The Impact of Syrian Crises on the Jordanian External Trade

Akram Masoud Haddad

American University in the Emirates, Dubai, United Arab Emirates

Jordan's economy is influenced significantly by events taking place in the region, and many successive events in the region occurred during the past two decades, resulted in successive waves of migrations in large numbers to Jordan. The Syrian crisis impact goes beyond the waves of refugees but extended to influence the trade routes to and from Jordan through Syrian route and ports. This research aims to analyze the impact of the Syrian crisis on the Jordanian trade through the use of regression analysis and the use of dummy variable to reflect the Syrian crisis, analyzed the monthly data for the period 2005-2015. In addition, it has used other statistical methods such as records, and has been the Syrian crisis impact analysis on the volume of trade, imports, total export, re-exported, and the national exports. In spite of the lack of trade stop with Syria completely, study showed that there is a significant decline in the trade exchange between Jordan and Syria, but the Syrian crisis may affect the Jordanian imports, the trade volume, trade balance while the study did not show any trace of the Syrian crisis on the national exports. Finally, the study recommends that there are needs for analytical studies and the use of econometric models to demonstrate the impact of the Syrian crisis measures on all sectors and on the sets of Jordanian goods imported and exported.

Keywords: international trade, bilateral trade, Jordanian external trade, Syrian crisis, impact of Syrian crisis on Jordan, Jordanian exports and imports

Introduction

Jordan with an area of 89.3 thousand km², and more than 9.5 million population, 30% are non Jordanian—either refugees or workers is characterized by small resource base, small open economy that is influenced by the surrounding political and economic circumstances and crisis, and is considered one of the highest countries that are exposed to refugees immigration waves during the last decades which have burden on the economy and natural resources. However, one of the Lange and ongoing crises that sustain for long period is the Syrian crisis. With the entry of the Syrian conflict sixth, Syrian crisis is considered as unique crisis that has impacts on Jordan directly and indirectly in many ways.

According to different studies done by international and national organizations, the impacts of the Syrian crisis on Jordan can be summarized as impacts on national development and economic growth, impacts on the direct trade with and through Syria both of inputs which will affect the production cost of the agricultural and industrial products produced in Jordan and thereby the prices of these products, impacts on the trade with and through Syria of commodities and products, prices of the consumers, the exports and imports.

Akram Masoud Haddad, professor of Economics, College of Business Administration, American University in the Emirates, Dubai, United Arab Emirates.

Correspondence concerning this article should be addressed to Akram Masoud Haddad, College of Business Administration, American University in the Emirates, Dubai International Academic City, P.O. Box 503000, Dubai, United Arab Emirates.

The conflict in Syria led to losing the traditional and the main land route to the major trading partners of Turkey, Lebanon, and Europe. As a result, it has been resorting to more expensive alternative ways; this harms the competitiveness of Jordanian exports.

Considering that there are more than 1.3 million according to the population censuses 2016 Syrian refugees in the country, which means there are more than 15% of the Jordanians, the structure of the Syrian refugees shows that 52.2% are females and 47.8% are males. The most of the Syrian refugees are on the age group 18-35 which represent around 28% followed by the age group 5-11 representing 20.7%. This means increase of the demand of certain commodities especially food items, impacts on national resources mainly agricultural resources to produce sufficient amount of agricultural products (Ministry of Planning and International Cooperation and United Nations, 2016).

Hence, this study, has an in-depth analytical study on the impact of the Syrian crisis on the Jordanian foreign trade and trade balance.

Data and Methodology

Secondary data are obtained from the Jordanian government institutions such as the Central Bank of Jordan, Department of Statistics and the Centre for Trade and Investment Information and international organizations that are concerned with the affairs of Syrian refugees in Jordan, such as UNDP, UNHCR, and the unity of humanitarian aid in the Ministry of Planning.

The data cover GDP, import, exports, import and exports quantity and unit value indexes of exports and imports for the period of 2005-2015 and until the end of September of 2016.

