The Long Run and Short Run Impacts of Exports on Economic Growth: Evidence from Gabon

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Abstract

This study investigates the impact of exports on economic growth in Gabon using annual time series data for the period 1980 - 2015 by implementing cointegration analysis and error correction model. The empirical results show that in the long run, investment and exports affect negatively on economic growth. However, in short run investment and export cause economic growth. These results provide evidence that investment and exports are necessary in Gabon's economy and are presented as an engine of growth since they cause economic growth in the short term. But they are not carried out and treated with a solid and fair manner, which offer new insights into Gabon's openness policy for promoting economic growth.

Keywords: Exports, Growth, Error-Correction, Openness policy, Gabon.

JEL Classification: F1, F10, F14

I. Introduction

The link between exports and economic growth has been an important field of study in recent years, specifically for developing countries. Research has focused on the relationship between exports and economic growth. Several macroeconomic policies have been identified as having a significant impact on long-term economic growth. These include fiscal policy, monetary policy, and the policy of liberalization of foreign trade. And policies for the promotion of foreign direct investment. Exports are usually added up to participate in a definite way in economic growth with indulgence to means giving the go-ahead to give preferential treatment to the exploitation of economies of scale and encourage the spread of technical knowledge. In the particular case of the policy of trade openness, the literature indicates the existence of a

possible causality between exports and economic growth. However, the many empirical studies that have examined the relationship between exports and economic growth have not resolved the causality between these two variables. Among the studies that have shown that an expansion of exports has a significant positive impact on economic growth are Michaely, (1977); Balassa, (1978, 1989 and 1995); Tyler, (1981); Grossman and Helpman, (1989); Fosu, (1990); Tybout, (1991 and 1992); Rahman (1993); Savvides, (1995); Asmah, (1998); Sachs and Warner, (1997); Edward, (1998); Frankel and Romer, (1999); Ram, (1987). On the other hand, others have concluded that the positive relationship between exports and economic growth does not exist during certain periods in some countries Tyler (1981), Helleiner (1986), Ahmad and Kwan (1991), Buffie (1992), Onafowora and Owoye, (1998). Thanks to oil and the small population, Gabon's average purchasing power is historically very much higher than that of sub-Saharan African countries; GNI per capita in 2013 is US $ 10,650 compared to US $ 1,657 in sub-Saharan Africa. It is the second country in continental Africa in terms of per capita income, after Equatorial Guinea (US $ 14,320); nevertheless the unequal distribution of wealth means that almost a third of the population is considered to be affected by poverty. "The unemployment rate is worrying, estimated to be over 20% and unemployed young people would represent 60% of the unemployed population. » The structure of Gabon's exports remains more than 90% dominated by the oil, mining and timber sectors, making the economy vulnerable to fluctuations in international prices, and to the euro / dollar exchange differential. By 2015, Gabonese exports, at 3,116 billion dollars, fell by 29%, driven by exports of oil (-33%), not offset by higher exports of manganese (+ 26%) and of sawn timber (+ 15%), up sharply. The fall in the price of a barrel of oil led to a sharp decline in sales. The three main destination areas of Gabonese exports are Asia (33%), Europe (37%) and America (18%). Otherwise, imports have also decreased by 9% to 1,773 XAF in 2015, after sustained growth since 2012, to link in a cyclical way to the organization of the 2012 CAN and the very large volume of public investment. In this cafe, France holds a special place in Gabon, with a market share of nearly 25%, although it has been steadily declining in recent years due to the emergence of new competitors, notably in Asia. Some 120 French subsidiaries are established in Gabon, and French investments represent a stock of several billion euro. This paper examines the causal relationship between trade and economic growth in Gabon. In contrast to most previous ELG studies, this study specifies an augmented production function that explicitly tests for the effect of exports on economic growth. This script is organized as follows. The second section describes the basic literature survey to explain the role of exports in the economic growth, the third section present the data, methodology and model

specification, the fourth section reports the empirical results, and the fifth section concludes the paper with a summary of the findings.

