Yetman (2015) argue that financial inclusion might not always exert a positive influence on every economy, pointing to potential negative impacts of credit growth and unregulated financial sector entities on stability, which can lead to financial crises and undermine the finance-growth relationship. Similarly, Sulong and Bakar (2018) argue that limited access to financial resources is a primary reason why studies often fail to demonstrate a positive relationship between these two variables. Chehayeb and Taher (2024) also uncover a unidirectional Granger causality that links economic growth to financial inclusion. Their findings further show that economic growth positively affects both the access and usage aspects of financial inclusion, highlighting the interconnected nature of these variables.

Neaime and Gaysset (2018) examine the relationship among financial inclusion, poverty, and income inequality within the MENA region. Their research reveals that while financial inclusion plays a role in diminishing income inequality, it does not significantly influence poverty levels. Instead, they identify larger population sizes, high inflation rates, and trade openness as critical factors contributing to rising poverty. Naceur, Barajas, and Massara (2015) examine the nexus between Islamic banking services and financial inclusion, revealing that, despite the availability of financial services in Islamic countries, their adoption has not evolved as anticipated. Nevertheless, the



***Nurture**: Volume 18, Issue 4, 911-923, **2024***
***Online ISSN**: 1994-1633/ **Print ISSN**: 1994-1625*
***DOI**: 10.55951/nurture.v18i4.918| **URL**: www.nurture.org.pk*
***Publisher:** Nurture Publishing Group*

existing literature lacks specific cross-country comparisons, particularly within the MENA region, suggesting that considerable efforts are still required to enhance financial inclusion.

*2.3. Hypotheses Testing*

This research aims to explore the factors contributing to the varying levels of financial growth and inclusion across MENA countries. The study anticipates finding a positive relationship between financial inclusion and economic growth in the region, following Patrick (1966) and Beck et al. (2000) who suggest that advancements in the financial sector can drive real economic growth by effectively directing resources from savers to investors.

Inflation varies across MENA countries and tends to erode financial assets, leading to reduced real growth. Recent studies consistently find that inflation negatively impacts growth Fischer (1993); Barro (1996); Mensah, Abor, Aboagye, and Adjasi (2012) and Bruno and Easterly (1998). The hypothesis suggests a negative relationship between inflation and economic growth.

The school enrollment ratio is used to reflect how education enhances financial decision-making and economic growth. Lusardi and De Bassa Scheresberg (2013) highlight that education improves household financial behavior and economic performance, while Klapper, Lusardi, and Panos (2012) find that financial literacy influences various economic indicators, including spending capacity. Thus, the correlation between school enrollment and growth is expected to be positive.

Given the considerable role that exports and imports play in the GDP of MENA countries, these nations are supposed to be greatly integrated into world trade, which improves the motivation to adopt an advanced financial system to facilitate trade activities. Rajan and Zingales (2003) argue that established industries may obstruct financial sector growth under low trade openness and suggest that financial development requires both trade and financial liberalization. Therefore, trade openness is expected to affect economic growth positively.

## 3. METHODOLOGY

The current study seeks to offer an in-depth descriptive analysis of financial inclusion levels across the MENA region and their association with economic growth indicators from 2004 to 2020, employing panel data regression model, i.e., Fixed Effects or Random Effects models.

These techniques are effective in addressing potential country heterogeneity, accounting for unique characteristics related to individual countries, and providing more reliable parameter estimates than pooled OLS.

The Fixed Effects model specifically removes country-specific effects and the influence of time-invariant components. It is particularly useful for examining variables that change over time and for analyzing relationships within a single country.

The Fixed Effects model assumes that certain characteristics may affect the predictor or outcome variables, allowing for a focused assessment of the net effects of predictors. Each country has its distinct intercept, ensuring independence of error terms across nations. However, it is crucial to recognize that the fixed effects model may not always be the best choice; if the error term and constant exhibit correlation with those of other countries, the results could be misleading (Kennedy, 2008).

The Random Effects model is based on the premise that variance among countries is random and not related to the predictor variables. This model's capacity to incorporate time-invariant variables, which the fixed effects model omits, is a key advantage. This enables the generalization of results beyond the specific sample under analysis. However, missing variables due to the absence of certain entity-level characteristics can introduce bias. The assumptions that a country's error term in the random effects model does not consistently correlate with the independent variables underlies the use of time-invariant variables (Greene, 2012).

Panel regression models employing both fixed and random effects were utilized for the analysis. The Hausman test evaluates whether to use the Fixed Effects model or the Random Effects model by determining if there are systematic differences in coefficients, while the chi-square probability test checks for the presence of fixed or random effects (Hausman, 1978).

Conducting comprehensive case studies of MENA countries with varying levels of financial inclusion would offer qualitative insights into how financial inclusion relates to economic progress. The timeframe of this research article covers significant developments that have reshaped the economic landscape of the MENA region, including the



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***Publisher:** Nurture Publishing Group*

surge in energy prices, increased global integration, and the influence of the COVID-19 pandemic. The following research questions have been formulated:

1. What is the current status of financial inclusion in the MENA region, encompassing key aspects such as access, usage, and depth of financial services?
2. How do country-specific differences in financial inclusion relate to economic growth?

These questions are pivotal for comprehending the state of financial inclusion and economic growth in the region. Therefore, exploring the specifics of financial inclusion in the MENA region and its implications is vital for fostering further advancement and ensuring the effective distribution of financial resources. This article examines the factors driving financial inclusion and growth in the MENA countries, with a focus on banks. It considers how economic fundamentals, macroeconomic policies, institutional settings, and structural obstacles impact financial inclusion. Additionally, financial liberalization and remittances have played roles in integrating the region into the global financial system, easing financing constraints, and supporting financial system growth. This analysis aims to clarify these connections across MENA countries.

The existing literature has guided the selection of a suitable approach that emphasizes detailed descriptive analysis, providing insights into the current state and variations of financial inclusion and its impact on growth across 13 selected MENA countries (Algeria, Djibouti, Egypt, Jordan, Kuwait, Lebanon, Libya, Morocco, Oman, Qatar, Saudi Arabia, Tunisia, and the United Arab Emirates).

