The Foreign Trade Performance and Economic Growth: Empirical Evidence from Jordan

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Abstract:

The importance of foreign trade appears by the role played in achieving economic development. So, it is necessary to activating the role of the Jordanian trade policy in order to make greater contribution to enhancing the competitiveness of the national economy. This study tries to explain the commodity composition of both exports and imports and evaluate the performance of foreign trade and economic growth in Jordan. To explore the relationship between trade openness and growth, a well-founded model based on neoclassical growth theory is used. Standard Cob-Douglas technology is used in which production is none-linear function of capital, labor and technological level. We will be estimated with Fully Modified OLS (FMOLS) in order to deal with both serial correlation and endogenity of regressors arising from the co-integration. As expected the coefficient representing the capital-labor productivity is positive and statistically significant at better than 5% level. The coefficient of interest for trade openness turned out to be positive and statistically significant for both industrial and construction sectors. Trend coefficient carries a positive sign and statistically significant for all sectors indicating to positive technological effect on growth over time.

Keywords: Foreign Trade, Economic Growth, Trade Openness, Fully Modified OLS (FMOLS).

1. Introduction

The importance of foreign trade appears by the role played in achieving economic development. According to the policies of liberalization and openness to trade, the foreign trade is not just a process of exchange of goods and services with the countries of the world, but beyond that, it is an indicator reflects the level of the economic development and openness to world trade markets, and the flow of capital from other countries, and thus upgrade trade policy, through systematic openness to global markets, and the modernization and development of legislation that contribute to strengthening the capacity of the economy and infrastructure.

In light of the challenges set by the economic openness and foreign trade to the Jordanian economy, especially through the increasing competition for Jordanian products of goods and services with regional and global countries, it is necessary to activating the role of the Jordanian trade policy in order to make greater contribution to enhancing the competitiveness of the national economy. We should focus on maximizing the exploitation of comparative advantages, harmonization of trade policy instruments with economic challenges at the local level and globally, and to broaden the base of trading partners; which lead to improving the level of production, exports, and thus improve the lives of citizens.

The export side in foreign trade is one of the major engines of economic growth(Adewuyi, 2002), where export products and national commodities is essential to support the balance of payments by their prices of foreign currencies which covering finance the import of various goods from other countries, and this important increasing because of growing needs for these source of currencies, in addition to find new job opportunities in productive activity, and maintain existing jobs, and improve the level of per capita income. And the importance of the export sector, most countries of the world seek to provide all forms of support for this important and vital sector in economic activity to achieve financial surpluses.

Despite the importance of export, the imports in the equation of balance of trade have a great importance to economic development. An imports are considered as a way to provide the basic requirements of society and welfare; because it enables producers consumers to obtain goods that cannot be produced locally, whether industrial goods like machinery and equipment, or agricultural products which is difficult cultivated within the country, or durable and non-durable consumer goods, in addition to the importance of access to raw materials and intermediate goods required for the process of investment and production, which is the most important function provided by imports for economic development, especially if they are invested in the investment side and not the consumer.

Economic growth is one of the most important goals of foreign trade in both developed and developing countries. But Jordan, like developing countries, suffers from many economic imbalances such as high rates of inflation, unemployment and chronic deficit in the balance of trade and balance of payments and others.

For this reason, it is worthy of note to analyze the influence of foreign trade on economic growth in Jordan. The main objectives of this study are:

1. Identify the commodity composition of both exports and imports.
2. Evaluate the performance of foreign trade and economic growth in Jordan.

This study tries to answer the following questions: What is the nature of the relationship between foreign trade, both exports and imports, and economic growth in Jordan.

Finally, this study will provide an essential results and recommendations that help policy makers to know more about performance of foreign trade and economic growth in Jordan. It will also assist in providing the framework of where work has been done by earlier researchers, and on which further research in foreign trade could be carried out.

2. *Foreign Trade in Jordan*

Jordanian foreign trade achieved obvious progress during the year 2011, in spite of economic and political fluctuations that have swept the Arab region in light of the so - called "Arab Spring", especially that occurred in a major Arab states which have a direct

economic impact on Jordan as Egypt, the Syrian Arab Republic, and other countries such as Yemen , Libya and Tunisia, where Jordan is associated with those countries, especially Syria relations by virtue of strong business near the site and geographical mobility of people and goods between the two countries, in addition to the Jordanian arena witnessed of protests that have the direct impact on the growth of some of the different economic sectors.