II. Literature Survey

The relationship between exports and economic growth has been well documented in empirical studies. Several different studies involving different countries, variables and methodologies have been taken into account, though the results of these studies appear to be contradictory at times. Some studies state that a bidirectional relationship exists between exports and economic growth; whereas the other studies state that a unidirectional relationship exists.

Table 1: Studies related to the relationship between exports and economic growth

NO	Authors	Countries	Periods	Econometrics Techniques	Keys Findings
1	Ahmed Mohammed Khater Arabi (2014)	Sudan	1970-2012	Cointegration Analysis Granger Causality Tests	EX => GDP
2	Chaido Dritsakia and al(2014)	Croatia	1994-2012	Cointegration Analysis Granger Causality Tests	EX ↔ GDP
3	Deepika Kumari and al(2014)	India	1980 - 2012	Cointegration Analysis Granger Causality Tests	EX => GDP
4	Mukherji Ronit and al(2014)	India	1969-2012	Cointegration Analysis Granger Causality Tests VAR	GDP=> EX
5	Shahbaz, Muhammad (2014)	Pakistan	1991-2012	Cointegration Analysis	GDP => EX
6	Syed Jawad Hussain Shahzad and al(2014)	South Asia	1989 - 2011	Cointegration Analysis OLS	EX => GDP
7	Zuzana Szkorupováa(2014)	Slovakia	2001-2010	Cointegration Test	EX => GDP
8	ADEEL SALEEM and al(2015)	Pakistan	1973-2013	Cointegration Analysis Granger Causality Tests	EX ↔ GDP
9	Afaf abdull j .saaed(2015)	Jordan	1977-2012	Cointegration Analysis VECM Granger Causality Tests	EX => GDP
10	Aicha El Alaoui (2015)	Morocco	1980 -2013	Cointegration Analysis Granger Causality Tests	EX ‡ GDP
11	Fanwell Kenala Bokosi (2015)	Malawi	1980 - 2013	Cointegration Analysis Granger Causality Tests VAR	EX => GDP
12	Gaber H. Abugamea (2015)	Palestine	1968 - 2012	Cointegration Analysis VECM Granger Causality Tests	GDP ≠ EX
13	Gülçin TAPŞIN (2015)	Turkey	1974 - 2011	Granger Causality Tests	EX ↔ GDP
14	Luan Vardari(2015)	Kosova	2004-2014	Cointegration Analysis	EX => GDP

				Granger Causality Tests	
				OLS	
15	Robert Simon and al(2016)	Namibia	1998 - 2014	Cointegration Analysis	EX => GDP
				Granger Causality Tests	
				VECM	
16	Sana Iftikhar and al(2016)	Pakistan	1952-2013	Cointegration Analysis	EX => GDP
				Granger Causality Tests	
17	Seng Sothan(2016)	Asia	1980 - 2013	Cointegration Analysis	EX ↔ GDP
				Granger Causality Tests	
18	Faisal FAISAL and al(2017)	SAUDI ARABIA	1968-2014	Granger Causality Tests	EX => GDP
19	Bakari, S. and Krit, M. (2017)	Mauritania	1960 - 2015	Cointegration Analysis	GDP <=> EX
				VECM	
				Granger Causality Tests	
20	Bakari, S. and Mabrouki, M. (2017)	Panama	1980 - 2015	Cointegration Analysis	EX => GDP
				VAR	
				Granger Causality Tests	

III. Data, methodology and model specification

This pursuit bestows three variables: (i) GDP (constant US$), (ii) exports of goods and services (constant US$) and (iii) Fixed Formation Capital (constant US$) to explore the short run and long run impacts of exports on economic growth. The secondary data for period 1980-2015 is collected from WDI (2016) and converted into logarithm denoted by l in each variable to make the model linear and to avoid heteroskedasticity problem (Shawa and Shen, 2013). The functional form is as shown below:

$$\log(\mathrm{GDP})_t = \beta_0 + \beta_1 \log(\mathrm{X})_t + \beta_2 \log(\mathrm{K})_t + +\varepsilon_t \quad (1)$$

Where:

- β_0 : The constant term.
- β_1: coefficient of variable (Exports: X)
- β_2: coefficient of variables (Investment: K)
- t: The time trend.
- ε: The random error term assumed to be normally, identically and independently distributed.

