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The Impact of Financial Development on the Growth of non-Hydrocarbon Sectors in light of Trade Openness

أثر التطور المالي على نمو القطاعات الغير النفطية في ظل الانفتاح التجاري

ZAID Hizia[1] ABOUMOUSSA ZIAD[2] DRAA MESSEOUDA Redha[3*]

ENSSEA, Kolea, (ALGERIA) hizia.zaid@gmail.com
ENSSEA, Kolea, (ALGERIA) redhainps@gmail.com
ENSSEA, Kolea, (ALGERIA);moussaziad74@gmail.com

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Abstract

This study examines the relationship between financial development and the growth of non-hydrocarbon sectors in the light of Algeria's trade openness for the period between 1990-2017. VAR's model was used to study the sensitivity of growth rates of non-hydrocarbon sectors due to shock in the variables of financial development in the presence of the variables of trade openness.

The results showed that the indicators of financial development(FDI) do not have an Immediate effect on the growth rates of non -oil sectors even after a period of time estimated between two and four years, where this impact becomes positive, Compared to the indicator of loans to the private sector, which was relatively weak contribution to the analysis of variance of growth rates of non-oil sectors The Financial intermediate indicator is of great importance in analyzing the variance of growth rates of non-hydrocarbon sectors, In addition, the trade openness indicator had a good contribution to the analysis of variance for non-oil sector growth

Key words: Growth of non-Oil sectors, Financial Development, Trade Openness, VAR models.

Jel classification: E6, F13 F41, F43, O44

ملخص

تبحث هذه الدراسة في العلاقة بين التطور المالي و نمو القطاعات الاقتصادية خارج المحروقات في ظل الانفتاح التجاري في الجزائر و هذا خلال الفترة (1990–2017) و لتحقيق هذا الهدف تم الاستعانة بنماذج الانحدار الذاتي VAR من أجل دراسة حساسية معدلات نمو القطاعات الاقتصادية خارج المحروقات إلى صدمة في متغيرات التطور المالي و ذلك بوجود متغير الانفتاح التجاري .

حيث أظهرت النتائج أن مؤشرات التطور المالي لا يكون لها أثر آني على معدلات نمو القطاعات الاقتصادية حتى بعد مرور فترة زمنية تقدر بين سنتين و أربع سنوات أين يصبح هذا الأثر إيجابي و من جهة أخرى توصلنا إلى نتيجة مفادها أن مؤشر الوساطة المالية له أهمية بالغة في تحليل تباين معدلات نمو القطاعات خارج المحروقات مقارنة بمؤشر القروض الموجهة للقطاع الخاص التي كانت مساهمتها ضعيفة نسبيا في تفسير تباين نمو القطاعات بدون أن نغفل على مؤشر معدل الانفتاح التجاري الذي كانت لديه مساهمة جيدة في تحليل تباين النمو للقطاعات

الكلمات المفتاحية: معدل نمو القطاعات الغير نفطية ، التطور المالي، الانفتاح التجاري، نماذج VAR

تصنيف جيل: E6, F13 F41, F43, O44

* DRAA MESSEOUDA Redha, redhainps@gmail.co

1. INTRODUCTION:

The financial and banking system has a great deal of importance in the economies of countries. Empirical studies have revealed a close connection between economic growth and the degree of financial development due to of the important role of the financial sector in the financial intermediation, directly, through the stock market, or indirectly, through the banking system which collects financial surpluses from various sources and distributes them on productive economic sectors so as to expand their investment projects, and consequently increase their growing rates.

Financial development measures the country's ability to direct its financial savings towards competent and efficient investments, within its geographical boundaries through the quality of its institutional and regulatory framework, its financial market's size, the diversity of its financial instruments, and their accessibility. Thus, the concept of financial development has expanded to include improvements and developments in the efficiency of both the financial and banking system and the stock market so that domestic and foreign financial savings can be efficiently distributed on various economic sectors to increase their growth and hence improve economic growth. So, through this financial intermediation process between savers and investors, resources are transferred and directed to the most productive economic sectors. According to economists Rajan and Zingales (2003) as well as the specialist in experimental economics Wolde-Rufael (2009), financial development has strong ties to trade openness; as it was concluded that financial growth has enhanced competition in case of openness related to international trade and a sense of freedom in capitalism flows. Kim et al (2010) also confirms a positive long-term relationship between trade openness and financial growth, while short-term relationship is often negative.

The growth and development of economic sectors can only be achieved through a financing process which ensures the supply of funds for the continuation of the productive process. Therefore, the financing process is a form of financial intermediation which is adopted by financial institutes in order to put various financial savings at the disposal of productive investments in various economic sectors. Thus, the development of the financial system will most likely increase efficiency and profitability of investment projects in various sectors, including economic, industrial, agricultural, public works and construction, which work to improve the growth of these sectors and eventually an increase in the growth rate of economics to achieve its desired development.

Subject Importance: Financial markets and institutions perform an important function in the economic development process, particularly through their role in allocating finance to various productive activities. These activities include mobilizing savings, obtaining information about investments and allocating resources, facilitating risk enhancement, and monitoring managers and exerting corporate control.

Research Purpose: The main purpose of this research is to try to find out the relationship between the indicators of financial development and the growth of various economic sectors in

Algeria in the light of the presence of economic openness indicator, this on the one hand and on the other to identify the economic sector most affected by indicators of financial development.

Study Problem: The development of the financial sector is the result of economic growth, which in turn feeds as much as a growth factor. Thus the Financial System plays an important role in the promotion of economic growth as well as an intermediary between the agents who have a need for financing and the agents who have a capacity of financing through the financing of the economic activities, so through this paper we tried to search for the answer to the following problematic:

What is the relationship between the indicators of financial development and the growth rates of economic sectors outside the hydrocarbons?