As is well known, the Jordanian economy is affected by external economic variables, especially those that occur in the Arab region and the Middle East, as is the case in Iraq and Palestine and the Arabian Gulf, where Jordan is affected directly by conditions of these countries.

Jordan is characterize a strategic geographical location and distinctive among the nations of the world, in the heart of the Middle East and on the transit lines between the countries of Europe on the one hand and Saudi Arabia and Gulf countries on the other hand, is considered a link between many of the countries in the region, in addition to featured international trade relations enjoyed by with most countries of the world, which made him an important trading partner with various countries of the world through its association with a number of Arabian and international bilateral and multilateral trade agreements (such as the Convention on the Jordanian - European partnership,

The Jordanian - American free trade, and the Agadir region, and the Greater Arab Free Trade, The Qualified Industrial Zones , and joining to the World Trade Organization), besides his membership in many agreements to protect and encourage investment, and prevent double taxation with various Arab and foreign countries .

2.1 Jordan Exports

According to the latest data released by the Department of Statistics, the trade movement has grown (Exports and re-exports and imports) in terms of absolute numbers and relative significantly with all Arab economic blocs, Asian and European. The total foreign trade of Jordan during the year 2012 amounted to (20333.2) million dinars, compared with the

value of foreign trade for the year 2011 amounting to (19124.8) million dinars, and it has increased by (1208.4) million, and as of (6.3 %).

Table (1)

Jordanian Foreign Trade Indicators for the year

2012 compared with the year 2011

JD Million

Category	2011	2012	Difference	Percentage Change %
National Exports	4805.9	4749.6	-56.3	-1.2
Re-exports Goods	878.7	849.9	-28.8	-3.3
Imports	13440.2	14733.7	1293.5	9.6
Total Foreign Trade	19124.8	20333.2	1208.4	6.3
Trade Balance	-7755.6	-9134.3	-1378.7	17.8

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Statistics in Table (1) shown the growth in the value of Jordanian exports in 2012, reaching (4749.6) million dinars, a decrease of 56.3 million dinars, compared with 2011, and a growth rate of (-1.2%). And national exports formed rate of (23.4%) of the total value of foreign trade in 2012, compared to (25.1%) for the year 2011.
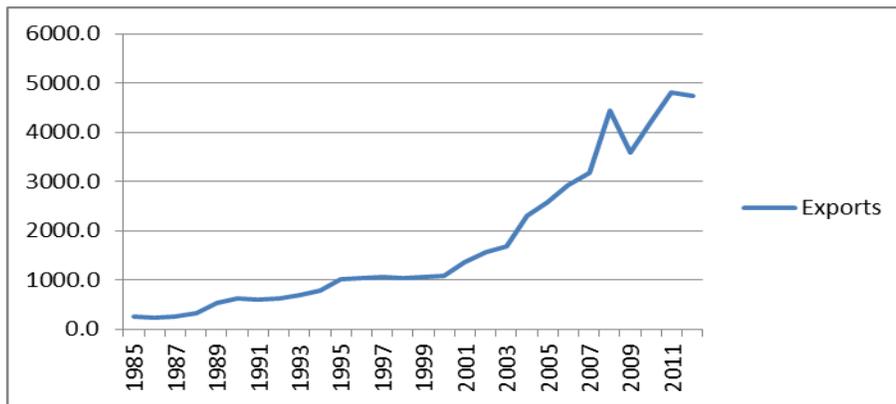

Figure (1)

Exports of Jordan during (1985-2012)

2.1.1 Re-exported Goods:

The value of goods re - exported in 2012 is (849.9) million dinars, with a decrease of (28.8) million dinars, compared with 2011, amounting to (878.7) million dinars, and the growth rate reached to (-3.3%).

Domestic exports accounted for (23.4%) of total foreign trade during the year 2012, compared to (25.1 %) in 2011. Greater Arab Free Trade countries were captured on the majority of the trade re-exports during the year 2012, where a total of what has been exported to states Area of the Greater Arab Free Trade valued by (2303.9) million dinars, or a rate of (48.5 %) of the total domestic exports, followed by Asian Non - Arab countries of (1148.9) million dinars, representing about (24.2%) , then the United States of America (788.5) million dinars, representing (16.6%), then the value of European countries (215.8) million dinars, including (4.5 %).