This paper clenches the Unit Root test, Cointegration, and an Error-Correction Modeling method to the initial model of exports and growth.

IV. Empirical Analysis

1) Test for unit roots

Unit Root Tests ought to be executed before practicing cointegration tests, because the statistical inference from a time series is usually asserted on the surmise of stationarity. This etude utilizes the Augmented Dickey-Fuller (ADF) test. The null hypothesis of non-stationarity is tested against the alternative hypothesis of stationarity and investigated for all variables (GDP, K and X). Table 2 mentions the Unit Root Tests using the ADF test.

Table 2: Stationary test of each variable

Null Hypothesis: D(LOG(Y)) has a unit root			
Augmented Dickey-Fuller test statistic		t-Statistic	Prob.*
		-5.959320	0.0000
Test critical values:	1% level	-3.639407	
	5% level	-2.951125	
	10% level	-2.614300	
Null Hypothesis: D(LOG(K)) has a unit root			
Augmented Dickey-Fuller test statistic		t-Statistic	Prob.*
		-8.034345	0.0000
Test critical values:	1% level	-3.639407	
	5% level	-2.951125	
	10% level	-2.614300	
Null Hypothesis: D(LOG(X)) has a unit root			
Augmented Dickey-Fuller test statistic		t-Statistic	Prob.*
		-4.164928	0.0026
Test critical values:	1% level	-3.639407	
	5% level	-2.951125	
	10% level	-2.614300	

It can be seen that for all variables the statistics of the ADF test and the PP test are lower than the criterion statistics of the different thresholds than after a prior differentiation, so accepting the first differencing for all series induces stationarity, entangle that all series are integrated of order one.

2) Lag order selection

For obtaining the most favorable lag Length for Co integration, analysis, we have taken on five criteria, namely, LR test statistic, Final prediction error, Akaike information criterion, Schwarz information criterion and Hannan-Quinn information criterion.

Table 3: Determination of the number of lags

VAR Lag Order Selection Criteria						
Lag	**Log L**	**LR**	**FPE**	**AIC**	**SC**	**HQ**
0	95.34983	NA	3.44e-07	-6.368954	-6.227509*	-6.324655*
1	105.9784	18.32507*	3.09e-07*	-6.481267*	-5.915489	-6.304073
2	112.0885	9.270556	3.86e-07	-6.281966	-5.291856	-5.971876
3	118.7532	8.733068	4.82e-07	-6.120912	-4.706468	-5.677926
4	126.0213	8.019897	6.10e-07	-6.001466	-4.162689	-5.425584
5	132.7589	6.040630	8.79e-07	-5.845440	-3.582329	-5.136662
6	146.7707	9.663295	8.92e-07	-6.191080	-3.503636	-5.349406

*** indicates lag order selected by the criterion**

LR: sequential modified LR test statistic (each test at 5% level)

FPE: Final prediction error

AIC: Akaike information criterion

SC: Schwarz information criterion

HQ: Hannan-Quinn information criterion

It is clear from the table 3, that most of the criteria have suggested a leg length of 1 as an optimal leg length.

3) Cointegration analysis

Once we get the results of unit roots, the upcoming step is to plot, whether there exists cointegration, using the same order of integrated variables. To discuss for co-integration, the Johansen and Juselius (1990) procedure was involved, which brings to two test statistics, trace test and maximum Eigenvalue test, for cointegration.