2.Previous studies:

I have made several researches on the subject of financial development and its impact on economic growth, but I have found no studies that deal with the impact of financial development on the growth of economic sectors, especially the growth of economic sectors outside the fuel sector for hydrocarbon producing countries, here lies the information we will try to supply in this research. Among the previous most important studies which I found and revised, we find:

- **D. Sami Mbarki:** financial development and its determinants in the regions of the middle east and north Africa, journal of industrial economics, issued 11th of December 2016, University of Batna Haj Lakhder.

The purpose of conducting this research is to search for the use of an index allowing comparisons between countries in their financial sector, which is what allows for the identification of areas which are deficient to evaluate and support the most developed areas. It also permits a construction of a financial indicator, so as to evaluate the extent of improvement of the country's financial environment effects economic growth in its various dimensions, or by determining the consequential relationship between financial development and economic growth. Thus, reversing it.

- **D. Ziad Mohamed Zureiqat, A.D Ali Hussein the interview, D. Aimen Mohamed Said Youssef the** :effect of financial system development on economic growth in Jordan (1980-2009) arab journal of management, Vol. 35, n°1, june 2015.

The importance of this study lies in addressing the impact of financial development on economic growth in Jordan. Since Jordan towards the early 90's started implementing numeral economic reform programs and financial liberalization, which is considered one of the most important requirements for a transition towards free market economics.

- **Raghutla CHANDRASHEKAR, T. SAMPATH, Krishna Reddy CHITTEDI, Financial:** development, trade openness and growth in India, Theoretical and Applied Economics, Volume XXV (2018), No. 1(614), Spring, pp. 113-124

This paper studies the relationship between the financial development, trade openness and economic growth in India.

- **Mesut Alper GEZER,** the relationship between financial deepening and economic growth: Bootstrap causality approach for the selected upper middle income countries, *Theoretical and* Applied Economics, Volume XXV (2018), No. 1(614), Spring, pp. 95-112

This paper investigates the causal relationship between financial deepening and economic growth for fourteen upper middle income countries for the period during 1987-2015.

- **MOHAMMEDI Fatima Zahra** : Le développement financier et la croissance économique dans une économie dépendante de ressources naturelles : Cas de l'Algérie 1970-2015 thèse de doctorat en science économie, Université Abou Bekr Belkaid – Tlemcen 2017

This thesis's main objective is to assess mutual relationships between the financial system's development and the economic growth, which includes studies and conceptual and experimental models, as compared to oil-rich economies, the importance of these studies lies in reaching a successful analysis of the relationship between finance and growth inside the existence of the natural resources curse.

3. Literature review:

A great deal of importance was granted to the study of the relationship between financial and trade openness and economic growth, which started right after the emergence of the conventional model of both Adam Smith and Ricardo, in which they displayed economic openness and how it enhances specialization. Therefore, the financial sector's role in the continuing economic growth is not a modern process, rather, one that has been discussed by the economist Scumpeter in the year 1912, in which he showed the banking sector's role and financial intermediation as a main source of technological development as well as a support for economic sectors. (Kangni R, 2003) Many other studies were conducted regarding this subject during the fifties and the sixties, its most significant ones were the studies conducted by Gurley(1955) and Goldsmith(1969), which involved 35 developed and developing countries during the time period of (1860- 1863) so as to test the relationship between financial and economic growth by which the latter formulated the theory of financial development and economic growth stating the existence of a positive impact for financial development on the growth and development of economics, as the increase of financial assets by financial institutions work on enhancing investment efficiency and increasing capitalism's rate, resulting in an increasing growth. (smith, 1969) The most important studies however, did not start until the 70's when economists began studying the contribution of financial activism on economic growth, after the publishing of the works of Shaw(1973) and Mckinnon(1973) concerning financial liberalization named "financial repression hypothesis" which provides for the enactment of legislation and laws that would permit further financial freedom and limit the freedom of banking activities for an increase in savings in order to increase the offer for private credit, which in turn will help increase investments, resulting in increasing growth rates. (Orji, 2015) Yet, the existing theory in that time would not allow for an involvement of the part of the financial factor in growth models, but the theory of internal growth which emerged in the early 80's showed that growth can be effected by several factors such as the financial factor which takes us to two main channels, the first channel involving the accumulation of capitalism, and the second one involving production of capitalism. As the first one works on increasing savings, whereas the second, on developing the financial sector through gathering data and improving the quality and efficiency of investments, which increases capitalism productivity and eventually growth rates. (Kenza M, 2015)

Khan and others also conducted studies in 2005 to examine the relationship between financial development and economic growth in Pakistan during the time period from 1971 to 2004 using the ARDL model, where results manifested the positive effect that financial depth and real interest rates have on economic growth rates. Agbelenko’s study (2005) on the other hand, examined the relationship between financial development and economic growth in Togo during the time period of (1981-2010) using the wrongfully directed VECEM model and concluded that financial development has a positive impact on economic growth. In contrast, one may also find some studies which cared to examine the cause of financial development and economic growth which reached the conclusion of an existing relationship between both directions, meaning, each variable causes the other. A good example of it would be the study conducted by Adusei in 2003 on a group of African countries using the Panel model

However, many scientific studies have shown a difference in the nature of relationship between financial development and economic growth and the direction to which the relationship move, this can also be due to distinctive financial indices used in studies such as that of Waqabaca (2004) where the ratio of financial assets to local products, the ratio of liquid liabilities to local products and the ratio of credit in the private sector to local products were used as financial indicators. While we find in studies conducted by Nelson and paudel (2009) a usage of six indices for financial development which includes the ratio of money supply of the individual’s share of products, ratio of total deposits of the individual’s share of products, private credit ratio of the individual’s share of products, ratio of total credit of the individual’s share of products and ratio of private credit to total local credit.

4.Financial development’s index(2011 ،خلف) :

In this section, the most important financial development related indices are presented and the level of growth and efficiency of the financial system are measured, enabling financial intermediation to mobilize and allocate available savings in economy towards more efficient and cost-effective projects. Yet, the difference and effectiveness of financial intermediation and financial markets should be more considerate towards the efficiency of financial systems in producing and publishing information and monitoring investment projects. The ideal index should also be considerate of the legal and regulatory framework provided by state institutions.