Percentage of the imports and domestic export of the GDP and terms of trade is computed, terms of trade are computed using the following formula:

Quantum Terms of Trade	Quantity Index of Imports Divided by Quantity Index of Exports multiplied by 100.
Price Terms of Trade	Price Index of Exports Divided by Price Index of Imports multiplied by 100.

Descriptive statistical methods to describe variables of trade use such trends and percentages as well as trend analysis and simple and multiple regressions.

The Model Used in the Study

$$Y_t = \beta_0 + \beta_1 X + \beta_2 D + \varepsilon$$

where:

X: imports or exports during the year Y_t ;

D: dummy variable expresses the Syrian crisis, it takes the value of 1 during the years of crisis and 0 in the period before the crisis, so that the change in the dependent variable (Y) in the absence of the Syrian crisis is equal to the value of coefficient X, while the value of β_2 measures the impact of the Syrian crisis and the change in Y will be equal to $\beta_1 + \beta_2$.

Background and Previous Studies

Since the Syrian crisis there are many studies conducted by national and international organizations. Some of these studies are conducted in short period after the crisis and mainly concentrate on the humanities issues rather than the economics issues, some are more or less descriptive and qualitative studies others are comprehensive studies that cover all aspects and impacts on Jordan.

A study is prepared by a team of researchers at the Economic and Social Council on the economic and social impacts of the crisis of displaced Syrians on the national economy as much as the total financial impact of the exodus of Syrian refugees on the national economy during the colloquial 2011-2012 by about six billion JD and constitute about 3% of the GDP of the Kingdom. The estimated cost per refugee hosting is about 2,500 dinars per year and the cost of Syrian refugees during the year 2012 amounted to 450 million dinars, while the cost of hosting refugees was estimated in 2011 at about 140.28 million (Economic and Social Council, 2012).

However, the agencies of the United Nations said that the effect of the Syrian crisis is much more than economic issues but extended to social and environmental impacts that could not be quantified at present. Thus, the reception of refugees in general and the Syrian refugees, in particular, is a major economic challenge for Jordan, which has not recovered yet from the consequences of the global financial crisis that hit the region in the world and the end of 2008. In addition, the Syrian crisis is not limited impact on Jordan on the arrival of Syrian refugees but Jordan will suffer from the closure of one of the most important trade routes to and from Jordan that is the land corridor through Syrian territory (Ministry of Planning and International Cooperation and United Nations, 2012; 2013; 2014; 2015).

The study of the Ministry of Planning conducted in 2012 is updated annually; explores the effects of the Syrian crisis as a whole, including the Syrian refugees and all sectors that are affected, it furthermore estimates both the needs of Syrian refugees and local communities. A plan of action to address the Syrian crisis, especially in the areas of education, food security and the environment and infrastructure, health, solidarity, social cohesion and social protection, justice, housing and subsistence, transportation, labor and others, is prepared accordingly. In accordance to that humanitarian aid unit is established in the Ministry of Planning and international cooperation to manage the issues of the Syrian crisis on Jordan (Ministry of Planning and International Cooperation and United Nations, 2013; 2014; 2015).

Trade Relations Between Jordan and Syria

Syria is the closest partner to Jordan. The Jordanian-Syrian border is considered as populated border where the citizens of each country are less than one kilometer apart of each other and the easiness of crossing the borders for both sides and the difference of the prices of most products and commodities make Syria be cheap market to buy their needs from and increase the non-formal trade that is coming with the passengers. Syria also is a land port to European countries: Lebanon, Turkey, Russia, and independent countries. In addition to the Syrian and Jordanian government, many measures are taken to facilitate the trade between the two countries such as Free Zone and trade agreements.