Table 4: Johansen and Juselius test

Unrestricted Cointegration Rank Test (Trace)				
Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob.**
None *	0.481842	50.37761	29.79707	0.0001
At most 1 *	0.421376	28.68093	15.49471	0.0003
At most 2 *	0.275314	10.62657	3.841466	0.0011
Unrestricted Cointegration Rank Test (Maximum Eigenvalue)				
Hypothesized No. of CE(s)	Eigenvalue	Max-Eigen Statistic	0.05 Critical Value	Prob.**
None *	0.481842	21.69668	21.13162	0.0416
At most 1 *	0.421376	18.05436	14.26460	0.0120
At most 2 *	0.275314	10.62657	3.841466	0.0011
Trace test indicates 3 cointegrating eqn(s) at the 0.05 level				
Maximum Eigenvalue test indicates 3 cointegrating eqn(s) at the 0.05 level				
*** denotes rejection of the hypothesis at the 0.05 level**				

Table 4 squeezes out the results of the co-integration test. There are two test statistics for co-integration, the Trace test and Maximum Eigen value test. The Trace-Statistic value is shown to be greater than the critical values at the 5% levels. Therefore, we reject the null hypothesis of no co-integrated equation among the variables. Thus, we conclude that there is at most three co-integrated equation among the variables. The results of Maximum Eigen value test statistics also express same here. Finally, we can say that there are three cointegration relationships, so the error-correction model can be retained.

4) VECM estimation

In our research, the objective of an estimate based on an error correction (ECM) model is to determine the effect of exports on economic growth (both short-term and long-term).

Table 5: Granger causality test results based on error correction models (ECM)

Dependent Variable: D(DLOG(Y))					
Method: Least Squares (Gauss-Newton / Marquardt steps) and WALD Test (Granger Causality)					
D(DLOG(Y)) = C(1)*(DLOG(Y(-1)) + 11.612873288*DLOG(K(-1)) + 9.59892959281*DLOG(X(-1)) - 0.392008185562) + C(2)*D(DLOG(Y(-1))) + C(3)*D(DLOG(K(-1))) + C(4)*D(DLOG(X(-1))) + C(5)					
	Coefficient	Std. Error	t-Statistic	Prob.	Effect
C(1)	***-0.017614***	0.005366	-3.282695	***0.0028***	***Long run***
C(2)	-1.022167	0.233116	-4.384803	0.0001	
C(3)	0.239662	0.052015	4.607515	***0.0001***	Short run
C(4)	0.449254	0.131327	3.420891	***0.0019***	
C(5)	0.002635	0.009576	0.275187	0.7852	

Table 5 reports the results of Granger causality tests based on the ECM. If the coefficient of the variable C (1) is negative and possesses a significant probability. This means that all variables in the long-term relationship are significant in explaining the dependent variables. In addition, if coefficients of variables C (3) and C (4) possess a significant probability. This means respectively that investment and exports cause economic growth in the short term. In our case, the correction error term C (1) is significant (0.0028) and has a negative coefficient (-0.017614). These prove that in the long run, investment and exports affect negatively on economic growth. However, it's seen that in short run investment and export cause economic growth since they have a probability of less than 5% {C (3) = 0.0001 and C (4) = 0.0019}.

5) Diagnostics Tests

The aim of applying a set of diagnostic tests after each empirical investigation is:

- To judge the quality of the adjustment related to the model {R^2 and Fisher test}.
- To check the robustness of our model.
- To verify the solidity of our estimate.