4.1Private sector credit index:

This index measures the amount of loans directed to the private sector relative to the size of economy, in other words, this index measures the gross of the private resources used to finance the private sector divided by the gross domestic product, since private resources consists of asset-oriented loans, stock purchases and commercial loans. It is noted that this index is the most used in economic literature within financial development studies, as it is precisely distinguished by the actual amount of funds offered to the private sector, which is why it is an indicator mainly linked to investment and growth.

Graff (2003) points out that available financial supply to the private sector is more productive compared to them being available to the public sector. This variable represents the overall level of the banking sector's development.

4.2Financial intermediation index:

The second index which reflects the level of financial development measures the gross size of the financial intermediate, also known as, financial depth. Which consists of liquid discounts that represent a group of currency and deposits at the central bank (M0), gross convertible cash and digital money, (M1), as well as time deposit and foreign currencies deposits, deposit certificates and stock repurchasing agreements (M2), this index is usually used in economic literature to express financial maturity so that countries holding large totalities of (M2) relative to gross local products are capable of supplying economic giants with a wider and more variable group of financial services.

4.3Banking assets index:

And which measures the relative importance of the banking assets for private institution compared to banking assets in total, the importance of this index lies in the fact that private financial institutes are more efficient in assigning savings in term of risk control and in quality and distribution of information, King and Levine (1993), indices close to the unit point out to a relatively high rate of private assets in the financial system means a developed system, this indicator also points out a relative increase in the importance of institutes in the economy.

These three indices are sensitive of size, variety and effectiveness of the financial intermediation, still, it is not very sensitive of financial services such as the quality of available information.

4.4 Total deposit ratio to gross domestic product:

It represents the financial intermediates capacity of restoring different resources because financial institutions ability to loan and to play the intermediate's role depends mainly on the size of deposits.

4.5 Asset size (discount) of the banking system to (GDP): The perceiving indicator gives a clear image on the banking system's size in the economy.

4.6 financial market's development indices:(مشعل، 2012)

- Ratio of total market's value to GDP
- Ratio of total circulation size to GDP
- Ratio of total circulation size to the total market's value.

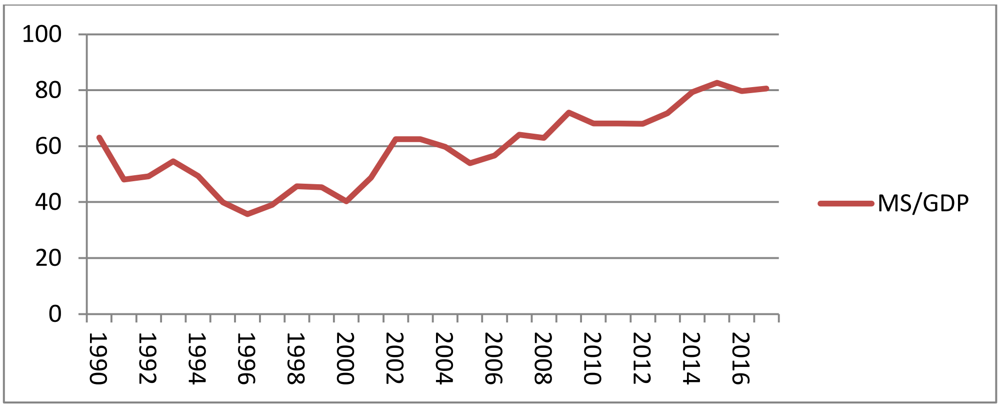
5. The financial development and growth of non-oil economic sectors in Algeria:

5.1 The evolution of financial development's index in Algeria:

The law of cash and offer issued in 1990 is considered to be a real leap for the financial and banking system and breaking away from the previous actions that damaged this sector, while attempting to establish a more effective and efficient in financing economy as well as accomplishing its desired development. A single and independent monetary authority was formed under this law, represented by the cash and loan board, in addition to establishing a banking system on two levels, the first being the monetary authority which is represented by the central bank and the second being represented by commercial banks, which is considered as a distributor of loans, which is why the central bank is in charge of establishment, implementation and monitoring of monetary policy, as well as regulating public, private and foreign banking activities. This law has witnessed several amendments, one of the most significant ones is the order n° 01/01 dated on the 27th of February 2001, Order n° 03/11 dated on the 26th of August 2003, Order n° 10/04 dated on the 26th of August 2010. In spite of these amendments on a structural and legal level, the Algerian banking system still suffers many malfunctions and could not keep up with the developments happening on a regional and international level, without forgetting the total absence of a stock market. Thus, we are about to delving next into the most important financial indicators in Algeria:

1) Financial intermediate index GDP/MS: the following figure shows the development of the financial intermediation index in Algeria during the period (1990-2017)

Fig 1: The evolution of the financial intermediation index during the period (1990-2017)

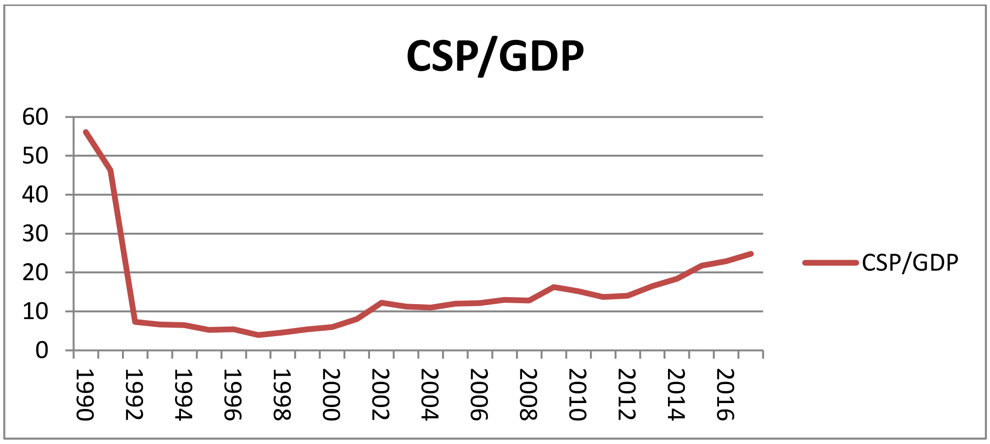


Source: By the researchers Depending on the data of Bank of Algeria

This Diagram clearly demonstrates the evolution and the rise and fall of the financial intermediation index throughout the study period. Yet, two noticeably different stages are distinguished, the first stage from 1990 to 2000 when there was a sense of decline as the lowest recorded percentage was during the year 1966 which reached 35.6% which is due to the strict austerity policy adopted by Algeria during this period as well as the international agreements conducted between Algeria and the international financial institutes under the framework of financial and economic reform. As for the second phase after the year 2000, a general improvement has been recorded in this index, which reached its climax in 2015 with a percentage of 82.59%