Trade Agreements Between Jordan and Syria

In the economic side Jordan and Syria signed many bilateral trade agreements to enhance and encourage the bilateral trade between the two neighboring countries. The trade agreement signed in 1975 included that the Syrian public sector institutions make a commitment to import the restricted and trapped materials and products with these institutions from Jordan in an amount not less than two million JD annually at appropriate prices, taking into account the customs exemptions of products of the two countries. In addition the agreement allows the import of all agricultural and animal products, natural resources, and industrial products from Jordanian or Syrian originate from the two countries, according to the case and with an exception of the provisions of the prevention of import and all administrative and monetary restrictions and other restrictions which give these

products exemption traded between the two countries from customs duties, other taxes, and import licenses. However, re-exporting such products needs the consent of the exporting country of these products. A committee of customs consisted of two countries to determine the imported raw materials used in symmetric local industries in both countries in order to unify customs duties and other fees and taxes on these products. Furthermore, the agreement allows the creation of mutual business between the two countries. Permanent joint committee is formed to follow up the implementation of the agreement and the development of economic relations between the two countries.

In 1999 Trade Protocol was signed between the two countries which included the application of full tax exemption on two the Jordanian-Syrian groups of commodities, the gradual application of the exemption is contained in the provisions of the greater Arab free trade area of the rest of the goods except this exemption. This protocol has been suspended after the signing of the free trade zone agreement between the two countries signed in 2002 in accordance with this agreement mutual direct exemption of goods and national products from duties and customs duties and other similar effect and taxes. In addition, the agreement abolition of duties on 99% of traded goods and services between the two countries, with the exception of some goods mentioned in the agreement, which is being reduced gradually by 60% started from the date of the agreement came into force.

Joint Free Zone (Syrian-Jordanian Free Zone)

Joint free zone area (JSJFZ) was the establishment as a joint adventure company between Jordan and Syria and managed by two sides, in accordance to the agreement of economic cooperation and trade exchange between the two countries, under Law No. 21 of 1975 in the Syrian and Law No. 5 of 1976 in Jordan. The JSJFZ is located on the common border between the two countries (Jaber) with an area of 650 hectares. The aim of the free JSJFZ is to provide appropriate investment climate to attract and recruit investments from both countries as well as third parties to contribute to the overall investment and economic development.

The number of employees working in the Syrian-Jordanian Free Zone is approximately 125 employees from the two sides, while the number of employees in the event of support for investment activity and companies amounted to about 5,000 people from both sides. There are many investments: economic, commercial, industrial, and service activities in JSJFZ, and total number of investors is 450 in 2012.

The Impact of the Syrian Crisis on Jordanian External Trade

In this item, we review the evidence analysis on the impact of the Syrian crisis on the Jordanian trade and trade with Syria, and among the main themes of the study.

The Impact of the Crisis on Bilateral Trade With Syria

As mentioned Syria and Jordan sign many agreements to encourage the trade between the two countries at the formal level, however Jordanian-Syrian trade relationship is not limited to the figures issued by the official institutions; there is informal trade between the two countries considering the land boundaries between the two countries.

Figures in Table 1 show that the trade exchange between Jordan and Syria during the period from 2000-2015, had a significant increase during the period from 2000 to 2011 except for the period in 2009, which exhausts a decline export and imports of Jordan to Syria. The export between the two countries increased from 16.5 million in 2000 up to 181.4 million in 2011, which is 10 times that in 2000. After the crisis in 2011 the exports to Syria sharply decrease.

Table 1

Trade Exchange Between Jordan and Syria 2000-2015 (Million JD)

