Financial Liberalization and Its Impact on Economic Growth in Jordan

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Abstract: - The researcher employs the Autoregressive Distributed Lag (ARDL) model with bounds testing methodology to examine the relationship between economic growth and financial liberalization in Jordan from 1993 to 2022. The findings of the analysis revealed that financial liberalization has a detrimental effect on both short-term and long-term economic growth, albeit this effect seems to be relatively weak. The study suggests that the adoption of financial liberalization policies in Jordan is not conducive to fostering economic growth. Nevertheless, given the vulnerability of financial markets to market failures, it is crucial to persist in implementing interventionist measures in financial reform. The researcher recommended more proposals that help enhance the importance of financial liberalization and the possibility of its impact on economic growth, in addition to proposing additional policies that help increase economic growth rates by increasing the rates of financial flows into the national economy.

Key-Words: - Economic growth, financial liberalization, Bounds testing methodology, Cointegration, Vector Error Correction Model (VECM), Jordan.

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1 Introduction

The exodus of money from certain prosperous nations has spurred these countries to pass laws and regulations pertaining to the opening up of their financial systems. By the end of the 1980s and the beginning of the 1990s, a number of prosperous nations had successfully completed the process of financial liberalization. The actions taken by these developed countries then motivated many developing nations to embark on a range of economic reforms in order to narrow the gap with their economically advanced counterparts.

To achieve economic reform, it is also essential that financial reform be addressed and the banking sector be given due attention. This entails the deregulation of this crucial sector by eliminating constraints on interest rates, currency values, and fees charged for financial services. The study investigates the effect of financial liberalization on the growth of gross domestic product in Jordan from 1993 to 2022. It aims to utilize modern econometric techniques such as autoregressive distributed lag (ARDL) models. The model estimates the relationship using integrating variables of order I (0), I (1), or a combination of both.

An established system of finance can greatly determine a country's pathway to economic development at large. A supportive financial environment encourages many financiers to venture into different sectors of the economy. Such investments open doors for progressive strides in various areas especially those that promote economic engagement leading to a lasting impact on GDP, [1].

Several countries have been exploring whether they can perform any kind of liberalization in their countries to remove some limits imposed on institutions functioning within their respective jurisdiction. Note that different policies have been implemented within the financial markets to enhance economic development. Most economists hold the view that it is such financial liberalization policies that are responsible for international crises of a financial and economic nature. As a result, countries chose to be economically liberated and one of the ways they did this was by liberalizing their banking systems to facilitate monetary policy autonomy: allowing market forces to determine exchange rates while discretion is given in interest rate determination.

Financial liberalization can also be classified into two main types; comprehensive and narrow. Comprehensive financial liberalization encompasses the methods and measures adopted by the state to enhance the efficiency of the financial system. It aims to eliminate or alleviate the restrictions

imposed on the financial system, with the goal of completely reforming it. On the other hand, narrow financial liberalization focuses on freeing financial market operations from imposed restrictions. These restrictions hinder the trading of financial instruments at both local and international levels. In order to achieve financial liberalization, various measures are taken, such as liberalizing interest rates, easing restrictions on commercial bank transactions in securities, reducing direct intervention tools, increasing the use of indirect intervention tools in monetary policy management, lifting or reducing barriers to foreign participation in national financial markets, and utilizing innovative financial instruments.

One can argue that financial liberalization policies encompass a variety of measures that need to be put into effect at the community level, addressing three key aspects: the freeing of interest rates, the loosening of credit and mandatory reserve requirements, and the promotion of competition in the banking sector. On an international scale, this type also involves the elimination of exchange controls. It is crucial to acknowledge the potential hazards associated with financial liberalization, given that the policies advocated by the International Monetary Fund, particularly the hasty deregulation of financial markets, have resulted in foreign financial institutions gaining absolute dominance over the financial landscape in developing nations. One of the main reasons for this is the unequal level of competition between financial institutions in developing nations and the prominent institutions in advanced countries. The latter always strive to expand their operations by establishing more branches in developing nations, especially those that have opened up their financial markets. In recent times, the International Monetary Fund (IMF) has been enforcing policies and conditions on developing nations and their governmental bodies in different ways. These include implementing a range of laws and regulations that are obligatory for these countries. Unfortunately, these measures have had an adverse effect on the overall economic activity of these nations, [2]. Thus, the study problem can be formulated by asking the following questions:

- How the financial system can contribute to economic growth?
- What is the direction of the relationship between the indicators of financial liberalization and economic growth in Jordan?
- Is the reason for the weakness of the national economy due to financial liberalization?

2 Theoretical Framework

The focal point of the interest rate liberalization hypothesis revolves around the concept of financial repression. This hypothesis posits that repression has detrimental effects on long-term economic growth by limiting the availability of funds or savings for investment purposes. Opposing viewpoints to the prevailing theory of financial repression have been presented by [3] and [4]. Conversely, [5] advocates for interest rate liberalization, which would eliminate various forms of financial repression. The model being proposed encompasses financial intermediaries, savers, and investors. In their proposal, [5] suggested a model wherein savings are determined by the real interest rate, and investment is influenced inversely. This model is based on the notion that private sector loans supported by domestic debt are subject to a fixed nominal interest rate, which is maintained below its equilibrium level to ensure the real rate remains low. It posits that if the real interest rate decreases due to inflation or a reduction in the nominal interest rate, savings will likely decrease as well. Inflation, however, serves as a hedge against land ownership, thus leading to an increased demand for land when the real interest rate declines, since depositing money in the financial system becomes less appealing.

Economists have engaged in discussions about the pros and cons of two approaches to transitioning to capital account liberalization. The first approach, known as the "Big Bang," advocates for a swift acceleration in this process. On the other hand, there is support for a gradual approach that relies on reforms in the real economy, the financial system, and the liberalization of interest rates before implementing capital account liberalization. These differing views stem from the belief that certain obstacles impede the smooth flow of capital, often linked to protective policies. Despite these debates, there seems to be a general agreement that capital account liberalization is beneficial for the economy. However, some suggest that the majority of economists concur on the significance of stability before the implementation of financial liberalization (specifically about interest rates and the capital account), as well as ensuring that institutional guarantees are firmly in place. Consequently, it is highly recommended to focus on implementing reforms in the real sector, enhancing legal regulations governing finance, and gradually opening the current account before considering any form of capital account liberalization.

Now, when we talk about the risks of financial liberalization that were mentioned before, we must

give careful thought to certain important measures that can help lessen the harm and dangers connected to this policy. There are a few significant steps that can be taken in this regard:

Financial market liberalization without proper regulation often leads to economic instability and crisis propagation, which is why gradualism is important.

Assessing options for developing countries to study the results of financial liberalization, focusing on the IMF's role as an international economic institution and the political risks.

Focusing on vital economic indicators such as wages, unemployment, and GDP, avoiding forcing developing countries to restructure financial institutions without considering the importance of restructuring industrial and trade sectors, and improving social welfare activities.

Considering that rapid liberalization can lead to asset stripping and prevent wealth creation, causing economic contraction, unemployment, and bankruptcy, a phased approach to financial liberalization should be implemented. This would allow for adjustments to the basic structure before full liberalization occurs.

Supporters of financial liberalization have identified four conditions to ensure the success of this policy, which can be highlighted as follows:

2.1 Economic Stability

Maintaining a low level of inflation is considered a top priority for any country's policies. This is because an increase in inflation can lead to various economic problems, such as a decrease in the purchasing power of the local currency and an increase in interest rates. As a result, the financial system weakens, and overall economic growth is hindered. To address this issue, countries must take precautionary measures through two types of actions: Before a crisis, preventive measures are taken while after the crisis remedial measures are taken. The tendency of these preventative steps is to be associated with the establishment of laws and regulations that give depositors rights such as government oversight of the whole financial system. Remedial measures, on the other hand, include direct government intervention to secure deposits in order to protect depositor’s rights and central bank intervention through its lending policies so as to provide liquidity.