2) Credit index to the private sector: CSP/GDP:

Fig 2: The evolution of Credit to the private sector during the period (1990-2017)

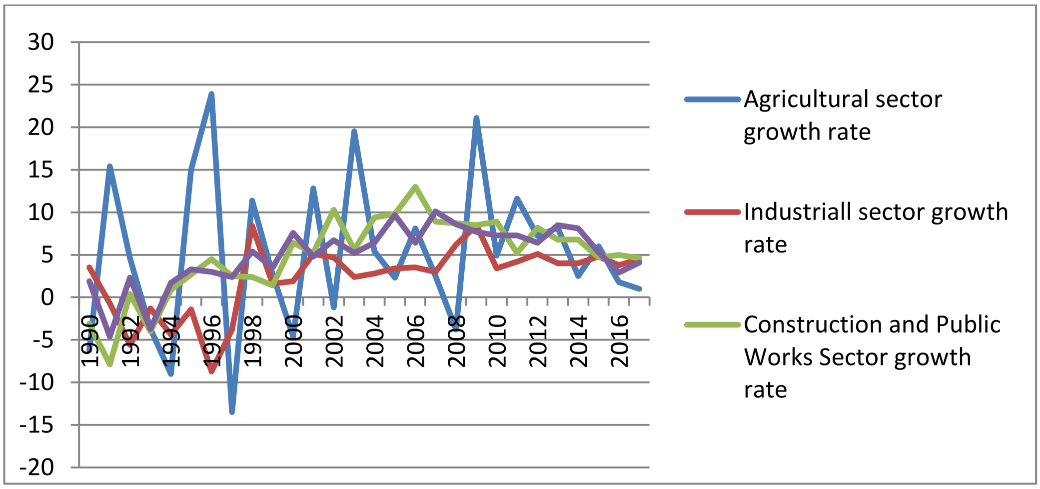


Source: By the researchers Depending on the data of Bank of Algeria

in this diagram, an intense decline of the index of loans offered to the economy is noticed until the year 1997, which is the period of the partial freedom granted to the banking system in Algeria. However, the collapse of the oil prices during this period has limited the bank's capacities to provide the private sector with loans considering its financing ability as it did not surpass 7%, but this index has known a slow paced positive turn since the year 1997, eventually reaching 24.7% in the year 2017.

3) The development of economic sectors outside the oil sector:

Fig 3: The evolution of the growth of economic sectors outside the hydrocarbon sector



Source: By the researchers Depending on the data of Ministry of Finance

The first observation that grabs attentions when analyzing economic sector's growth development is the great amount of instability concerning the agricultural growth, which was recorded through major fluctuations in the previous diagram. The industrial sector has also witnessed a decline and only start to improve gradually in the year 1996. As for the services, construction and public work sector, they have witnessed an improvement up until the year 2007 when the latter's rates started declining and decreasing. It is also noticed when comparing this diagram to the previous one of the loan index directed to the private sector, it is noticed that the same time period that a decline in this index was recorder, a decline in the industrial sector was also recorded and started improving as soon as the loan index directed to the private sector improved. This is a proof of the existing relationship between the industrial sector's growth and the credit index directed to the private sector.

6.Empirical studies:

This article includes a standard study of the effect of the financial development indicators on the growth of economic sectors outside of oil in light of trade openness in Algeria. While using the Vector Auto-Regression model VAR through analyzing response functions so as to study the sensitivity of the growth of economic sectors outside oil to the financial development index and the rate of trade openness, in addition to an analysis of the variance growth of the economic sectors.

6.1 study variables: the table below summarizes the variables used in this article:

Table 1: Study variables

Variable	Icone	Method of measurement	Data Source
The variables of financial development			
Money supply index (Measures the volume of financial intermediation)	MS	Ratio of money supply to GDP	Bank of Alegria
Credit directed to the private sector	CPS	Ratio of credit directed to the private sector to GDP	Bank of Alegria
The Variable Trade openness			
Trade openness	TO	Total exports and imports relative to GDP	Ministry of Finance (General Directorate of Customs)
The Variable of investment			
Gross capital formation	GCF	Total gross capital formation relative to GDP	World Bank
The Variables of nonhydrocarbon economic sectors			
Agricultural sector growth (rate (by volume	GDPAS	Growth rate	Ministry of Finance
Industrial sector growth (rate (by volume	GDPIS	Growth rate	Ministry of Finance
service sector growth rate (by volume)	GDPSS	Growth rate	Ministry of Finance
Construction and Public Works Sector growth rate (by volume)	GDPCPWSS	Growth rate	Ministry of Finance

Source: By the researchers

6.2 Study of stationarity:

This step covers the study of the stationarity of the study variables based on both the (ADF) and (PP) test. the results are summarized in the following tables:

Table 2: stationarity study

Variable	stationarity
MS	stationarity after the first differentiation I (1)
CPS	level stationarity I (0)

TO	stationarity after the first differentiation I (1)
GCP	stationarity after the first differentiation I (1)
GDPAS	level stationarity I (0)
GDPIS	level stationarity I (0)
GDPSS	stationarity after the first differentiation I (1)
GDPCPWSS	level stationarity I (0)

Source: By the researchers Depending on the result of the program Eviews

It is noticed through table (2) that some variables are stationary in the level, and other stationary in the first degree. Therefore, the hypothesis of long-term Equilibrium relationship between variables is not likely because variables are not stationary of same degree, which is why we resort to a short-term relationship through the VAR model

After studying the stationarity of the variables, we can now estimate the VAR(p) model, but before estimating the model, we must know the appropriate degree of delay, which was the first class P=1 meaning VAR (1), where we estimated this model.