This approach utilizes cross-sectional data from 2004-2020, depending on data availability, which varied by country, leading to estimates based on unbalanced panel data.

The factors explaining variations in economic growth across the MENA countries are empirically examined by estimating equation (1).

$$GDP_{i,t} = \alpha_1 + \alpha_2 FI_{i,t} + \alpha_3 Access_{i,t} + \alpha_4 Usage_{i,t} + \alpha_5 Depth_{i,t} + \alpha_6 Macro_{i,t} + \varepsilon_{i,t} \quad (1)$$

Where *i* indicates the country and *t* represents the timeframe, $\alpha_i$ represents the parameters for the intercept and slope coefficients, while $\varepsilon_{i,t}$ denotes the stochastic disturbance term that accounts for the effects of omitted variables, having a mean of zero and constant variance and covariance. GDP represents GDP per capita to measure economic growth. FI represents the financial inclusion level for each country, data obtained from the research study of Chehayeb (2024).

Chehayeb (2024) developed an index that this research uses to measure financial inclusion. The index is valuable for several reasons: it is a new, multidimensional tool not previously used in similar studies; it builds on Sarma (2012) methodology and other indices like the Human Development Index (HDI); it allows for cross-country comparison; and its inclusion of the depth dimension—measured by private credit, financial system deposits, and remittance inflows relative to GDP—provides significant insights. Access, Usage, and Depth represent the three dimensions of the financial inclusion (Chehayeb, 2024) with relevant data obtained from the financial inclusion data bank provided by the World Bank and International Monetary Fund (IMF).

Macroeconomic data (macro) comprises a core set of conditioning variables identified in research as influencing financial growth. This includes real GDP growth to measure economic growth; inflation rate (annual %); trade openness (% of GDP), as defined by the World Bank and used by Musembi and Chun (2020) as well as Neaime and Gaysset (2018) which measures the sum of exports and imports as a percentage of GDP, reflecting an economy's exposure to global trade and its potential for growth; and primary school enrollment (% gross). Kim et al. (2018) use GDP per capita as a measure for economic growth. They also control for economic growth using macroeconomic factors in their panel dynamic regression analysis.

The macroeconomic variables considered include inflation rate, primary education enrollment, and trade. The World Bank's World Development indicators database provides the annual variables. The natural logarithms of GDP will be used in order to reduce heteroscedasticity.

## 4. EMPIRICAL ANALYSIS

### *4.1. Univariate Analysis*

Table 1 displays the summary statistics of the variables along with their correlation matrix.



***Nurture**: Volume 18, Issue 4, 911-923, **2024***
***Online ISSN**: 1994-1633/ **Print ISSN**: 1994-1625*
***DOI**: 10.55951/nurture.v18i4.918| **URL**: www.nurture.org.pk*
***Publisher:** Nurture Publishing Group*

**Table 1.** Descriptive statistics, 2004-2020, 13 countries; coefficient correlation matrix.

| Variables | FI | LnGDP | Access | Usage | Depth | Inf. | SEP | Trade |
|---|---|---|---|---|---|---|---|---|
| Mean | 0.30 | 9.12 | 0.40 | 0.27 | 0.22 | 3.89 | 98.90 | 98 |
| Std. deviation | 0.12 | 1.19 | 0.22 | 0.10 | 0.10 | 4.30 | 12.37 | 50 |
| Minimum | 0.08 | 6.97 | 0.06 | 0.06 | 0.00 | -4.86 | 54.60 | 30 |
| Maximum | 0.55 | 11.35 | 0.86 | 0.48 | 0.43 | 29.51 | 125 | 348 |
| **Correlation** | | | | | | | | |
| FI | 1.00 | | | | | | | |
| LnGDP | 0.31 | 1.00 | | | | | | |
| Access | 0.92 | 0.58 | 1.00 | | | | | |
| Usage | 0.85 | 0.02 | 0.61 | 1.00 | | | | |
| Depth | 0.76 | -0.30 | 0.46 | 0.82 | 1.00 | | | |
| Inflation | -0.20 | -0.15 | -0.23 | -0.20 | -0.03 | 1.00 | | |
| School enrollment (SEP) | 0.04 | 0.25 | 0.09 | 0.00 | -0.09 | -0.07 | 1.00 | |
| Trade openness (Trade) | -0.02 | 0.09 | 0.03 | -0.02 | -0.13 | -0.22 | -0.57 | 1.00 |

Table 2 provides a detailed summary of the mean, minimum, maximum, and standard deviation of financial inclusion values and GDP per capita for selected MENA countries. It highlights significant disparities in financial inclusion across the region, alongside notable volatility in GDP as reflected by the standard deviation figures. The low financial inclusion scores underscore the region's inadequate progress in this area. It is important to note that a higher index value represents greater financial inclusion, while a lower value indicates less (Sarma, 2012).