Table 6: Residual diagnostics tests

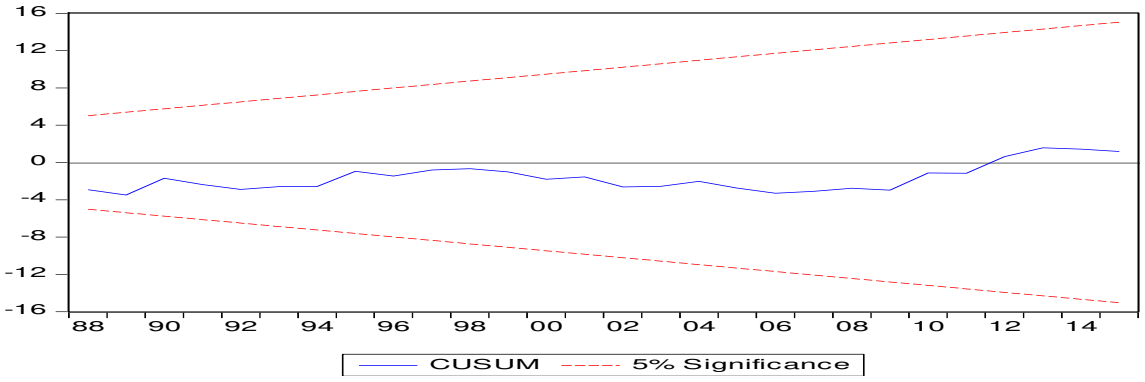
Heteroskedasticity Test: Breusch-Pagan-Godfrey	**F-statistic**	**1.484378**
	Prob. F(9,23)	0.2122
Heteroskedasticity Test: Harvey	F-statistic	1.401254
	Prob. F(9,23)	0.2445
Heteroskedasticity Test: Glejser	F-statistic	1.398001
	Prob. F(9,23)	0.2458
Heteroskedasticity Test: ARCH	F-statistic	0.000620
	Prob. F(1,30)	0.9803
Breusch-Godfrey Serial Correlation LM Test:	F-statistic	1.389707
	Prob. F(1,27)	0.2487
R-squared	0.607978	
Adj. R-squared	0.551975	
F-statistic	10.85615	
Prob. (F-statistic)	0.000019	

All residual diagnostic tests are satisfactory and assert that our model is acceptable and well treated (R^2 is greater than 60%, Fisher statistical probability is less than 5%, Breusch-Godfrey Serial Correlation LM Test and Heteroskedasticity Test are superior to 5%.).

6) VAR Stability

Finally we will apply to use the test CUSUM, this test makes it possible to study the stability of the model estimated over time

Graph 1: VAR Stability (CUSUM test)



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V. Discussion and Conclusion

This study is one of very few studies, which have investigated, empirically, the impact of export on economic growth of a small rich country Gabon during the period 1980 – 2015. The Co-integration and the Error Correction Model are applied to investigate this relationship. The unit root properties of the data were examined using the Augmented Dickey Fuller test (ADF) after that the cointegration and the Error Correction Model were conducted. Empirical results show that all variables are stationary in the first differences. The application of the cointegration test indicates the existence of cointegration relations, which obviously forces us to apply the Error Correction Model. The latter shows us that in the long run, investment and exports affect negatively on economic growth. However, it's seen that in short run investment and export cause economic growth. Economically, this explains that investment and exports are necessary in Gabon's economy and are presented as an engine of growth since they cause economic growth in the short term. But they are not carried out and treated with a solid and fair manner, resulting in the negative effect of these two major macroeconomic magnitudes on economic growth in the long term. Oil plays the bulk of the country's exports. However, there has been a significant decline in oil production in the country since 1998 to reach 13 million metric tons in 2003. For the first time in 25 years, in 2004 the contribution of oil to the national budget is lower than the contribution of non-oil goods. That is why Gabon's political authorities should seek a way to compensate for the decline in oil production by stimulating production in other sectors and turning to industrial production of the country's abundant mineral resources. In fact, unless new oil fields are discovered, Gabon's policymakers will face the challenge of finding economic alternatives to oil to stimulate economic growth in the country. Otherwise, the country will slowly enter the economic "recession" when existing oil fields dry up. However, the prospects for economic growth in Gabon are still large and large. For example, there are other alternatives, including the exploitation of forests covering 85% of agricultural land, which occupies 12.5 million hectares, the profiteering of wood (from 4340000 to 5 million panels per year). Further measures could be taken to diversify the manufacture and sale of wood products, such as flooring and wooden home accessories, in African and international markets, and to produce furniture rather than timber and the development of the tourism sector.