6.3 Estimation of the model VAR (1):

Table 3: Estimation of the model VAR (1)

	CPS	MS	GPF	TO	GDPAS	GDPCPWSS	GDPIS	GDPSS
CPS (-1)	0.534073	-0.074581	-0.026626	-0.034881	0.302211	-0.145163	-0.056832	-0.093912
	(0.09419)	(0.14607)	(0.06825)	(0.10303)	(0.20364)	(0.05266)	(0.06533)	(0.04795)
	[5.67020]	[-0.51057]	[-0.39014]	[-0.33856]	[1.48405]	[-2.75660]	[-0.86998]	[-1.95833]
MS (-1)	0.291666	0.733305	0.280905	0.301865	-0.616440	0.051215	0.127255	0.016055
	(0.18370)	(0.28489)	(0.13310)	(0.20093)	(0.39716)	(0.10270)	(0.12741)	(0.09353)
	[1.58776]	[2.57402]	[2.11046]	[1.50231]	[-1.55213]	[0.49868]	[0.99882]	[0.17166]
GPF (-1)	-0.139792	0.238532	0.524962	-0.562298	0.584256	-0.089638	-0.130960	-0.052439
	(0.25844)	(0.40080)	(0.18726)	(0.28269)	(0.55876)	(0.14449)	(0.17925)	(0.13158)
	[-0.54090]	[0.59513]	[2.80341]	[-1.98908]	[1.04563]	[-0.62037]	[-0.73062]	[-0.39853]
TO (-1)	-0.478510	0.373404	0.303891	0.627336	0.186842	0.433407	0.151722	0.322775
	(0.17939)	(0.27820)	(0.12998)	(0.19622)	(0.38784)	(0.10029)	(0.12442)	(0.09133)
	[-2.66745]	[1.34219]	[2.33800]	[3.19708]	[0.48175]	[4.32137]	[1.21946]	[3.53405]

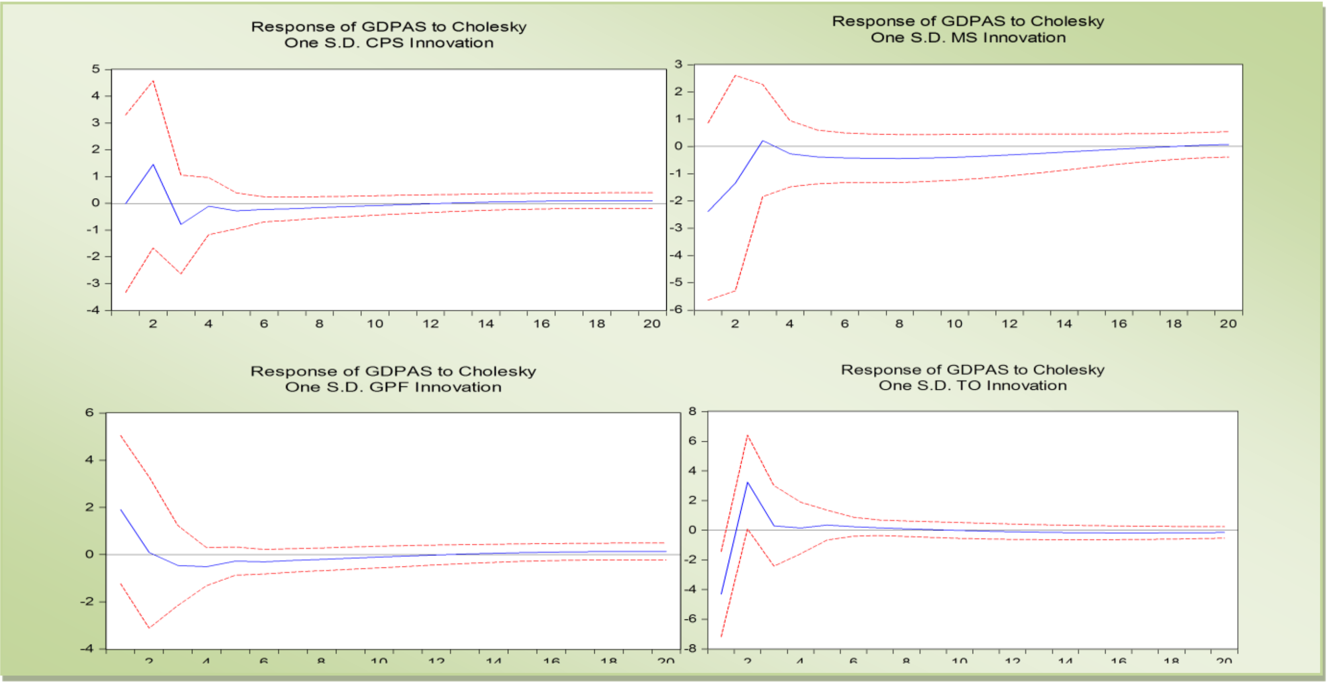
Source: By the researcher Depending on the result of the program Eviews

6.4 Analysis of response functions:

After estimating the VAR (1) model, we will attempt at this stage to study the effect of random shock caused in the variables of financial development and trade openness on economic sector's growth outside the oil sector through response functions provided by VAR models.

1) Analysis of the response of the agricultural sector growth to a shock in the financial development's index with the existing trade openness.