2.2 Availability of Information from Participating Parties and Coordination between Them

The comprehension of the liquidity of financial institutions helps protect depositors’ interests and investors’ welfare. Furthermore, knowledge about how these firms operate is important when assessing investment risks and prospective returns. This association can be established by considering the connection between risk levels about interest rates or expected profit margins in terms of interest rates. The advocates for financial liberalization argue that bigger enterprises become more susceptible to risk as well as yield higher profits once the interest rate increases. Conversely, they say that lowering an interest rate would compensate for any possible loss in profit.

2.3 Gradualism in the Financial Liberalization Process

In general, fundamental reform in finance is key to achieving liberalization. It allows for flexibility and adjustment to effectively carry out intended actions. It is imperative to implement a series of measures gradually to ensure successful financial liberalization. We can outline three fundamental stages that are essential for this process to thrive:
For various economic sectors, complete financial control must precede the financial liberalization process through a series of structural reforms to ensure economic stability.

Internally, to stimulate competition among the mentioned institutions, there is a process that involves opening up the field for the private banking sector and liberalizing interest rates on loans and deposits.

To enhance competition, the last stage in the global arena is to entice overseas investments into the domestic capital markets.

The works of [6], [7], [8], [9] are the starting point for several theoretical and applied studies carried out by many experts and economists who stressed that financial development stimulates economic growth, especially in developing countries. The existence of a well-developed financial sector in a country allows it to operate financial resources to the size needed by the economy and improves the task of directing these resources to viable projects and investments. This is why many economists consider that financial development helps stimulate economic growth in developing countries, as this opinion is based on a set of economic theories and applied work carried out by many experts, unlike the old economic

theories that considered the financial sector to have a neutral and negative role in the economy and also supported this trend, [8]. Financial development draws their point of view allowing for the increase and diversity of financial intermediation institutions and increasing their competitiveness, which leads to the provision of financial resources and thus achieves more productive investments. The study [9] is one of the studies that confirmed the pivotal role played by the financial sector in increasing economic growth. Although most theoretical and applied economic studies indicate that financial development contributes to raising the economic growth of countries, there is a group of economists who consider that the importance of developing the financial sector to advance development is exaggerated. This development is an inevitable consequence of economic growth, in the sense that positive economic growth rates help increase the demand for financial services, leading to the recovery of financial activities, which leads to the deterioration of the financial sector, and promotes economic growth in the long term, as proven by [10], [11]. In their theoretical and applied studies, they found an adverse effect between economic growth and financial development.

2.4 Previous Studies

Numerous researchers have extensively discussed this prevailing trend in various countries, and among these numerous studies that have diligently focused on this captivating topic is the esteemed Study [12], which astoundingly indicated that the process of financial liberalization has the potential to be an immensely advantageous catalyst for stimulating economic growth. However, concurrently, it bears mentioning that this process may inadvertently give rise to a multitude of predicaments in the intricate tapestry of economic development. The main aim of this research, therefore, was to study in detail the profound impacts that financial liberalization and institutional quality have on banking development. To achieve this task, a comprehensive data set was meticulously compiled from an unusually representative sample of 17 Arab countries over two decades (1990-2012). The findings of the study are nothing short of mind-blowing as they universally suggest that financial liberalization has the incredible ability to yield positive and revolutionary changes within the domain of banking development in Arab countries.

On the other hand, another research [13] focused on unraveling complex relationships between trade, financial development (measured by local credit, private credit, and money supply), and economic growth in Jordan. This empirical study reveals a persistent connection between real GDP growth, trade openness, and financial deepening. Moreover, it has been noted that trade openness influenced negatively the economic growth both in short-run and long-run periods.