2.2 Jordan Imports:

The value of Jordanian imports during the year 2012 was (14733.7) million dinars, an increase of (1293.5) million dinars, compared with 2011, amounting to (13440.2) million dinars and a growth rate of (9.6%). The Jordanian imports accounted for (72.5 %) of the value of foreign trade for the year 2012, compared to (70.3%) for the year 2011.
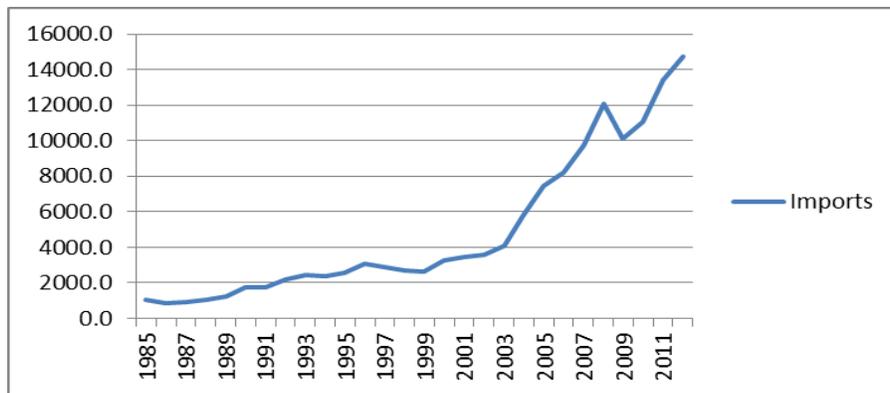

Figure (2)

Imports of Jordan during (1985-2012)

2.3 Trade Balance:

Trade Balance represents the difference between the aggregate value of National exports and re-exports and aggregate value of imports. Statistics in Table (1) shown that the deficit of trade balance increase in 2012, from (7755.6) million dinars in 2011, to (9134.3) million dinars in 2012, with an increase of (1378.7) million dinars, by the increasing rate of (17.8%) than it was in 2011.

Jordan's trade deficit with the countries of the Greater Arab Free Trade was the highest in terms of the absolute numbers and relative terms, compared with the rest of the other economic groups, reached (2956.1) million dinars, or (32.4%) of the total trade balance during the year 2012. The trade deficit with the European countries reached (2363) million dinars in 2012, or (25.9%) of the total trade balance. The trade deficit with non-Arab Asian countries, totaled (2772.4) million dinars, or (30.4%) of the total trade balance during the year 2012.
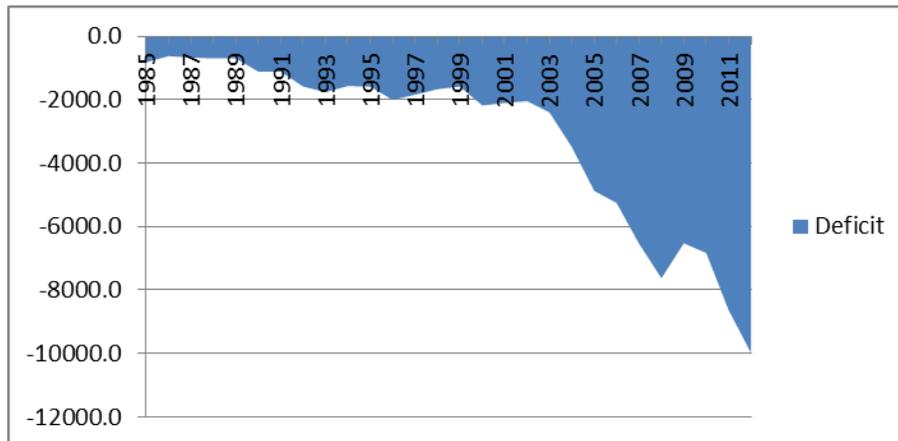
Figure (3)

Balance Trade Deficit of Jordan (1985-2012)

2.4 Commodity Composition of Exports and Imports

Jordan has an area of just over 89287 km^2; moreover, the land is hilly and arable lands in the west and desert lands in the east. Jordan lacks kinds of natural resources. There are no important mineral reserves such as coal or petroleum and hardly any raw material

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supplies. Thus, because of the lack of mineral reserves, Jordan has to import virtually all raw materials and fuels required by the various industrial activities. In addition, the domestic market is not large enough to absorb all the manufactured products produced locally by the rapidly expanding industries. The major manufacturing industries in Jordan are therefore export oriented.