Fig 4: A response function of Agricultural sector



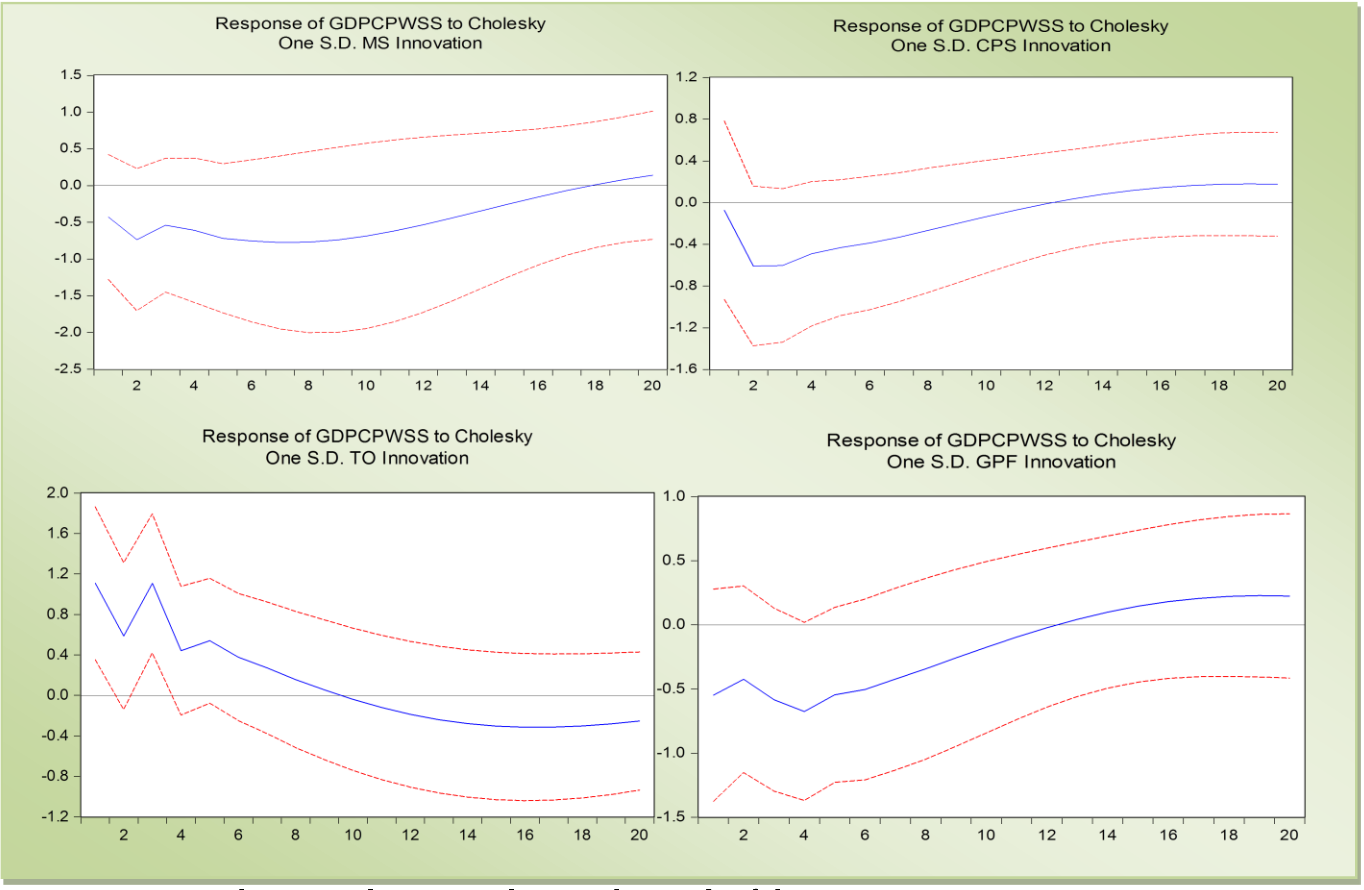
Source: By the researchers Depending on the result of the program Eviews

As for the financial development index, a shock in the volume of loans directed to the private sector can have a positive impact on the agricultural sector's growth during the first two years which will then become negative until the fourth year when it stabilizes at this level, concerning the shock in the financial intermediation index, it experiences a weak paced positive effect during the first three years then disappears.

The shock in the size of investments represented in total capital formation on the other hand, recorded a negative effect on the agricultural sector's growth. Finally, a shock in the rate of trade openness may have a positive effect at first, which will eventually disappear after the fourth year.

2) Analysis of the response of the construction sector's growth and public works to a shock in the financial development's index in the presence of trade openness