The study [14] sought to explore the relationship between financial liberalization and economic growth in Algeria from 1990-2020. Surprisingly, the results of the study could not explain any favorable impacts of financial liberalization on the economic growth of the country. In fact, it stressed the need for a re-think of the financial approach by strengthening both financial and banking sectors and achieving comprehensive economic stability.

The study [15] went into specifics about Financial Openness particularly among Arab countries. It has also extensively dwelt on the causes of the current financial crisis. The paper pays much attention to the extremely complicated interrelationship between liberalization in finance and global crises while suggesting some plausible measures that can be taken to mitigate the negative effects of such liberalizations as well as prevent another crisis. The research thus suggests that Arabic nations should restrict activities in their money market, oversee international flows of funds with caution, and adopt an expansive monetary policy aimed at ensuring adequate liquidity provisions within the economy.

Moreover, the Study [16] focused on assessing the impact that financial deregulation had on the recession as well as the banking system's collapse. The study has recommended using indicators to predict bank crises; this will increase banks' ability to effectively utilize resources and minimize risks. It indicated the need for timely measures before things get worse and highlighted the requirement of the central bank's cautious concern with banking operations in ensuring financial and banking stability.

In addition, a wide-ranging study by Research [17] investigates how financial liberalization indicators impact trading volumes and stock returns within Jordanian banks. The study also deeply explored the complexities of globalization and financial liberalization, their ultimate goals, and wide-ranging consequences. In its conclusion, the research deployed sophisticated financial liberalization indicators which showed that in Jordan's banking sector, there is no significant correlation between these variables and trading volume or returns. Thus, several important findings from the research include; adopting a clear-cut

policy on financial liberalization; removing barriers to foreign ownership; as well as enhancing the effectiveness of monetary policy.

In addition, research was carried out aiming at scrutinizing the influence of financial sector development on economic growth in advanced and developing nations [18]. It builds upon prior theoretical and empirical literature employing various measures such as indicators of the growth of banking institutions and financial markets.

On the flip side, investigators in another study investigate the complex theoretical grounds for financial liberalization [19]. It also suggests ways of measuring its impact through theoretical and empirical analysis by looking into some criticisms related to the term “financial liberalization.” Eventually, they conclude that successful financial liberalization depends on overall stability in the national economy, step-by-step reforming as well as strong supervision within the financial sector.

According to [20] research on the link between financial deregulation and growth taking a closer look at long-term issues. The KAOPEN index was specifically developed for this purpose. They made use of the Error Correction Model to determine their findings by analyzing yearly data from 1970 until 2010. A significant finding emerged from the study which was surprising: financial liberalization is negatively related to economic growth in Algeria.

3 Research Methodology

The introduction of financial liberalization, in its conventional form, which encompasses the influence on interest rates and the opening up of capital accounts, is anticipated to bring about a rise in economic growth. Consequently, this study sets out to construct a model with the objective of assessing the effects of financial liberalization on broader economic progress. Expanding upon the methodology outlined in reference [21], this study puts forth a model that quantifies economic growth as a product of the financial liberalization index, alongside variables representing capital (including fixed capital and new investments) and the labor force.

The formulated model used in this study can be articulated as follows:

$$\mathrm{LnY}_t = c + \alpha \,\mathrm{lnK_t} + \beta \,\mathrm{lnL_t} + \omega \ln Fl_t + \varepsilon_t \tag{1}$$

Where:

- Y=Real Gross Domestic Product (GDP);
- K=Capital Stock (Fixed capital plus new invest ments);
- L=Labor force;
- FL=Financial Liberalization Index
- C=Constant parameter;
- ε=Random error term.
- .ln=Natural logarithm.

Using principal component analysis, the model incorporated the Financial Liberalization Index (FL) to showcase political changes throughout all stages of the financial liberalization policy implementation process.

The signs of the coefficients α, β, φ, and ω elasticity parameters are expected to be positive.