This paper will study the composition of Jordan's exports and imports. This will explained on the demand side in terms of the changing conditions in the overseas markets and on the supply side in terms of the changing comparative advantages within the domestic economy. This paper will also deal with the direction of Jordan's foreign trade. Jordan's trade with its major trading partners will be analyzed in some detail.

2.4.1 Composition of Domestic Exports

According to the data of Jordanian's domestic exports, we can find that:

- Chemicals (medicinal and pharmaceutical products, fertilizers, Phosphoric acid, cosmetics, plastics) ranked first with value of (1148.1) million dinars, accounted for (24.2%) of the total domestic exports during the year 2012.
- Crude Materials, Inedible, except Fuels (phosphate, potash) ranked second in the list of domestic exports during the year 2012 with value of (987.7) million dinars, accounted for (20.8%), where pharmaceutical products accounted for (33.1%) of the total this group.
- Third place followed by Misc. Manufactured Articles (clothing, shoes, publications, manufactures plastic), which are principally labor intensive products, with value of (979.5) million dinars accounted for (20.6%), where clothing items accounted for (77.5%) of the total of this group.
- Then a total of food and live animals (vegetables, dairy and eggs, fruits) ranked fourth with value of (786.7) million dinars accounted for (16.6%).

Table (2)

Domestic Exports by Commodity According to S.I.T.C (2012)

JD Million

Category	Value	Relative Importance %
Food and Live Animals	786.7	16.6
Beverages and Tobacco	60.2	1.3
Crude Materials, Inedible, Except Fuels	987.7	20.8
Mineral Fuels, Lubricants & Related	13.6	0.3
Animal & Vegetable Oils and Fats	14.6	0.3
Chemicals	1148.1	24.2
Manufactured Goods Classified by Material	433.5	9.1
Machinery and Transport Equipment	224.3	4.7
Misc. Manufactured Articles	979.5	20.6
Other	101.4	2.1
Total	4749.6	100

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2.4.2 Composition of Imports

The lack of natural resources and minerals reserves such as petroleum and coal, and shortage of capital formation led to make Jordan one of the countries that heavily depend on imports. By looking to the data of Jordanians imports data, we can find that:

- The total mineral fuels (crude oil, oil products) ranked first in the list of imported goods Jordanian group, representing (28.8%) of the total imports, and the value of 3751.5 million dinars.
- The total of machinery and equipment (transport and parts, machinery and equipment connections, machines and electrical equipment, machinery and other equipment), ranked second in the list of imported materials, including (18.4%) of the total imports during the year 2011 and the value of 2403.6 million dinars.
- The total of manufactured goods (iron and steel, textile yarn, paper and cardboard) accounted for (15.6%) and value (2037.8) million dinars.
- Finally, a total of nutrients and organisms (fruit, barley, wheat, meat, fish, fodder) including (14%) and value (1818.2) million dinars.

Table (3)

Imports By Commodity According to S.I.T.C (2012)

Million JD

Category	Value	Relative Importance %
Food and Live Animals	2275.2	15.4
Beverages and Tobacco	101.6	0.7
Crude Materials, Inedible, Except Fuels	248.9	1.7
Mineral Fuels, Lubricants & Related	4692.8	31.9
Animal & Vegetable Oils and Fats	141.2	1.0
Chemicals	1524.6	10.3
Manufactured Goods Classified by Material	2175.0	14.8
Machinery and Transport Equipment	2418.5	16.4
Misc. Manufactured Articles	905.5	6.1
Other	250.5	1.7
Total	14733.7	100

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2.5 Jordan Trade Direction

First: The Council of Arab Economic Unity (CAEU)

The Council of Arab Economic Unity (CAEU) was established by Egypt, Iraq, Jordan, Kuwait, Libya, Mauritania, Palestine, Saudi Arabia, Sudan, Tunisia, Syria, United Arab Emirates and Yemen on 3 June 1957. It became effective on 30 May 1964, with the ultimate goal of achieving complete economic unity among its member states.

Figures of foreign trade indicates to increase the relative importance of trade with Greater Arab Free zone compared with the rest of the other economic blocs, where Arab countries are first trade partner of the Kingdom in the field of trade exchange which shows the importance of Arab markets for the Jordanian economy.

Statistics show that Jordan's foreign trade with Greater Arab Free Trade Area ranks first in terms of absolute and relative numbers, as these indicators show that movement of national exports and re-exported goods are mostly with neighboring Arab countries (such as Iraq, Saudi Arabia, Egypt, Syria, and Lebanon) without a significant expansion in geographical depth for the Arab region as a whole, especially the Arab Maghreb countries.