**Table 2.** Descriptive statistics by selected countries in the MENA region.

| Variables | Financial inclusion (FI) | | | | Economic growth (GDP per capita) | | | |
|---|---|---|---|---|---|---|---|---|
| | Mean | Min. | Max. | SD | Mean | Min. | Max. | SD |
| Algeria | 0.12 | 0.09 | 0.15 | 0.02 | 4306 | 2609 | 5591 | 887 |
| Djibouti | 0.14 | 0.11 | 0.17 | 0.02 | 1875 | 863 | 3141 | 806 |
| Egypt | 0.20 | 0.17 | 0.25 | 0.03 | 2568 | 1062 | 3571 | 845 |
| Jordan | 0.38 | 0.36 | 0.41 | 0.02 | 3890 | 2735 | 4312 | 418 |
| Kuwait | 0.38 | 0.28 | 0.43 | 0.05 | 39875 | 27011 | 55494 | 9241 |
| Lebanon | 0.53 | 0.51 | 0.55 | 0.01 | 6756 | 4575 | 7950 | 1390 |
| Libya | 0.11 | 0.08 | 0.20 | 0.04 | 9989 | 5554 | 14382 | 3074 |
| Morocco | 0.35 | 0.23 | 0.41 | 0.06 | 2841 | 1952 | 3499 | 435 |
| Oman | 0.28 | 0.25 | 0.31 | 0.02 | 18227 | 14618 | 21872 | 2534 |
| Qatar | 0.36 | 0.28 | 0.46 | 0.04 | 66002 | 42124 | 85076 | 13044 |
| S.A. | 0.22 | 0.17 | 0.27 | 0.03 | 19424 | 11185 | 25243 | 4356 |
| Tunisia | 0.29 | 0.22 | 0.36 | 0.05 | 3790 | 3111 | 4307 | 413 |
| UAE | 0.36 | 0.22 | 0.42 | 0.06 | 40027 | 32024 | 45376 | 3694 |

Regional factors among MENA countries influence these variations. For example, the Middle East hosts five of the world's leading oil producers: Saudi Arabia, Iraq, the United Arab Emirates (UAE), Iran, and Kuwait. The region is also a main natural gas producer, with Iran, Qatar, and the UAE ranking among the top ten global producers. Significant variations in per capita income and energy consumption are evident, with Saudi Arabia, the UAE, and Kuwait positioned at the top, while Yemen and Syria fall at bottom. There are notable disparities in Sovereign credit ratings: Saudi Arabia, Kuwait, Qatar, and the UAE have high ratings, while Jordan, Oman, and Bahrain have medium ratings. Conversely, Iraq and Lebanon are assigned very low ratings[1].

Although financial inclusion levels in the MENA region remain relatively low, there has been notable progress over the years, rising from 0.22 in 2004 to 0.29 in 2009 and reaching 0.34 in 2017. However, there was a significant drop

[1] https://www.iea.org/reports/world-energy-investment-2024/middle-east



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***DOI**: 10.55951/nurture.v18i4.918| **URL**: www.nurture.org.pk*
***Publisher:** Nurture Publishing Group*

to 0.31 in 2019 due to the COVID-19 pandemic. Fortunately, the levels rebounded to 0.34 in 2020 see Figure 1. The pandemic, however, speeded up the move toward digital financial services, as lockdowns and social distancing measures led many to rely on online banking, mobile payments, and e-commerce platforms. This transition helped increase access to financial services for numerous individuals, specifically in previously underserved areas. Nonetheless, those lacking technology or reliable internet connections encountered substantial barriers. This situation exacerbated existing disparities in financial inclusion[2].

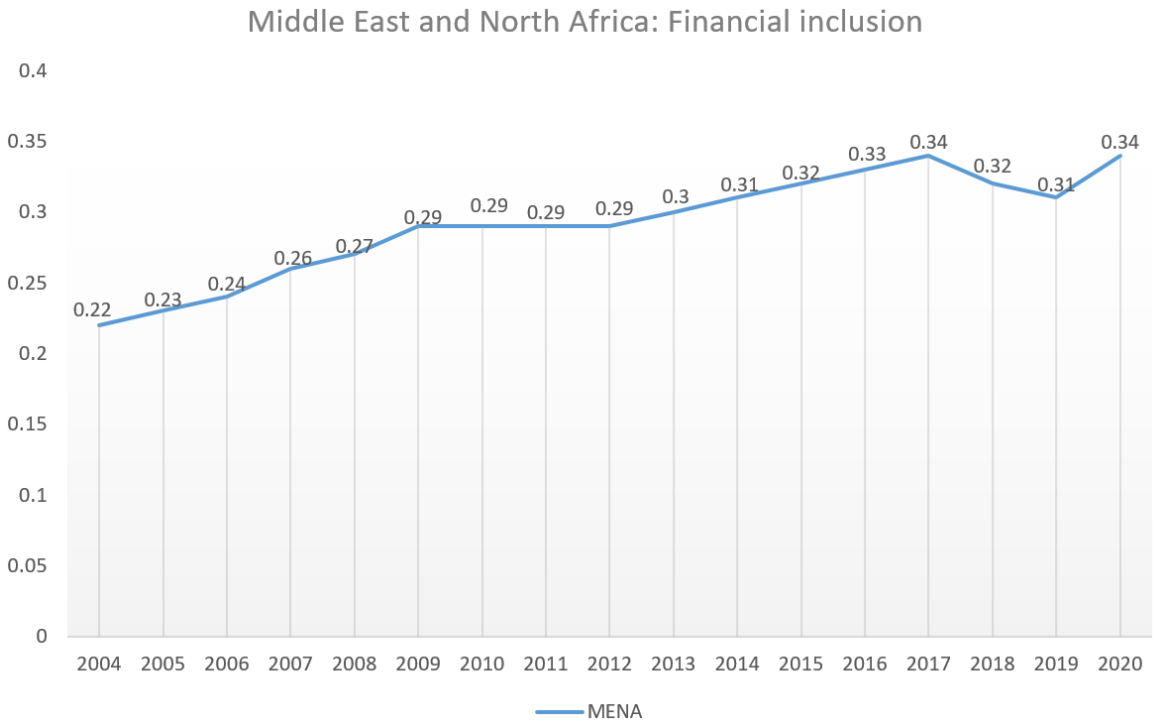


**Figure 1.** Evolution of financial inclusion in the MENA region from 2004 to 2020.

Table 3 provides descriptive statistics for the three dimensions of financial inclusion—access, usage, and depth—by country. It reveals that, generally, the values for the access dimension are higher than those for usage, which in turn exceed the values for the depth dimension. This pattern highlights that while access to financial services is relatively more widespread, both usage and depth of financial inclusion tend to be more limited.