The ARDL methodology test is conducted using the Unrestricted Error Correction Model (UECM) technique in two stages. Firstly, the ARDL model is estimated through Ordinary Least Squares (OLS) to determine if there exists a long-term relationship between the relevant variables. This involves constructing the UECM model and examining the statistical significance of the lag periods in the equation. Essentially, this step entails rejecting the hypothesis of no long-term relationship. The second stage of the methodology encompasses estimating the long-term coefficients, followed by estimating the associated Error Correction Model and computing the Error Correction Coefficient.

The short-term effects are captured by the coefficients of the first-differenced variables in the UECM model, as follows:

$$\begin{aligned}\Delta \mathrm{LnY}_t &= c + \delta_1 \ln Y_{t-1} + \delta_2 \ln K_{t-1} + \delta_3 \ln L_{t-1} + \delta_4 \ln FL_{t-1} \\ &+ \sum_{i=1}^{p} \alpha_i \,\Delta \mathrm{lnY_{t-i}} + \sum_{i=0}^{p} \beta_i \,\Delta \mathrm{lnK_{t-i}} + \sum_{i=0}^{p} \gamma_i \,\Delta \mathrm{lnL_{t-i}} + \sum_{i=0}^{p} \Pi_i \,\Delta \mathrm{lnFL_{t-i}} + \varepsilon_t\end{aligned} \tag{2}$$

The coefficients are multiples of the long-term relationships. c is the constant, and ε represents the random errors. The empirical analysis included a series of steps that can be explained as follows.

3.1 Unit Root Tests for Variables

In most cases, it is assumed that the time series data is non-stationary, so it is necessary to test the root of the unit to ensure that there is static data to avoid the problem of spurious regression, Table 1 and Table 2 present the results of the Augmented Dickey-Fuller tests for the unit root of the relevant variables, and the lag periods were automatically determined. It is observed that all variables were either I(0) or I(1) based on the unit root tests. It refers to the rejection of the null hypothesis at a level of significance of 10%, 5%, and 1%, respectively.

Table 1. Augmented Dickey-Fuller Test for Unit Root of Level Variables

Variable	Without Direction	Result	Direction	Result
FDI	-1.934860	non-residential	-0.898797	non-residential
FL	1.833722	non-residential	-1.920005	non-residential
lnK	0.226451	non-residential	-2.146500	non-residential
lnL	-2.346536	non-residential	-2.7223465	non-residential
lnGDPr	-0.732456	non-residential	-4.100242***	residential

*Notes: *, **, *** indicate rejection of the null hypothesis at the 10%, 5%, and 1% significance level, respectively.*

Table 2. Dickey-Fuller Unit Root Tests for First Differences of Variables

Variable	Without Direction	Result	Direction	Result
FDI	-2.817732*	residential	-3.043093	non-residential
FL	-5.207521***	residential	-6.390132***	residential
lnK	-2.658672*	residential	-2.746833	non-residential
lnL	-2.789136*	residential	-2.568340	non-residential
lnGDPr	-1.568567	non-residential	-	-

*Notes: *, **, *** indicate rejection of the null hypothesis at the 10%, 5%, and 1% significance level, respectively.*

3.2 ARDL Bounds Test

Table 3 presents the long-term results for the specified model.

Table 3. Economic Growth and Financial Liberalization - Long-Term ARDL Results

Long Run Coefficients				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
LOG(K)	0.172663	0.030452	6.321421	0.0002
LOG(LABOR)	1.451838	0.169897	8.896329	0.0000
FL	-0.000010	0.000005	-1.810623	0.1001
C	6.198998	0.177794	42.671368	0.0000

Note: Dependent Variable: lnY = lnGDPr (Real Gross Domestic Product)

In Table 4, we can observe the coefficients of the Financial Liberalization Index (FL), which is a different variable that reflects the alterations in financial liberalization and the execution of its policies. Surprisingly, it exhibits a negative sign, contradicting our expectations, and is deemed statistically significant at the 1% level. Hence, an increment of 1% in the Financial Liberalization Index results in an exceedingly marginal reduction of economic growth by a mere 0.000005%.