Jordan is associated with this group of countries trade conventions and protocols economic and aimed to increase trade exchange, which would contribute to facilitate the movement of Inter-Arab trade.

To prove the importance of the Arab markets for both exports and imports, Jordan's foreign trade with countries of the Greater Arab Free Trade accounted for (40%) of the total foreign trade last year 2011, compared to (39.1%) for the year 2010, almost half of the total Jordanian trade is with Arab countries.

The markets of the countries of the Greater Arab Free Trade received during the year 2012 amounted to (2303.9) million of Jordanian goods and commodities, representing (48.5%) of the total domestic exports of Jordan (4749.6) million dinars.

The Iraqi market is at the forefront of the Arab markets that receiving the Jordanian national exports worth (716.4) million dinars, followed by Saudi Arabia, Lebanon and Syrian, with value of (523.6) (167.4) (140.9) million dinars, respectively.

 The level of Jordanian imports from the Greater Arab Free Trade, rose from (4945.7) million dinars during the year 2011, to (5260) million dinars during the year 2012, with growth rate of (6.4%), and accounted for (35.7%) of total imports of Jordan.

The Saudi market considered the forefront of exporting markets for Jordan worth (3469.7) million dinars, followed by Egypt, U.A.E and Iraq, with value of (560.5) (418.8) (230.8) million dinars, respectively.

Second: The non-Arab Asian Countries:

Asian economic bloc (Indonesia, China, India, Turkey, Japan, South Korea, Malaysia) ranked second in terms of foreign trade volume of Jordan with the rest of the world, where Jordanian foreign trade with non-Arab Asian countries accounted for (24.9%) of the total foreign trade in 2012, and the value (5070.2) million dinars, compared to (4745.2) million dinars during the year 2011.

The markets of these countries experienced a high activity in front of receiving of Jordanian exports. The goods which received worth (1148.9) million dinars during 2012, compared to (1315.6) million dinars in 2011, a growth rate of (-12.7%).

The markets of this group is the second major market for Jordanian products and goods after Arab markets in terms of its importance for Jordanian exports, which absorbed a rate (24.2%) of Jordan's total exports in 2012, compared with a rate of (27.4%) of Jordan's total exports for the year 2011. The Indian market is considered the most prominent of this group markets for Jordanian exports for the year 2012 where It received (510.5) million dinars, representing (10.7%) of the total exports to those countries, followed by Indonesia of (192.7) million dinars, as of (4.1%) and China (PRC) (132.4) million dinars accounted for (2.8%).

The Jordanian imports from the countries of this group rose from (3429.6) million dinars in 2011 to (3921.3) million dinars in 2012 with growth rate of (14.3%), and its considered the most prominent of this group markets for Jordanian imports are markets of China, Turkey, India, South Korea and Japan.

The Chinese market is one of the most important Asian markets for Jordanian products, where Jordanian market received during 2012 (1416.4) million dinars of various Chinese goods, and the Turkish market comes in second place worth (568.9) million dinars, then the Indian market with value of (506.8) million dinars.

Third: The European Union (EU):

 The European Union (EU) is an economic and political union of 28 member states that are located primarily in Europe. The EU operates through a system of supranational independent institutions and intergovernmental negotiated decisions by the member states.

Foreign trade with European countries has grown during 2012. Where the value of total foreign trade with these countries was (2794.6) billion dinars, with a decrease of (168.4) million dinars, compared with a total value of foreign trade in 2011 which was (2963) million dinars, the growth rate was (-5.7%). The foreign trade with European countries

was (13.7%) of the total value of Jordanian trade during 2012, compared to a rate of (15.5%) in 2011.

Jordanian exports already low to the European market. It increased significantly during 2012 to reach (215.8) million dinars, compared to (220.1) million dinars for the year 2011, a decrease of (4.3) million and a rate of (-2%). The markets of Bulgaria, Italy, and Netherlands have a great portion in the value of Jordanian exports.

The Domestic exports is characterized by low value compared with the other groups. Where national exports are still unable to access some European markets such as (Malta, Czech Republic, Lithuania, Finland, Cyprus, Portugal, and Luxembourg), due to the numerous difficulties and obstacles encountered in the European markets.