**Table 3.** Descriptive statistics of the dimensions of FI in the MENA region by country.

| Variables | Access dimension | | | Usage dimension | | | Depth dimension | | |
|---|---|---|---|---|---|---|---|---|---|
| | Mean | Min. | Max. | Mean | Min. | Max. | Mean | Min. | Max. |
| Algeria | 0.09 | 0.06 | 0.11 | 0.16 | 0.12 | 0.22 | 0.09 | 0.07 | 0.12 |
| Djibouti | 0.09 | 0.03 | 0.20 | 0.17 | 0.15 | 0.23 | 0.14 | 0.13 | 0.16 |
| Egypt | 0.14 | 0.07 | 0.24 | 0.23 | 0.16 | 0.30 | 0.24 | 0.20 | 0.29 |
| Jordan | 0.38 | 0.35 | 0.41 | 0.39 | 0.37 | 0.45 | 0.36 | 0.32 | 0.40 |
| Kuwait | 0.64 | 0.41 | 0.79 | 0.25 | 0.19 | 0.36 | 0.21 | 0.17 | 0.25 |
| Lebanon | 0.78 | 0.70 | 0.85 | 0.43 | 0.38 | 0.48 | 0.38 | 0.34 | 0.43 |
| Libya | 0.14 | 0.12 | 0.15 | 0.12 | 0.06 | 0.30 | 0.07 | 0.03 | 0.15 |
| Morocco | 0.41 | 0.19 | 0.53 | 0.32 | 0.23 | 0.38 | 0.32 | 0.26 | 0.36 |
| Oman | 0.38 | 0.34 | 0.43 | 0.29 | 0.20 | 0.37 | 0.15 | 0.01 | 0.21 |
| Qatar | 0.62 | 0.54 | 0.73 | 0.25 | 0.13 | 0.46 | 0.18 | 0.11 | 0.30 |

[2] World Bank "COVID-19 Drives Global Surge in use of Digital Payments"



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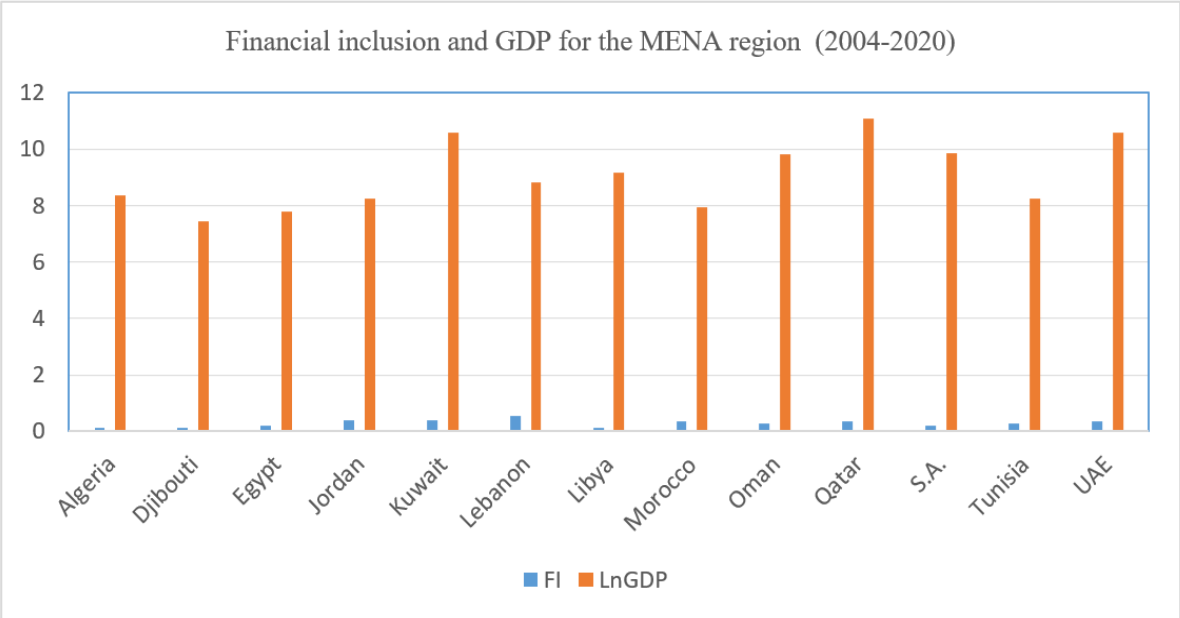
| Variables | Access dimension | | | Usage dimension | | | Depth dimension | | |
|---|---|---|---|---|---|---|---|---|---|
| | Mean | Min. | Max. | Mean | Min. | Max. | Mean | Min. | Max. |
| S.A. | 0.31 | 0.22 | 0.36 | 0.19 | 0.16 | 0.26 | 0.14 | 0.11 | 0.18 |
| Tunisia | 0.36 | 0.21 | 0.47 | 0.27 | 0.21 | 0.34 | 0.25 | 0.22 | 0.28 |
| UAE | 0.53 | 0.31 | 0.62 | 0.34 | 0.21 | 0.46 | 0.20 | 0.12 | 0.27 |

Figure 2 provides a visual comparison between the degree of financial inclusion and the natural logarithm of GDP (LnGDP) for each country. This figure illustrates how financial inclusion correlates with economic performance across different countries. By comparing financial inclusion levels with LnGDP, the figure highlights the link between financial inclusion and economic growth, offering insights into how financial inclusion may influence or be influenced by a country's economic progress.




| Country | Algeria | Djibouti | Egypt | Jordan | Kuwait | Lebanon | Libya | Morocco | Oman | Qatar | S.A. | Tunisia | UAE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| FI | 0.12 | 0.14 | 0.2 | 0.38 | 0.38 | 0.53 | 0.11 | 0.35 | 0.28 | 0.36 | 0.22 | 0.29 | 0.36 |
| LnGDP | 8.35 | 7.44 | 7.79 | 8.26 | 10.57 | 8.8 | 9.16 | 7.94 | 9.8 | 11.08 | 9.85 | 8.23 | 10.59 |

**Figure 2.** Authors' estimation.

**Note:** FI values lie between 0 and 1, 1 being the maximum. Mean values are presented for simplicity.

*4.2. Multivariate Analysis*

To ensure robustness, three model specifications are estimated: pooled, fixed, and random effects models. A Hausman test is conducted to determine the most suitable technique fixed or random effects for the current research's panel data regression analysis. The test statistic adheres to a chi-square distribution under the null hypothesis that there is no correlation between the independent variables and the error term. A significant test result indicates that the fixed-effects model should be selected; if not, the random-effects model is used (Hausman, 1978). Table 4 summarizes the outcomes for the variables based on pooled data from MENA countries.