It can be inferred from the evidence that financial liberalization policies have a rather unfavorable impact on economic growth, although they lean towards neutrality. As per economic theory, the opening up of financial markets results in a rise in savings, subsequently leading to increased investments and ultimately fostering economic growth. Nevertheless, the expected positive outcomes do not seem to materialize according to the findings.

Table 4. Economic Growth and Financial Liberalization - ARDL Error Correction Results

Cointegrating Form				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
DLOG(GDPR(-1))	0.314062	0.125602	2.395887	0.0440
DLOG(GDPR(-2))	0.803321	0.116894	6.335886	0.0003
DLOG(K)	0.090123	0.014998	5.142334	0.0008
DLOG(LABOR)	0.499878	0.170189	3.096798	0.0150
DLOG(LABOR(-1))	-0.7011234	0.138554	-4.448012	0.0022
DLOG(LABOR(-2))	-0.399254	0.147786	-2.710172	0.0269
D(FL)	-0.000005	0.000001	-3.626798	0.0068
CointEq(-1)	-0.517287	0.068127	-7.592991	0.0001

Cointeq = LOG(GDPR) - (0.172663*LOG(K) + 1.451838*LOG(LABOR) -0.0000 FOP + 6.989861)

As for the coefficients ΔlnK, ΔlnLabor-2, ΔlnLabor-1, ΔlnLabor-2, and ΔFL, all are statistically significant at a level below 5%. Therefore, the variables are statistically significant in the short run. Additionally, the coefficient ECM(-1) is statistically significant at a level of 1%, with the expected negative sign. This confirms the presence of a long-term relationship between the variables. The ECM(-1) coefficient is -0.52, indicating the speed of the adjustment process. The magnitude of the ECM(-1) coefficient implies that the disturbance caused by a shock is completely corrected in approximately two years at an annual rate of 52%.

4 Results and Recommendations

In this study, we delve into the effects of financial liberalization policies on economic growth in Jordan. We employ various methodologies, such as the ARDL and Bound Test methodology, as well as the Unrestricted Error Correction Model (UECM) for cointegration analysis. To measure financial

liberalization policies, we utilize a multidimensional Financial Liberalization Index that encompasses different indicators. Despite the limited size of our sample, the ARDL Bound Test methodology proves to be suitable for small samples and exhibits superior properties compared to conventional cointegration methods, which typically necessitate larger sample sizes to yield valid outcomes.

The findings imply that the effects of financial liberalization policies on economic progress in Jordan are statistically meaningful, yet exceedingly feeble, gravitating towards insignificance over both the immediate and prolonged duration. This implies that the enactment of financial liberalization policies fails to invigorate economic advancement in Jordan. Consequently, the investigation suggests that financial liberalization policies are unsuitable, urging the undertaking of alternative measures to bolster economic growth.

Based on the results of the study, the researcher proposes the following recommendations:

- Work on more financial liberalization policies in the future to achieve better banking performance and thus stimulate economic growth.
- Work to increase the competitiveness of banks and find more financial products to stimulate economic growth.
- Strengthening the role of financial intermediation to facilitate the growth of the real sector through the implementation of financial reforms and encouraging trade openness.
- Encouraging foreign investment in light of the availability of appropriate political and economic conditions and reviewing and updating the investment law permanently.
- The ability of the monetary authority to develop policies that ensure the flow of investable funds and improve the ability of banks to provide credit to the economy.
- Implementation of some government interventions in the form of financial restrictions along with the policy of financial liberalization.

References:

[1] A. Al-Sawaie, K. (2017). Determinants of Jordanian trade balance: An ARDL approach. *Zarqa Journal for Research and Studies in Humanities*, *17*(1), 138-149.