As for imports, it was quite the same case, where the value of imports has fallen to (2578.8) million dinars in 2012, with a decrease of (164.1) million dinars compared to (2742.9) billion dinars in 2011 and a growth rate was (-6%). The most prominent markets of Jordanian imports for the year 2012 were Italy, Germany and Spain.

Fourth: The North American Free Trade Agreement (NAFTA)

 The North American Free Trade Agreement (NAFTA) is an agreement signed by Canada, Mexico, and the United States, creating a trilateral trade bloc in North America. The agreement came into force on January 1, 1994. It superseded the Canada–United States Free Trade Agreement between the U.S. and Canada. In terms of combined purchasing power parity GDP of its members, as of 2007 the trade bloc is the largest in the world and second largest by nominal GDP comparison.

Jordanian Foreign trade with the countries of the North American Free (Mexico, Canada, the United States) accounted for (9.1%) of the value of Jordan's total foreign trade in 2012, compared of (8.6%) during the year 2011. The market of the United States of America is the most prominent of this group markets by virtue of trade agreement signed between Jordan and the United States of America. The U.S. market in 2012 record a progress in the reception Jordanian exports compared to 2011, where exports rose to

national U.S. market by (788.5) million dinars in 2012 compared to (733.7) million dinars in 2011, with an increase of (54.7) million dinars and a growth rate of (7.5 %). Jordanian imports also rose from the U.S. market by (861.4) million dinars in 2011 to (977.5) million dinars in 2012, with a difference of (116.1) million dinars, and growth rate of (13.5%).

Table (4)

The most important trading partners - Exports

For the year 2012

Million JD

Country Rank	Country	Value	% of Total Exports
1	USA	788.5	16.6
2	Iraq	716.4	15.1
3	Saudi Arabia	523.6	11.0
4	India	510.5	10.7
5	Indonesia	192.7	4.1
6	UAE	173.7	3.7
7	Lebanon	167.4	3.5
8	Syria	140.9	3.0
9	China	132.4	2.8
10	Algeria	91.4	1.9
Total		4749.6	72.4

Despite the high value of Jordanian's national exports to most of the Arab and Global markets, there has been no significant change on trading partners for Jordanian exports. American and Iraqi market maintained at the forefront of recipient markets for national exports and for many years, with a value of (788.5) and (716.4) million dinars, respectively, representing (16.6%) and (15.1%), respectively.

Iraqi market has returned to assume the strategic trade partner of the kingdom after the large movement of trade exchange between the two countries which return it to its former glory, the Iraqi market is the largest outlet for national exports, then the Saudi Arabia market and India (11%) and (10.7%), respectively.

Table (5)

The most important trading partners - Imports

For the year 2012

Million JD

Country Rank	Country	Value	% of Total Exports
1	Saudi Arabia	3469.7	23.5
2	China (PRC)	1416.4	9.6
3	USA	977.5	6.6
4	Italy	658.6	4.5
5	Germany	575.2	3.9
6	Turkey	568.9	3.9
7	Egypt	560.5	3.8
8	India	506.8	3.4
9	UAE	418.8	2.8
10	South Korea	406.3	2.8
Total		14733.7	64.8

Trading partners for Jordanian's imports has some significant change during the year 2012, where the Saudi and Chinese markets was at the forefront of Arab and international markets exporting to the Jordanian market, where Jordanian market received the value of (3469.7) million dinars (1416.4) million dinars from the Saudi market and the Chinese market, respectively. The value of Jordanian's imports of Italian goods significantly decreasing during the year 2012 to reach (658.6) million dinars, with a growth rate (-4.3%) compared to (688.5) million dinars during the year 2011, and thus may have ranked fourth in the list of Jordanian partners of imports.

Also, we found the Indian market within the list of strategic partners of Jordanian's imports, where the Jordanian market has received the value of (506.8) million dinars of Indian goods and commodities during the year 2012, compared to (360.2) million dinars during the year 2011, with growth rate of (40.7%).

3. Trade and Growth

To explore the relationship between trade openness and growth, a well-founded model based on neoclassical growth theory is used (Amirkhalkhali 2003, Sarkar 2007, and Yanikkaya.2003). It assumes that output is determined mainly by factors of production

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and technology. Standard Cob-Douglas technology is used in which production is none-linear function of capital, labor and technological level. The problem in such model is that labor and capital are collinear; since more capital requires less labor to keep output fixed at certain point of time, due to complementary or substitution relationships between primary inputs. To make the model estimable using traditional econometric methods we first converted all variable to per-labor unit and then linearized by taking the log of both sides of the production function. The resulting model is as follows:

$$\ln y = b_0 + b_1*\ln k + b_2* \ln Trado + b_3* i + e$$

The model variables are defined as follows:

> y: is real gross domestic product per unit of labor, k: is real capital-labor ratio, Trado: is the sum of exports and imports divided by GDP, The technology i is measured by a simple time trend. The e term is added to account for random error in the model specification.