- Null Hypothesis: The random-effects model is appropriate.
- Alternative Hypothesis: The fixed-effects model is appropriate.

The fixed-effects model is appropriate, as it violates the random effects model's assumption of no correlation between individual-specific effects and the regressors, leading to the rejection of null hypothesis. Table 4 presents a summary of the results from the three models—pooled, fixed, and random effects—for the economic growth indicators.



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***DOI**: 10.55951/nurture.v18i4.918| **URL**: www.nurture.org.pk*
***Publisher:** Nurture Publishing Group*

The pooled regression model reveals a noteworthy positive effect of financial inclusion on economic growth. In contrast, the fixed effects model—better aligned with the objectives of this study—reveals a significant and pronounced negative impact of financial inclusion on economic growth in the region, with a coefficient of -33.78 see Table 4. This suggests that financial inclusion may not be as essential for driving real economic growth in the MENA region as previously believed.

**Table 4.** Regression Models for the indicators of economic growth.

| Variables | Pooled regression | | Fixed effect | | Random effect | |
|---|---|---|---|---|---|---|
| | Coefficient | t-statistic | Coefficient | t-statistic | Coefficient | t-statistic |
| FI | 52.31 | 3.874*** | -33.78 | -5.296*** | -31.08 | -5.02*** |
| Access | 13.61 | -2.88** | 13.25 | 5.94*** | 12.57 | 5.80*** |
| Usage | 14.34 | -3.23** | 10.21 | 4.97*** | 9.47 | 4.73*** |
| Depth | 26.31 | -6.39*** | 8.53 | 4.35*** | 7.23 | 3.81*** |
| Inf | -0.009 | 0.79* | -0.01 | 3.45*** | -0.01 | 3.31** |
| Sep | 0.011 | 2.52** | 0.011 | 3.12** | 0.01 | 3.87*** |
| Trade | 0.001 | 1.24* | 0.002 | -2.06** | 0.001 | -1.92* |
| Constant | 7.25 | 13.03*** | 8.38 | 24.47*** | 8.18 | 24.62*** |
| Nbr. obs. | 176 | 176 | 176 | 176 | 176 | 176 |
| Nbr. countries | 13 | 13 | 13 | 13 | 13 | 13 |
| $R^2$ | 0.81 | 0.81 | 0.98 | 0.98 | 0.44 | 0.44 |
| Hausman test | 65.08*** | 65.08*** | 65.08*** | 65.08*** | 65.08*** | 65.08*** |

**Note:** ***significant at 1%, ** significant at 5%, * significant at 1%.

Theoretically, expanding a financially inclusive system can enhance economic growth by increasing the availability of financial resources, optimizing resource allocation, and fostering a more inclusive and resilient economic environment (Cobb et al., 1995; Ozili, 2020; Robinson, 1952). However, economic growth itself can also drive financial inclusion by increasing requests for financial solutions like loans, savings, and credit cards, and by improving infrastructure to better reach underserved areas. Research study by Sethi and Acharya (2018) supports the notion of a reciprocal relationship between these variables, similar to Kim et al. (2018).

Furthermore, the findings of Sahay et al. (2015) suggest that while financial inclusion can initially spur economic expansion, excessive financial development may, beyond a certain threshold, actually inhibit further economic progress. Conversely, in some countries, the connection between financial inclusion and economic growth can be negative (Khan, 2011; Maune, 2018; Menyelim, Babajide, Omankhanlen, & Ehikioya, 2021; Nkwede, 2015). The results of the regression model align with this perspective, suggesting that factors such as insufficient public trust in financial institutions reduce engagement with formal financial systems, leading individuals to rely on informal methods instead. Additionally, corruption and political instability may contribute to poorly designed or implemented economic policies that fail to effectively promote broad-based financial inclusion. This view is Emara and El Said (2021) who assert that financial inclusion enhances growth in countries with strong institutions, defined by robust supervisory and regulatory systems that include adherence to the rule of law, judicial independence, contract enforcement, control of corruption, and political stability.

Nonetheless, each dimension of the financial inclusion index exhibits a positive and significant influence on economic growth. This finding highlights the urgency of a unified measure of financial inclusion that takes into account the specificities of each region.

Inflation can impede economic growth by eroding purchasing power, diminishing the value of savings, and increasing the cost of credit. This makes it more challenging for low-income people to save and access affordable loans, thereby exacerbating financial inequality. The findings for the MENA region corroborate this hypothesis, showing that inflation significantly negatively impacts economic growth.

Moreover, the findings support the opinion that higher education boosts economic growth by enhancing workforce skills and productivity, fostering innovation and technological advancements, and attracting higher-value industries. A more educated population contributes to a more efficient and competitive economy, thereby driving long-term economic development. Greater trade openness often leads to higher economic activity, which can expand financial



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***Online ISSN**: 1994-1633/ **Print ISSN**: 1994-1625*
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infrastructure and services. However, the benefits may vary depending on the region's specific economic conditions and existing financial systems. The evidence shows a week positive impact on economic growth, likely due to varying levels of economic development, financial infrastructure, and regulatory environments. Other factors, such as political instability, economic policies, or global economic conditions, might overshadow the influences of trade openness on economic progress.