Year	Value import	% of total	% of Arab countries	Index	Rank	Value export	% of total	% of Arab countries	Index	Rank
2015	50.2	0.5	1.8	157.9	38	69.3	1.9	3.8	420.0	12
2014	108.3	0.7	2.2	340.6	28	142.2	2.8	5.4	861.8	7
2013	184.4	1.2	3.8	579.9	23	95.9	2	3.7	581.2	9
2012	171.3	1.2	3.3	538.7	20	140.9	3	6.1	853.9	9
2011	268.4	2	5.4	844.0	12	181.4	3.8	8	1,099.4	8
2010	267.2	2.4	6.9	840.3	12	169.4	4	8	1,026.7	7
2009	218	2.2	6.7	685.5	15	149.4	4.2	8.1	905.5	7
2008	244.5	2	6.1	768.9	14	166.3	3.8	9	1,007.9	7
2007	257.8	2.7	8	810.7	10	149.7	4.7	10.7	907.3	7
2006	185.8	2.3	6.3	584.3	13	110.8	3.8	8.9	671.5	8
2005	161.6	2.2	6.4	508.2	13	113.1	4.4	10.3	685.5	6
2004	147.4	2.5	8.3	463.5	12	94.6	4.1	10	573.3	6
2003	108.7	2.7	9.7	341.8	10	64	3.8	9.2	387.9	9
2002	68.7	1.9	7.6	216.0	15	46.7	3	6.3	283.0	9
2001	47.1	1.4	5.7	148.1	22	25.6	1.9	3.8	155.2	10
2000	31.8	1	4.1	100	25	16.5	1.5	3.8	100	11

Source: Calculated by the Central Bank of Jordan, the monthly newsletter.

Table 1 shows that Syria is one of the ten main partners of Jordan in export. Syria's rank among the importers of the Jordanian products is between sixth and seventh that Jordan exported to before the crisis, however, after the crisis Syria is still in the ninth and tenth position which Jordan exported to, this may be due to the presence of the Jordanian Syrian free zone as well as the open boundaries between Jordan and Syria.

Figures in Table 1 show that Syria is one of the most important countries that Jordan imports from. The rank of Syria between the world countries that export to Jordan is between tenth and twelfth during the period before the crisis. After the crisis, Syria's rank increases to reach 20, 28, and 38 for the years 2011-2015.

As noted trade between Syria after the crisis eased to a great extent in spite of the existence of the crisis, but there is a trade exchange between Jordan and Syria, and to be almost non-existent, especially during 2015 and most of the trade with Syria is done through Syrian-Jordanian Free Zone.

The table also indicates that the Syrian-Jordanian trade accounts for about 2% of the apical Jordanian imports, and is a ratio of up to about 9.7% of the Jordanian import from Arab countries in 2003 and settled about 6-8% of the value of imports from the Arab countries. In other words, there is Jordan's reliance on a large degree on imports from Syria.

The proportion of the national Jordanian exports to Syria, Jordanian exports to Syria amounted to about 10% of the value of Jordan's imports from the Arab countries, in some years, and fell to settle at around 8% ahead of the crisis and then took back down to settle at about 4% in 2015. Also, exports to Syria make up about 4% of the national value of Jordanian exports, fell to around 2% in 2015.

The statistics show that the most products that were exported to Syria before and after the crisis but with different ratios are edible vegetables and certain roots and tubers which are the most important products that Jordan export to Syria and the percentage of these products represents 22.2% of the total export to Syria in

2001 and increased around half of the Jordanian export to Syria in 2012 then started to decrease to reach 26.7% in 2015. Machinery, mechanical appliances, nuclear reactors, boilers became in the second place that Jordan exported to Syria with around 18% in 2001, and decreased to reach only 1.8% in 2015. Products are such as articles of iron or steel, miscellaneous chemical products, albuminoidal substances, modified starches, glues, enzymes, paper and paperboard, articles of paper pulp, of paper or of paperboard, man-made filaments, strip and the like of man-made textile materials, fertilizers, edible fruit and nuts, peel of citrus fruit or melons, beverages, spirits and vinegar, tanning or dyeing extracts, tannins and their derivatives, dyes, pigments and other colorings, inorganic chemicals, organic or inorganic compounds of precious metals, of rare-earth metals, sugars and sugar confectionery, aluminum and plastics.