Fig 5: A response function of Construction and Public Works Sector

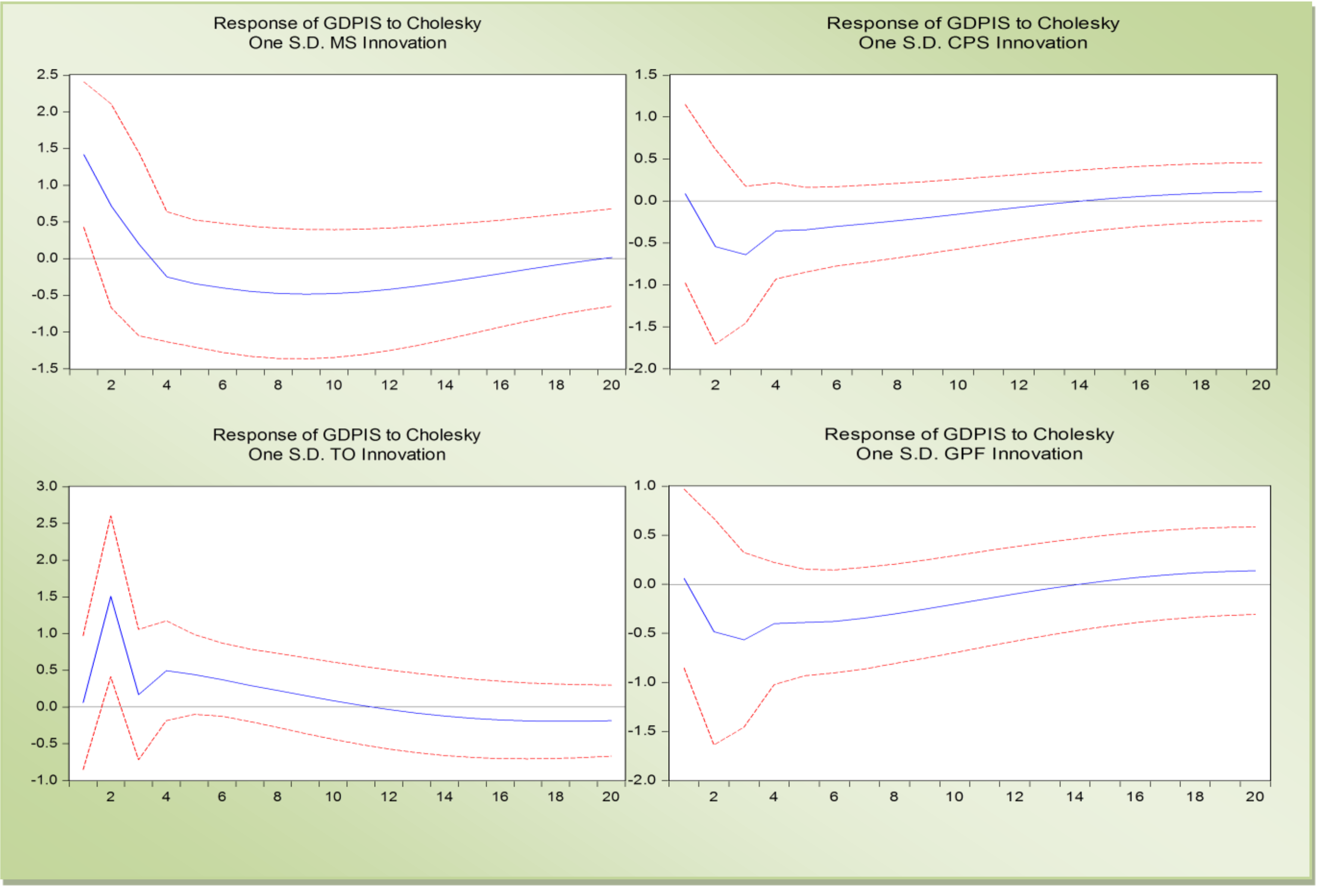


Source: By the researcher Depending on the result of the program Eviews

Concerning the analysis of the response of the growth of the construction sector and public works, a shock is found in the financial development's index may have a negative effect during the first couple of years, but will start to improve gradually.

As for a shock in the size of investments on the growth of the public works sector, it may have a positive effect all along the study period as compared to the effect of trade openness which had been negative during the entire period.

Fig 6: A response function of Industrial sector



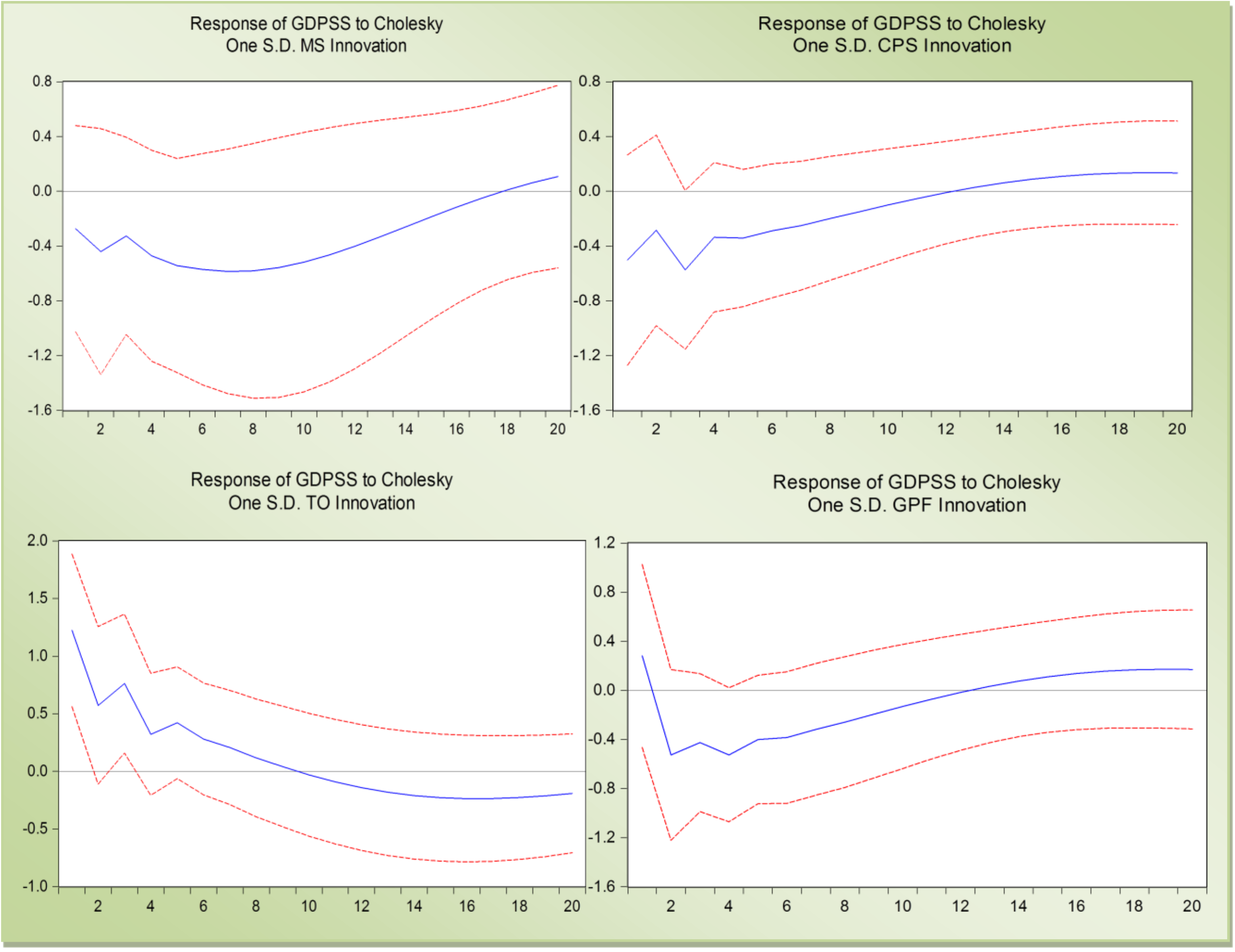
Source: By the researchers Depending on the result of the program Eviews

Through response functions of the constructional sector's growth, a negative effect is noticed during the first three years in relation to a shock in the size of loans directed to the private sector where it shows some improvement starting from the third year, as for the shock concerning the financial intermediation variables, a negative effect was recorded on the constructional sector's growth.