**Table 5.** Normality test. Authors' estimate on Eviews.

| Mean | Median | Maximum | Minimum | Skewness | Kurtosis | Jarque-Bera | Probability |
|---|---|---|---|---|---|---|---|
| -3.19e-16 | -0.074 | 1.398 | -1.829 | 0.060 | 3.262 | 0.659 | 0.719 |

The Jarque-Bera test results reveal an approximate normal distribution of the residuals, albeit with a slight rightward skewness (0.060), as shown in Table 5. The model also confirms the absence of heteroskedasticity see Figure 3 highlighting its robustness and appropriateness for the observed data.

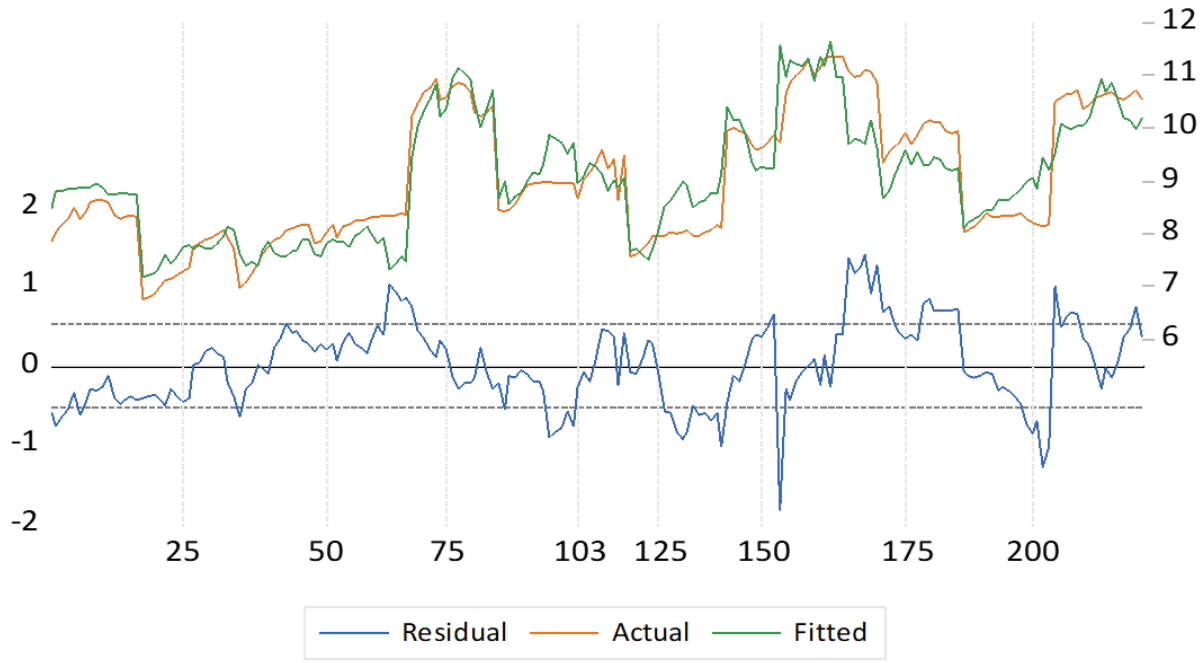


**Figure 3.** Scatter gram of residual, actual, and fitted values of the dependent variable (GDP per capita), authors' drawn out via Eviews.

## 5. CONCLUSION

In this paper, we aim to deliver a comprehensive analysis of the current state of financial inclusion and its impact on economic growth in the MENA region. The findings reveal that financial inclusion exerts a significant negative influence on economic growth within this region, consistent with certain studies in the literature, such as those by Sulong and Bakar (2018) and Mehrotra and Yetman (2015). Moreover, each dimension of the Financial Inclusion Index—access, usage, and depth—individually shows a moderate, positive, and statistically significant impact on economic growth. This nuanced finding illuminates the underlying reasons behind the differing conclusions in the literature regarding the nature of relationship between financial inclusion and economic growth. Therefore, differences in measuring financial inclusion may lead to discrepancies in existing studies, as specific aspects of financial inclusion can have varying impacts on economic growth.

In the MENA region, however, the result diverges from established economic theory, which suggests that financial inclusion stimulates economic growth. Structural rigidities and inadequate financial intermediation have undermined the benefits of the region's strong performance in growth indicators, primarily due to its energy sector. These results deviate from this theoretical framework due to several factors: First, the evaluation of financial inclusion and its impact on economic growth in the MENA region is complex due to persistent conflicts and political



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uncertainty, which can negatively affect the financial sector and disrupt economic activities. Second, the adoption of financial services is influenced by the region's cultural and religious attitudes, such as Islamic Sharia and gender disparities. Third, differences in financial regulations and banking systems across MENA countries can impact the efficiency of financial inclusion initiatives. Fourth, some MENA countries rely heavily on oil and gas revenues, which overshadow the assessment of financial inclusion and its potential benefits for economic growth. Finally, due to political and economic instability in certain MENA countries, the informal economy is highly active, obscuring the real impact of financial inclusion initiatives on formal economic growth.

The policy implications of the findings suggest that adopting a standardized measurement of financial inclusion from global authorities is crucial to resolving this debate. In addition, tackling the challenges in this region requires comprehensive reforms aimed at improving governance, strengthening accountability measures, and reinforcing institutions. To promote financial inclusion, it is crucial to enforce anti-corruption measures, maintain a stable political environment, and ensure that all segments of society benefit from economic growth.

The current study acknowledges several limitations that may impact its findings. Firstly, it is unable to incorporate key indicators like religion, digital banking, and corruption levels, primarily due to data constraints. Furthermore, the research solely focuses on banks, potentially failing to encompass the entire range of financial inclusion mechanisms in operation. Furthermore, the results are specific to the MENA region, which may restrict their generalizability to other contexts. These constraints highlight the need for further research that encompasses a broader range of variables and financial institutions to provide a more comprehensive understanding of financial inclusion's dynamics. Future research should aim to integrate digital banking and religious factors into the measurement of financial inclusion as data becomes increasingly accessible. By doing so, studies can offer a more nuanced understanding of how these elements influence financial inclusion and its subsequent impact on economic growth. This approach will enhance the depth of analysis and contribute to a richer comprehension of the complex interplay between financial systems and socio-economic variables.