While the main products imported to Syria are edible fruit and nuts, peel of citrus fruit or melons, articles of apparel and clothing accessories, not knitted or crocheted, edible vegetables and certain roots and tubers, live animals, iron and steel, plastics and articles thereof, man-made filaments, strip and the like of man-made textile materials, articles of iron or steel, and machinery, mechanical appliances, nuclear reactors, boilers, parts thereof are among the most important products imported to Jordan from Syria. It is worthwhile to mention that edible fruit and nuts, peel of citrus fruit, or melons represent about 10% before the crisis and increased to be around 28% of the total import from Syria in 2015. The percentage of these products differs from year to year before and after the crisis.

The Impact of the Syrian Crisis on the Jordanian External Trade

Features of the Jordanian Foreign Trade

The Jordanian foreign trade policy stems from a philosophy of openness to the world and open economy, trade liberalization, strengthened market mechanisms and encouraged a spirit of entrepreneurship and achievement, in addition to encouraging the diversified exports to improve and decrease the trade balance which suffer from chronic and increasing deficit.

Jordan strengthens the economic and trade ties with Arab and other countries through many ways such as signing international, regional, and bilateral agreements. These include World Trade Organization (WTO), the Greater Arab Free Trade Area, FTA with Turkey, the Association Agreement with the European Union, and FTAs with the United States and Canada, and FTAs with the European Free Trade Association (EFTA) states and Singapore.

In addition, Jordan signs more than 32 bilateral trade and investment agreements with Arab and regional and other countries and 29 agreements to prevent double taxation between Jordan and other countries. This leads to favorable trade environment to Jordanian products and easiness of the trade with Jordan.

Table 2 shows the trends of the values of the Jordanian external trade and Table 3 shows the main indicators of the Jordanian external trade such as the index of unit value and volume of the exports and imports and the price and quantity terms of trade and the percentage of import and export of the Gross Domestic Products.

The figures in the tables show that the Jordanian trade balance is negative and increases during the period to reach 565% of that deficit in 2001. This increase in the deficit is coming mainly from the increase of the imports in larger rate than the increase in exports.

The total imports steadily increase to reach 471.4% of that import in 2001 for the year 2014. The total exports increase by 366% in 2014, the increase in domestic is 381.8% in the year 2014.

Table 2

Trends of the Jordanian External Trade (Values in Million JD)

Year	Balance	Total trade	Import	Export	Re-export	Domestic export
2001	-1,827	4,806.1	3,453.7	1,626.7	274.4	1,352.4
2001	100	100	100	100	100	100
2002	89.5	107.3	104.2	120.7	148.4	115.1
2003	103.3	119.6	117.9	134.3	185.8	123.9
2004	166.7	168.7	167.9	169.2	162.7	170.6
2005	240.5	208.3	215.5	187.5	174.7	190.0
2006	246.2	231.3	237.1	226.8	277.2	216.6
2007	309.7	268.5	281.5	249.8	320.7	235.4
2008	351.8	343.1	349.2	346.3	438.0	327.6
2009	305.5	284.8	292.7	278.3	345.2	264.7
2010	331.7	317.7	319.9	306.8	281.8	311.8
2011	424.5	379.6	389.2	349.5	320.2	355.4
2012	500.0	405.4	426.6	344.2	309.7	351.2
2013	550.0	426.0	453.6	345.4	296.2	355.3
2014	565.2	446.2	471.4	366.0	288.0	381.8
2015	351.5	295.2	306.5	255.9	203.3	266.5

Source: Calculated by the Central Bank of Jordan, the monthly newsletter.