A shock in the size of investments can only improve the growth of the constructional sector after three years, where it starts to improve and rise, as for a shock in the trade openness, it can improve from the constructional sector's growth rate during the first two years, then this effect will start to fade away and decrease.

3) Analysis of the response of the sector's growth to the shock in the financial development's index in the presence of trade openness

Fig 7: A response function of service sector



Source: By the researcher Depending on the result of the program Eviews

As for the growth of the services sector, a shock in the financial development's index may improve the latter's growth rate, but this positive effect is not temporary. However, regarding a shock in the size of investments, it may have a negative effect until the fourth year when it will start to gradually improve, unlike the shock in the trade openness rate which may have a negative impact on the services sector's growth all through the study period.

7.Analysis of decomposition of variance:

7.1The contribution of the financial development variables in the analysis in contrast to the agricultural sector's growth

Table 4: decomposition of the variance of Agricultural sector

Period	CPS	MS	GPF	TO
1	0.000236	7.682100	4.893992	25.03173
5	2.578147	7.091091	3.823269	26.75615
10	2.668179	7.814641	3.981732	26.48686
15	2.664485	8.103284	3.977004	26.45178
20	2.698286	8.098378	4.031884	26.50812

Source: By the researchers Depending on the result of the program Eviews

The table above shows the contribution of the financial development's variables in addition to trade openness variables and the size of investments in analyzing of the variance of agricultural sector's growth, where it was concluded that the trade openness variables contributes with more than 26%, followed by the financial intermediation variable with its contribution worth of 8% then comes the size of investments with 4%, as it is noticed that the size of loans directed to the private sector did not exceed 2.7% in the analysis of the contrasts of the agricultural sector.

7.2The contributions of the financial development variables in the analysis of contrasting industrial sector

Table 5: decomposition of the variance of Industrial sector

Period	CPS	MS	GPF	TO
1	0.095469	26.35085	0.044474	0.047712
5	6.096687	17.41672	5.542801	17.48202
10	6.910324	21.01051	7.408733	16.99801
15	6.724369	23.77951	7.279031	16.50876
20	6.803282	23.69461	7.469036	17.11454

Source: By the researchers Depending on the result of the program Eviews

Concerning the analysis of the variance of industrial sector's growth, the financial intermediation variable's contribution was in the first place with 23.6%, followed by the trade openness's contribution with 17%, then the contribution of both the size of investments and the size of loans directed to the private sector at its 7% limit.

7.3The contribution of financial development variables in contrast analysis of the construction and public works sector

Table 6: decomposition of the variance of Construction and Public Works Sector

Period	CPS	MS	GPF	TO
1	0.107051	3.688717	6.074812	24.85104
5	9.613816	15.67735	13.01347	27.16624
10	9.448943	28.43383	13.53249	21.51916
15	8.857014	32.02182	12.70807	21.37127
20	9.177706	30.75366	13.29381	22.61446

Source: By the researchers Depending on the result of the program Eviews

As for the growth of the construction and public works sectors, we noticed a significant contribution to the variable size of financial intermediation by more than 30%, followed by a contribution of the rate of trade openness. We also recorded a significant contribution of the variable size of investment by 13%. It is also noted that the contribution of the variable size of loans directed to the private sector is the weakest when analyzing the contrasting the construction sector public work sector

7.4 The contribution of the financial development variables in analyzing contrasting services sector's growth

Table 7: decomposition of the variance of service Sector

Period	CPS	MS	GPF	TO
1	6.145422	1.827224	1.902288	36.42593
5	10.46545	10.45504	11.38461	31.41924
10	10.11746	22.51228	12.20274	25.62767
15	9.563487	25.99195	11.58380	25.22989
20	9.812602	25.14603	12.14106	26.14400

Source: By the researchers Depending on the result of the program Eviews

The same goes for variance analysis of services sector's growth in which the trade openness contribution rate and financial intermediation in the first place by 25%, we also recorded the weakest contribution, which was the variable size of loans directed to the private sector at 9.8%.

8.CONCLUSION:

This research aims to identify the nature of relationship between financial development, trade openness and the economic growth of economic sectors outside the fuel sector, which is represented in the agricultural, industrial, construction and public works and services sectors during the time period (1990-2017) in which they depended on the VAR model, considering the use of two indices of financial development: the financial intermediation index (GDP/M2) and the loan index presented to the private sector

(GDP/CSP). In addition to the total capital variable and trade openness on one hand, and the real growth rates of economic sectors on the other

The study reached the following results:

- Concerning the loan index presented to private sector, it positively effects the agricultural sector's growth during two periods, then this effect starts to gradually fade away. As for industrial, construction and public works and services sectors, the loan index presented to the private sector has no immediate impact on the latter, rather, only after four years have passed.
- As for the financial intermediation index, it has no effect until after the period of eight years when it starts to impact the construction and public work and services sectors, in return, we also find that this index has a negative effect on the industrial sector.
- Concerning the trade openness, it has a negative impact in all economic sectors except the agricultural one, which had a positive impact
- When studying variance analysis, it was found that financial intermediation index contributes more to the variance analysis growth in all economic sectors, which is then followed by the rate of trade openness, we also recorded the weakest contribution which was by the index of loans to the private sector that did not surpass 9% in the variance analysis of all sectors.

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