References

Adeel. S and Maqbool. H. S. (2015). « Exports-Growth Nexus in Pakistan Cointegration and Causality Analysis » *Pakistan Economic and Social Review*. Volume 53, No. 1 (Summer 2015), pp. 17-46

Afaf abdull j .saaed and Majeed Ali hussain. (2015). « the causality relationship between exports, imports and economic growth in Jordan :1977-2012 » *International Journal of Economic and Business*. Review vol-3,Issue 7 July 2015.

Ahmed. J. and A.C.C. Kwam. 1991. "Causality between Exports and Economic Growth: Empirical Evidence from Africa". *Economic Letters*. Vol.37.243-48.

Ahmed Mohammed Khater Arabi,(2014) « The Causal Link between Foreign Direct Investment, Export and Economic Growth in SUDAN, 1970-2012: An Application of Granger Causality » *University of Bakht Alruda Scientific Journal*. Issue No. 12 Sep 2014.

Aicha El Alaoui (2015). « Causality and cointegration between export, import and economic growth: evidence from Morocco » *MPRA Paper. 65431*, *University Library of Munich, Germany*.

Asmah, E.E .. 1998. «Export performance and Economic Growth: Empirical Evidence from Ghana 1966-1996», *M. Phil. Thesis, University of Cape Coast*.

Bakari, S. and Krit, M. (2017), "The Nexus between Exports, Imports and Economic Growth: Evidence from Mauritania". *International Journal of Economics and Empirical Research*. 5 (1), 10-17.

Bakari, S. and Mabrouki, M. (2017), "Impact Of Exports And Imports On Economic Growth: New Evidence From Panama," *Journal of Smart Economic Growth*, , vol. 2(1), pages 67-79, March.

Balassa, B (1978). "Exports and Economic Growth: Further Evidence", *Journal of Development Economies*, vol.5, 81-89.

Balassa, B (1989). "Outward Orientation" In: *Handbook of development Economics*. Vol.2.

Balassa, B (1995). "Export, Policy Choices and Economic Growth in Developing Countries after the 1973 Oil Shock", *Journal of Development Economics*, vol. 18.pp.23-35.

Buffie, E. F., 1992. «On the Condition for Export Led Growth», *Canadian Journal of Economics,* XXV.

Chaido Dritsakia and Emmanouil Stiakakisb (2014) « Foreign Direct Investments, Exports, and Economic Growth in Croatia: A Time Series Analysis » *Procedia Economics and Finance.* 14 (2014) 181 – 190

Deepika Kumari and Neena Malhotra (2014) « Export-Led Growth in India: Cointegration and Causality Analysis » *Journal of Economics and Development Studies*. June 2014, Vol. 2, No. 2, pp. 297-310.

Edwards, S., 1998. «Openness. Productivity and Growth: What Do We Really Know? » , *Economic Journal*, 108.

Faisal. F and al. (2016) « Is Export-Led Growth Hypothesis Exist in Saudi Arabia? Evidence from an ARDL Bounds Testing Approach». *Asian Journal of Economic Modeling*. ISSN(e): 2312-3656/ISSN(p): 2313-2884.

Fanwell Kenala Bokosi. (2015). « Export Trade and Economic Growth in Malawi: A Disaggregated Approach » *International Journal of Economics and Financial Research* ISSN: 2411-9407 Vol. 1, No.7, pp: 97-105, 2015.

Fosu, A., 2002. «The Global setting and African Economic Growth» *Journal of African Economies*, voI.10, N°3, pp.282-31 O.

Frankel, J.B and D. Romer, 1999. «Does Trade Cause Growth» *American Economic Review*, 89 (3).

Gaber H. Abugamea (2015) « External Trade and Economic Growth Relationship Under Trouble: Time Series Evidence from Palestine » Journal *of Economics and International Finance (SJEIF)* November 2015 Vol. 1(2), pp. 010-016.

Grossman, E. M. and E. Helpman, 1989.»Quality Ladders and product Cycles» *NBER Working Paper no*. 3201.