Table 3

Indicators of the Jordanian External Trade

Year	Import index of unit		Exports index of unit		Terms of trade		% of GDP	
	Volume	Price	Volume	Price	Quantity	Price	Import	Dom. export
2001	118.8	122.5	158.7	107.2	74.9	114.3	54.3	21.3
2002	122.4	124.8	182.5	107.6	67.1	116.0	53.0	22.9
2003	125	138	196.1	107.8	63.7	128.0	56.3	23.2
2004	153.3	160.1	240.2	120.9	63.8	132.4	71.7	28.5
2005	178	177.1	234.1	138.6	76.0	127.8	83.4	28.8
2006	179	193.8	240	153.6	74.6	126.2	76.7	27.4
2007	186.3	220.1	224.8	179.3	82.9	122.8	80.1	26.2
2008	191.2	265.2	202.3	277	94.5	95.7	77.3	28.4
2009	183.7	233.4	178.2	256.7	103.1	90.9	59.8	21.2
2010	162.8	289.7	241.6	219.6	67.4	131.9	58.9	22.5
2011	160.1	355.1	245.3	247.5	65.3	143.5	65.6	23.5
2012	174	360.2	225.2	266.5	77.3	135.2	67.1	21.6
2013	181.8	357	248	245.8	73.3	145.2	65.7	20.1
2014	183.3	376.8	261.3	249.3	70.1	151.1	64.0	20.3
2015	176.6	339.9	254.8	238.3	69.3	142.6	85.4	29.1

Source: Calculated by the Central Bank of Jordan, the monthly newsletter.

The re-export fluctuated from year to year and reached maximum in 2008 with 438% of that in 2001 and started to decrease to reach 281.8% in 2010 and then increased to reach 309% and decreased after that. It is noted that all trade indicators decreased in 2015.

Trend of the Structure of Jordanian External Trade

The relative importance of the structure of the Jordanian imports is measured as the percentage of the each

commodity out of the total imports shown in Table 4 while the trends of import of each commodity are measured as index number according to the baseline year 2001 shown in Table 5 during the period 2001-2015.

Table 4 shows the structure of the Jordanian imports by commodity according to S.I.T.C. during the period 2001-2015. The table shows that there are changes in the structure of the Jordanian import, after 2002 mineral fuels, lubricants became the first group of commodities imported by Jordan, followed by manufactured goods by material and food and live animal chemicals.

Figures in the Table 4 shows that there are steady percentages of the food and live animal; it ranges between 10.9-16.3% of the total import. The value of this group increased to reach 496.5% and 432.6% of the value in 2001 in the years 2014 and 2015 and the value increases in high rate after 2012 that is after the Syrian crisis.

The import of mineral fuels, lubricants increased during the period 2001-2015 especially after 2005 to be the first and big group of imports of Jordan. The value of import of mineral fuels, lubricants increases to be 867.6% in 2014 and reached the maximum amount in 2012 that is 922.3% of that amount in 2001. However Table 5 shows that after 2010 the value of this product increases more than that in the period before.

Table 5 shows that the value of the main groups of imports increases after the Syrian crisis, which means that the Syrian crisis has impact on the structure and the values of the Jordanian import.

In the export side, Tables 6 and 7 show the structure and the trends in the main groups exported by Jordan during the period 2001-2015. Chemicals is among the most groups that Jordan exports with share of 21.4-28.1% of the total domestic export, the percentage of this group is more or less stable during the period of the study.

Crude materials is the main export of Jordan with percentage of 12.1-23.7 of the total domestic export of Jordan, this percentage varies from year to year. However after 2011, the percentage of this group decreases. Food and live animal is the third group that Jordan exports with percentage of 8.7-19.2 of the total domestic exports.

Mescaline manufactured group share of export varies from year to another reaching maximum share of 32.7% in 2006, it is worthwhile to mention that before this year this group is the first group and consists of about one third of Jordanian export. After that year it started to decrease to reach 19% in 2011 and then the share of this group is increasing.

According to figures in Table 7 the value of the Jordanian exports of the main groups increased sharply, for example, the value of food and live animal increased to reach around 830.5% and 790.4% in 2014 and 2015 respectively, while the value of beverages and tobacco increased to reach 939.7% and 915.7% in 2014 and 2015 respectively.

The value of the Jordanian exports of each group decreased in 2015, and increased after the Syrian crisis that is after 2011.