**FUNDING**
This study received no specific financial support.

**INSTITUTIONAL REVIEW BOARD STATEMENT**
Not applicable.

**TRANSPARENCY**
The authors confirm that the manuscript is an honest, accurate, and transparent account of the study; that no vital features of the study have been omitted; and that any discrepancies from the study as planned have been explained. This study followed all ethical practices during writing.

**COMPETING INTERESTS**
The authors declare that they have no competing interests.

**AUTHORS' CONTRIBUTIONS**
All authors contributed equally to the conception and design of the study. All authors have read and agreed to the published version of the manuscript.

**ARTICLE HISTORY**
Received: 16 September 2024/ Revised: 31 October 2024/ Accepted: 19 November 2024/ Published: 9 December 2024



## REFERENCES

Akhtar, S., & Pearce, D. (2010). *Microfinance in the Arab World: The challenge of financial inclusion world bank group*. Retrieved from https://coilink.org/20.500.12592/hmzjn4

Barajas, A., Chami, R., & Yousefi, S. R. (2013). *The finance and growth nexus re-examined: Do all countries benefit equally?* Retrieved from International Monetary Fund, working Paper No. 2013/130:

Barro, J. R. (1996). *Determinants of economic growth: A cross-country empirical study*. Retrieved from National Bureau of Economic Research (w5698):
Beck, T., Levine, R., & Loayza, N. (2000). Finance and the Sources of growth. *Journal of Financial Economics*, *58*(1-2), 261-300.
Bruno, M., & Easterly, W. (1998). Inflation crises and long-run growth. *Journal of Monetary Economics*, *41*(1), 3-26. https://doi.org/10.1016/S0304-3932(97)00063-9
Chehayeb, R. J. (2024). Measuring financial inclusion in the mena region: Comparative analysis. *Global Business and Finance Review*, *29*(3), 81-93. https://doi.org/10.17549/gbfr.2024.29.3.81
Chehayeb, R. J., & Taher, H. (2024). The relationship between financial inclusion and economic growth empirical study from mena countries. *Global Business & Finance Review*, *29*(7), 153. https://doi.org/10.17549/gbfr.2024.29.7.153
Cobb, C., Halstead, T., & Rowe, J. (1995). If the GDP is up, why is America down? *Atlantic-Boston*, *276*, 59-79.
Demirgüç-Kunt, A., Klapper, L., Singer, D., Ansar, S., & Hess, J. (2018). *The global findex database 2017: Measuring financial inclusion and the fintech revolution*: World Bank. https://doi.org/10.1596/978-1-4648-1259-0
Dev, S. M. (2006). Financial inclusion: Issues and challenges. *Economic and Political Weekly*, 4310-4313.
Emara, N., & El Said, A. (2021). Financial inclusion and economic growth: The role of governance in selected MENA countries. *International Review of Economics & Finance*, *75*, 34-54. https://doi.org/10.1016/j.iref.2021.03.014
Fischer, S. (1993). The role of macroeconomic factors in growth. *Journal of Monetary Economics*, *32*(3), 485-512. https://doi.org/10.1016/0304-3932(93)90027-D
Ghosh, J. (2013). Microfinance and the challenge of financial inclusion for development. *Cambridge Journal of Economics*, *37*(6), 1203-1219. https://doi.org/10.1093/cje/bet042
Greene, W. H. (2012). Econometric analysis. 71e. In (pp. 721-723). New York University: Stern School of Business.
Gurley, J. G., & Shaw, E. S. (1955). Financial aspects of economic development. *The American Economic Review*, *45*(4), 515-538.
Hannig, A., & Jansen, S. (2010). *Financial inclusion and financial stability: Current policy issues*. Retrieved from ADBI Working Paper No. 259. Tokyo: Asian Development Bank Institute:
Hariharan, G., & Marktanner, M. (2012). The growth potential from financial inclusion. *ICA Institute and Kennesaw State University*, *2*(5), 1-12.
Hausman, J. A. (1978). Specification tests in econometrics. *Econometrica: Journal of the Econometric Society*, *46*(6), 1251-1271.
Kennedy, P. (2008). *A guide to econometrics* (6th ed.). Malden, MA: Blackwell.
Khan, H. (2011). Financial inclusion and financial stability: Are they two sides of the same coin. In (pp. 1-12). Chennai: BANCON 2011, Indian Bankers Association and Indian Overseas Bank.
Kim, D.-W., Yu, J.-S., & Hassan, M. K. (2018). Financial inclusion and economic growth in OIC countries. *Research in International Business and Finance*, *43*, 1-14. http://dx.doi.org/10.1016/j.ribaf.2017.07.178
Klapper, L. F., Lusardi, A., & Panos, G. A. (2012). *Financial literacy and the financial crisis*. Retrieved from National Bureau of Economic Research, No.17930:
Levine, R. (2005). Finance and growth: Theory and evidence. *Handbook of Economic Growth*, *1*, 865-934. https://doi.org/10.1016/s1574-0684(05)01012-9
Lusardi, A., & De Bassa Scheresberg, C. (2013). *Financial literacy and high-cost borrowing in the United States* Retrieved from National Bureau of Economic Research. No. w18969:
Maune, A. (2018). Financial inclusion and the trade-growth nexus: Evidence from the emerging Zimbabwean economy. *Journal of Economics and Behavioral Studies*, *10*(6A (J)), 43-55.
Mckinnon, R. I. (1973). *Money and capital in economic development*. Washington, D.C: Brookings Institution Press.
Mehrotra, A., & Yetman, J. (2015). *Financial inclusion - Issues for central banks. BIS*. Retrieved from www.bis.org/publ/qtrpdf/r_qt1503h.htm
Mensah, E., Abor, J., Aboagye, A. Q. Q., & Adjasi, C. K. D. (2012). Enhancing the economic growth of Africa: Does banking sector efficiency matter? Finance and development in Africa. *Emerald Group Publishing Limited*, *12*(B), 1-23. https://doi.org/10.1108/S1479-3563(2012)000012B005
Menyelim, C. M., Babajide, A. A., Omankhanlen, A. E., & Ehikioya, B. I. (2021). Financial inclusion, income inequality and sustainable economic growth in sub-Saharan African countries. *Sustainability*, *13*(4), 1780. https://doi.org/10.3390/su13041780
Mitton, L. (2008). *Financial inclusion in the UK: Review of policy and practice Joseph Rowntree Foundation York*. Retrieved from https://www.jrf.org.uk/sites/default/files/jrf/migrated/files/2234.pdf
Mohan, R. (2006). *Economic growth, financial deepening, and financial inclusion*. Retrieved from Annual Bankers' Conference, Hyderabad:
Musembi, G. R., & Chun, S. (2020). Long-run relationships among financial development, financial inclusion, and economic growth: Empirical evidence from Kenya. *Global Business & Finance Review*, *25*(4), 1-11. Https://doi.org/10.17549/gbfr.2020.25.4.1