Before moving to the estimation process the model variables were tested for unit root and the results indicated to non-stationary problem. Hence, a co-integration test between the model variables is conducted. The test result (Table 6) rejects the hypothesis of no cointegration at the 5% significant level, and indicates to the existence of single co-integration equation for the overall model. This means that the long run relationship between the variable is valid and stable and therefore, the model can be estimated by OLS.

Table (6): Unrestricted Cointegration Rank Test (Trace).

No. of coint. eqations	Eigenvalue	Trace Statistic
None *	0.404382	32.68369
At most 1	0.234080	12.99379
At most 2	0.072502	2.860057

However, due to variables non-stationary, the model will be estimated with fully modified OLS (FMOLS) suggested first by (Phillips and Hansen, 1990) in order to deal with both serial correlation and endogenity of regressors arising from the co-integration.

Furthermore, the resulting estimates of FMOLS will have the standard statistical properties and therefore normal inferences can be used. For the sectoral models the results of co-integration test showed that only the construction sector equation is co-integrated (one co-integrating vector), while both the industrial and service sectors equations are not co-integrated. Hence, the proper modeling method will not be the same for all sectors. The co-integrated equation for the construction sector can be estimated by either the error correction method or the fully modified ordinary least squares (FMOLS). For the other two non-co-integrated equations other estimation methods must be used. Since the main focus in this study is on the significance of the relationship between trade openness and the growth of each sector, it is sufficient to use OLS after proper differencing of the variable. The results of applying FMOLS for the construction equation and the OLS for the other two equations after taking the first difference of the variables are shown in Table (7).

For the overall model all estimated coefficients carry the correct expected sign and are statically significant at better than 1% level except the trade openness coefficient which is significant at only 10% level. The model fit is acceptable as shown by the measure of adjusted multiple determination coefficient. The coefficient of trade openness means that a 1% increase in trade openness will increase growth of real GDP per unit of labor by 0.76%. This may be taken as indicator of modest positive affect of trade liberalization on overall real economic growth in Jordan.

Table (7): Estimation results of FMOLS and OLS, 1970-2011

	Industrial Sector		Construction Sector		Service Sector		Overall	
	OLS		FMOLS		OLS		FMOLS	
	β	t-stat	β	t-stat	β	t-stat	β	t-stat
Constant	-.08	-1.5	1.3	3.6	-.09	-2.05	-	-
Capital-labor ratio	0.025	0.35	0.49	9.6	0.38	3.46	0.980030	16.14132
Trade openness	0.53	2.5	0.8	2.7	-0.32	-1.86*	0.758603	1.691111
Trend	.005	1.5	0.03	3.1	0.007	2.37	0.027504	2.382883
R^2	0.36		0.92		0.53			

Due to data limitation, the sample for sectoral models covered the period 1985-2011.

The result of estimation is satisfactory and all coefficients carry the correct expected sign. As expected the coefficient representing the capital-labor productivity is positive and statistically significant at better than 5% level for both construction and service sectors, while it turned out to be statistically insignificant for the industrial sector.

The simple trend coefficient carries a positive sign and statistically significant for all sectors indicating to positive technological effect on growth over time.

Finally, the coefficient of interest for trade openness turned out to be positive and statistically significant for both industrial and construction sectors. However, it turned out to be none significant for the service sector. This may be an indication of less trade openness of the Jordanian service sector and /or an indication to the existence of more non-tradable in this sector compared to other sectors as usually expected.   Hence, generally the sectoral econometric analysis tends to reaffirm the positive impact of trade openness found earlier at the aggregate level.

It is important to have into account that very often problems arise when the estimated equation mixes variables in per capita terms with ratios, as seen in Guisan(2009), who shows, with data of OECD countries, that strong positive correlations between foreign trade in per capita terms and real production per capita may appear very weak if ratio of openness is correlated with production per head.