[2] Ali, M. S. (2020). Evaluating the effectiveness of macroeconomic indicators to influence the stability of Jordanian banking system. *Zarqa J. Res. Stud. Humanit*, *20*(1), 136-144.

[3] McKinnon, R. I. (1973). The value-added tax and the liberalization of foreign trade in developing economies: a comment. *Journal of Economic Literature*, 11(2), 520-524.

[4] Shaw, E. S. (1973). *Financial deepening in economic development*. Harvard University Press, Cambridge, M.A

[5] Tobin, J. (1965). Money and economic growth. Econometrica: *Journal of the Econometric Society*, 671-684.

[6] Bagehot, W. (1873). *Lombard Street: A description of the money market*. London: HS King.

[7] Becker, M. C., & Knudsen, T. (2002). Schumpeter 1911: farsighted visions on economic development. *American Journal of Economics and Sociology*, *61*(2), 387-403.

[8] Culbertson, J. M. (1958). Intermediaries and monetary theory: A criticism of the Gurley-Shaw Theory. *The American Economic Review*, *48*(1), 119-131.

[9] Goldsmith, R. W. (1969). Financial structure and development. *(Subject for International Comparative Study)*.

[10] Robinson, J. V. (1952). *The rate of interest and other essays*. (Published online by Cambridge University Press).

[11] Patrick, H. T. (1966). Financial development and economic growth in underdeveloped countries. *Economic development and Cultural change*, *14*(2), 174-189.

[12] Hleli, N., & Smida, M. (2023). Financial Liberalization and Banking System Development: Evidence from Arab Countries. *Saudi J Econ Fin*, 7(3), 155-165.

[13] Al-Swai'e, K. (2015). The impact of trade liberalization and financial development on economic growth: Jordan case study. *Jordan Journal of Economic Sciences*, *2*(1).

[14] Milou Saleh and Arzi Fathi (2021). "The Impact of Financial Liberalization on Economic Growth in the Context of the Modern Globalization Cycle: A Standard Study Using the ARDL Cointegration Model in Algeria for the Period 1990–2020." *Journal of Economic, Management, and Commercial Sciences*, Vol. 14, Issue 2, pp. 50–70.

[15] Wissaf Atieqa (2013). "The Role of Financial Liberalization in the Globalization of the Current Financial Crisis: The Case of Arab Countries," *Economic and Administrative Research*, Issue 14, Algeria.

[16] Abdulghani Hreere (2009). "The Role of Financial Liberalization in Crises and Banking Failure," *International Scientific*

Symposium on the International Financial and Economic Crisis and Global Governance. Alshalaf, Algeria, 20-21/10/2009.

[17] Hamza Al-Asali (2005). *"The Impact of Financial Liberalization on the Returns of the Trading Volume of the Banking Sector Stocks in Jordan (2004-1980),"* Master's thesis in Banking and Finance, Al al-Bayt University, Jordan.

[18] Mujahid and Keynesa (2016). *"The Impact of the Evolution of the Financial Sector on Economic Growth: A Case Study of Developing and Advanced Countries"*, Master's thesis

[19] Ben Bouziane Mohamed, Shakouri Sidi Mohammed (2006). "Financial Liberalization and Its Impact on Economic Growth: A Case Study of Algeria," *General Economic, Management, and Commercial Sciences, University of Tlemcen*. Morocco, High Commission for Planning.

[20] Mohamed Zakaria Ben Mawzo and Kamal Hamana. (2013). *"Measuring the Relationship Between Financial Liberalization and Economic Growth in Algeria Using the (KAOPEN) Index: A Standard Study (1970-2010)"*, El-Bahith Review, 13(1), 19-30.

[21] Beck, T. (2000). *Financial structure and economic development: Firm, industry, and country evidence* (Vol. 2423). World Bank Publications.

Contribution of Individual Authors to the Creation of a Scientific Article (Ghostwriting Policy)

I, Nidal Abbas, contributed fully to the present research, at all stages from the formulation of the problem to the final findings and solution.

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