***Nurture**: Volume 18, Issue 4, 911-923, **2024***
***Online ISSN**: 1994-1633/ **Print ISSN**: 1994-1625*
***DOI**: 10.55951/nurture.v18i4.918| **URL**:* www.nurture.org.pk
***Publisher:** Nurture Publishing Group*

Mustafa, M., & Rahman, A. (2015). Financial inclusion and per capita real GSP growth across fifty US states and the District of Columbia: Evidences from panel cointegration and GMM estimates. *Global Business & Finance Review*, *20*(1), 87-94. https://doi.org/10.17549/gbfr.2015.20.1.87

Naceur, S. B., Barajas, A., & Massara, A. (2015). *Can Islamic banking increase financial inclusion?* Retrieved from International Monetary Fund, Working Paper No. 2015/031:

Neaime, S., & Gaysset, I. (2018). Financial inclusion and stability in MENA: Evidence from poverty and inequality. *Finance Research Letters*, *24*, 230-237. https://doi.org/10.1016/j.frl.2017.09.007

Nkwede, F. (2015). Financial inclusion and economic growth in Africa: Insight from Nigeria. *European Journal of Business and Management*, *7*(35), 71-80.

Ozili, P. K. (2018). Impact of digital finance on financial inclusion and stability. *Borsa Istanbul Review*, *18*(4), 329-340. https://doi.org/10.1016/j.bir.2017.12.003

Ozili, P. K. (2020). *Theories of financial inclusion. Uncertainty and challenges in contemporary economic behavior*: Emerald Publishing. http://dx.doi.org/10.2139/ssrn.3526548

Ozili, P. K., Ademiju, A., & Rachid, S. (2023). Impact of financial inclusion on economic growth: Review of existing literature and directions for future research. *International Journal of Social Economics*, *50*(8), 1105-1122. https://doi.org/10.1108/IJSE-05-2022-0339

Patrick, H. T. (1966). Financial development and economic growth in underdeveloped countries. *Economic Development and Cultural Change*, *14*(2), 174-189. https://doi.org/10.1086/450153

Pearce, D. (2011). *Financial inclusion in the Middle East and North Africa: Analysis and roadmap recommendations*. Retrieved from World Bank Policy Research Working Paper No. 5610:

Rajan, R. G., & Zingales, L. (2003). The great reversals: The politics of financial development in the twentieth century. *Journal of Financial Economics*, *69*(1), 5-50. https://doi.org/10.1016/s0304-405x(03)00125-9

Robinson, J. (1952). *The generalization of the general theory the rate of interest and other essays*. London: Macmillan.

Sahay, R., Cihak, M., N'diaye, P., Barajas, A., Mitra, S., Kyobe, A., & Yousefi, S. R. (2015). Financial inclusion: Can it meet multiple macroeconomic goals? *International Monetary Fund*, *15*(17), 33. https://doi.org/10.5089/9781513585154.006

Sarma, M. (2012). *Index of financial inclusion–A measure of financial sector inclusiveness*. Retrieved from Berlin (GE). Berlin Working Papers on Money, Finance, Trade and Development,No. 07/2012:

Sarma, M., & Pais, J. (2011). Financial inclusion and development. *Journal of International Development*, *23*(5), 613-628. https://doi.org/10.1002/jid.1698

Schumpeter, J. (1911). *The theory of economic development: An inquiry into profits, capital, credit, interest and the business cycle*. Cambridge: Harvard University Press.

Sethi, D., & Acharya, D. (2018). Financial inclusion and economic growth linkage: Some cross country evidence. *Journal of Financial Economic Policy*, *10*(3), 369-385. https://doi.org/10.1108/jfep-11-2016-0073

Sharma, D. (2016). Nexus between financial inclusion and economic growth: Evidence from the emerging Indian economy. *Journal of Financial Economic policy*, *8*(1), 13-36. https://doi.org/10.1108/JFEP-01-2015-0004

Shaw, E. S. (1973). *Financial deepening in economic development*. New York: Oxford University Press.

Solow, R. M. (1956). A contribution to the theory of economic growth. *The Quarterly Journal of Economics*, *70*(1), 65-94.

Sulong, Z., & Bakar, H. (2018). The role of financial inclusion on economic growth: Theoretical and empirical literature review analysis. *Journal of Business & Financial Affairs*, *7*(4), 2167-0234.1000356. https://doi.org/10.4172/2167-0234.1000356

Van, L. T.-H., Vo, A. T., Nguyen, N. T., & Vo, D. H. (2021). Financial inclusion and economic growth: An international evidence. *Emerging Markets Finance and Trade*, *57*(1), 239-263.



***Nurture**: Volume 18, Issue 4, 911-923, **2024***
***Online ISSN**: 1994-1633/ **Print ISSN**: 1994-1625*
***DOI**: 10.55951/nurture.v18i4.918| **URL**:* www.nurture.org.pk
***Publisher:** Nurture Publishing Group*