4. Summary, Conclusions and Recommendations
4.1 Summary

From this study, the term Real Gross Domestic Product per labor was used to describe economic growth, which is one of the macroeconomic objectives. The study had depicted the pattern of export and import in Jordan right form 1985 to 2012. The study also made some effort in examining the composition of Jordanian exports and imports. The work also provides the trade partners of Jordan.

The study had also thrown some light on the relationship between economic growth rate and foreign trade. There is a positive effect of trade liberalization on overall real economic growth in Jordan. As expected the coefficient representing the capital-labor productivity is positive and statistically significant. Finally, the coefficient of interest for trade openness turned out to be positive and statistically significant for both industrial and construction sectors.

4.2 Conclusion

This study has examined the performance of foreign trade in relations to economic growth. We conclude from this that great efforts should be made by the government to adjust the various macro-economic variables such as focusing on comparative of exports, imports substitution policy, activate external marketing process … etc., in order to provide a favorable environment to stimulate foreign trade.

4.3 Recommendations

Accordingly, there is an urgent need for the economic decision-makers to develop an economic reform which concentrate on the following aspects:

- Preparation of strategies for the state involving the private sector in all productive economic sectors, and activating the partnership between the public and private sectors.
- Trade policy reform: By supporting the application of trade laws such as antitrust and competition law.
- Finance and guarantee exports: Support exports financially and technically, and launch freedom export, and facilitating it without any financial or administrative burdens.
- The industrial sector: Give this sector the premium importance through direct the flow of domestic capital to invest in this sector, and must be reconsidered in tax policy on this sector, through the study of the impact of the tax on the situation investment and trade cooperation with the Jordanian Chambers of Commerce and Industry, and coordination with the Ministry of Finance and the Ministry of

Industry and trade, in order to employ the policy of exemptions from tax and customs duties to stimulate investments in the fields that it lacks the national economy, especially in the industrial sector.

5. References

1. Akeem, Usama (2011): "Performance Evaluation of Foreign Trade and Economic Growth in Nigeria" , Research Journal of Finance and Accounting www.iiste.org, ISSN 2222-1697 (Paper) ISSN 2222-2847 (Online) Vol 2, No 2, 2011.

2. Adewuyi(2002), "Balance of Payments Constraints and Growth Rate Differences under Alternative Police Regimes"

3. Nigerian Institute of Social and Economic Research (NISER) Monograph Series No. 10 Ibadan, Nigeria.

4. Awad, T.(2013) " International Economics: Policies and Theories", 2nd Edition, Dar Wael Press., Amman, Jordan.

5. Bidlingmaier, T.(2007): "International Trade and Economic Growth in Developing Countries", Paper prepared for presentation at the DEGIT XII conference in Melbourne in June 2007.

6. Central Bank of Jordan Reports, various issues.

7. Dollar, David and Kraay, Aart (2004). "Trade, Growth, and Poverty", The Economic Journal, vol. 114, pp. 22-49.

8. Department of Statistics Reports, various issues.

9. Greenaway, D., Morgan, W., Wright, P. (2002). "Trade liberalization and growth in develop-ing countries", Journal of Development Economics, vol. 67.

10. Klinger, B. and Lederman, D. (2004), "Discovery and Development: An Empirical Explora-tion of 'New' Products", World Bank Policy Working Paper no. 3450.

11. Ozdeser, H. and Ozyigit, A. (2007): "Foreign Trade and Economic Growth in Northern Cyprus: A Time Series Analysis", International Research Journal of Finance and Economics, ISSN 1450-2887 Issue 10 (2007), © Euro Journals Publishing, Inc. 2007, http://www.eurojournals.com/finance.htm..

12. Romer, D. (1996), Advanced Macroeconomics, New York.

13. Saidam, M. (2012): "The General Performance of the Jordanian Foreign Trade in 2011", Studies and Training Administration. Studies Unit and International Conventions. Amman Chamber of Commerce, Amman, Jordan.

14. Shalan, M. (2011): "The Prominent Developments in The Foreign Trade of Jordan during the period (2000-2010)", Economic and Social Council, Amman, Jordan.

15. Shalan, M. (2011): "Jordanian Foreign Trade Developments and Their Impact on the National Economy", Economic and Social Council, Amman, Jordan.

16. Sun, P. and Heshmati, A. (2010):" International Trade and its Effects on Economic Growth in China", Discussion Paper No. 5151, IZA, Institute for the Study of Labor.

17. Todaro, M. and Smith, S. 2006. Economic Development 9th Edition. USA Addison Wesley.