Gülçin TAPŞIN (2015) « The Relationship between Foreign Trade and Economic Growth in Turkey » *International Review of Research in Emerging Markets and the Global Economy (IRREM) An Online International Research Journal* (ISSN: 2311-3200) 2015 Vol: 1 Issue 3.

Helleiner, G. k., 1986. «Outward Orientation, Import Instability and African Economic Growth: An Empirical investigation», In: *Theory and Reality in Development Essays*. In Honour of Paul Steelton Ed. S. Lall and F. Stewart, Macmillan. London.

Luan Vardari (2015) « Relationship between Import-Exports and Economic Growth: The Kosova Case Study ». *Revista Shkencore Regjionale (REFORMA)*, Vol. 3, p. 262-269, Feb. 2015.

Michaely, M., 1977. «Export and Growth: An Empirical Investigation», *Journal of Development Economies.* 3 vol. 4, 49-5.

Mukherji Ronit and Pandey Divya (2014) « The relationship between the growth of exports and growth of gross domestic product of India » *International Journal of Business and Economics Research*. 2014; 3(3): 135-139.

Onafowora, O. A., and Owoye. O., 1998. «Can Trade Liberalization Stimulate Economic growth in Africa? «, *World Development*. 26 (3).

Rahman, M. A., 1993. «Export and Economic Development of Bangladesh», *Dhaka: Young.*

Ram, R., 1987, Exports and Economic Growth in Developing Countries: Evidence from Time-series and Cross-section Data», *Economic Development and Cultural Change*, vol. 33,415-25.

Robert Simon and al, (2016) « Investigating the Causal Relationship between Primary Commodities Exports and Economic Growth in Namibia » *International Review of Research in Emerging Markets and the Global Economy (IRREM) An Online International Research Journal*. (ISSN: 2311-3200) 2016 Vol: 2 Issue: 2.

Sachs, J., and A., Warner, 1997. «Sources of Slow Growth in African Economies», Harvard Institute of international Development. March.

Shawa, M.J. and Y. Shen, 2013. Causality relationship between foreign direct investment, GDP growth and export for Tanzania. *International Journal of Economics and Finance*, 5(9): 13-19.

Sana Iftikhar and al. (2016) « Gross Domestic Capital Formation, Exports and Economic Growth » *Journal of Economics and Sustainable Development,* ISSN 2222-1700 (Paper) ISSN 2222-2855 (Online), Vol.7, No.13, 2016.

Savvides, A., 1995. «Economic Growth in Africa», *World Development,* 23 (3).

Seng Sothan. (2016) « Foreign Direct Investment, Exports, and Long-Run Economic Growth in Asia: Panel Cointegration and Causality Analysis » *International Journal of Economics and Finance;* Vol. 8, No. 1; 2016.

Shahbaz, Muhammad and Mohammad, Mafizur Rahman, (2014). "The Dynamics of Exports, Financial Development and Economic Growth in Pakistan: New Extensions from Cointegration and Causality Analysis," *MPRA Paper 53225, University Library of Munich, Germany,* revised 19 Jan 2014.

Syed Jawad Hussain Shahzad and al. (2014). « Relationship between Remittance, Export, Foreign Direct Investment and Growth: A Panel Cointegration and Causal Analysis in South Asia ». *MPRA Paper.* 60290, *University Library of Munich, Germany*.

Tybout, J., 1991. «Researching the Trade Productivity Link: New Directions», *World Bank Policy Research and External Affairs Working Papers* 638.

Tybout, 1., 1992. «Linking Trade and Productivity: New Research Directions», *World Bank Economic Researeh*. vol. 6, N°. 2.

Tyler, w., 1981. «Growth and Exports Expansion in Developing Countries: some Empirical Evidence», *Journal of Development Studies*, vol. 9, 121-30.

Zuzana Szkorupováa. (2014) « A causal relationship between foreign direct investment, economic growth and export for Slovakia ». *Procedia Economics and Finance*. 15.(2014) 123 – 128.