Table 4

The Structure of the Jordanian Import (% of the Total of the Year Import)

Year	Food and live animal	Beverages and tobacco	Crude materials	Mineral fuels, lubricants	Animals vegetables and fats	Chemicals	Manufactured goods by material	Machinery and transportation	Misc. manufactured	Other
2000	16.3	1.0	3.2	15.6	1.2	10.7	15.1	28.6	5.5	2.7
2001	15.2	1.0	3.1	14.3	1.1	11.0	19.3	27.2	5.9	1.9
2002	14.7	1.2	3.0	15.0	1.6	11.2	19.2	24.7	6.9	2.5
2003	15.5	1.5	2.4	16.2	1.8	10.9	19.7	22.6	6.1	3.3
2004	13.1	1.1	2.0	19.1	2.5	9.8	20.0	22.7	6.5	3.1
2005	10.9	1.1	1.6	23.0	1.5	8.8	18.3	25.1	7.1	2.5
2006	11.3	1.1	1.7	23.6	1.1	8.7	18.8	24.4	7.2	2.1
2007	13.6	0.9	1.6	21.1	0.8	9.2	18.0	25.8	6.8	2.0
2008	14.4	0.8	1.8	21.7	1.5	9.7	18.0	23.5	6.6	2.1
2009	14.7	1.0	1.7	17.9	1.2	10.6	17.3	26.2	7.5	2.0
2010	15.2	0.9	1.8	22.1	0.8	11.1	16.9	22.6	7.0	1.6
2011	15.3	0.8	1.8	29.2	1.1	10.6	15.2	18.0	6.5	1.6
2012	15.4	0.7	1.7	31.9	1.0	10.3	14.8	16.4	6.1	1.7
2013	15.4	0.8	1.6	26.4	0.8	10.2	16.2	18.0	6.8	3.8
2014	16.2	0.8	1.8	27.1	0.8	10.1	14.4	18.2	6.3	4.3
2015	15.9	1.0	1.8	18.2	0.8	10.6	15.4	23.0	7.1	6.1
Max	16.3	1.5	3.2	31.9	2.5	11.2	20	28.6	7.5	6.1
Min	10.9	0.7	1.6	14.3	0.8	8.7	14.4	16.4	5.5	1.6

Source: Calculated by the Central Bank of Jordan, the monthly newsletter.

Table 5

The Index Number of the Imports by Commodity According to S.I.T.C.

Year	Total	Food and live animal	Beverages and tobacco	Crude materials	Mineral fuels, lubricants	Animals vegetables and fats	Chemicals	Manufactured goods by material	Machinery and transportation	Misc. manufactured	Other
2000	100	100	100	100	100	100	100	100	100	100	100
2001	106.0	98.9	99.9	102.2	97.4	98.0	108.5	135.0	100.8	113.4	74.6
2002	110.4	100.1	132.0	102.4	106.2	146.7	115.1	139.7	95.6	136.7	101.7
2003	124.9	119.0	179.1	95.2	130.0	181.4	127.4	162.6	98.9	136.9	151.1
2004	177.9	143.7	199.5	109.7	218.2	368.6	162.3	235.4	141.3	209.3	199.6
2005	228.4	153.1	253.8	117.6	336.8	272.4	187.3	275.7	200.8	294.1	209.8
2006	251.2	175.1	271.3	130.9	379.9	228.5	203.0	311.1	214.8	328.1	192.9
2007	298.3	249.5	279.6	151.9	404.1	204.5	256.5	353.7	269.9	365.2	221.3
2008	370.0	327.3	287.8	207.7	513.5	443.5	334.1	438.9	305.0	439.6	288.3
2009	310.1	281.0	311.0	164.8	354.8	295.2	306.3	354.7	284.0	417.9	225.1
2010	339.0	317.3	305.2	189.6	479.8	226.9	350.1	377.7	267.9	428.5	204.5
2011	412.4	388.7	311.0	236.5	770.7	361.2	408.0	414.9	259.1	479.7	239.0
2012	452.0	429.4	307.8	239.8	922.3	353.8	436.1	440.5	259.7	500.8	282.2
2013	480.7	454.3	392.3	246.7	812.7	320.9	455.8	513.0	303.1	586.6	678.2
2014	499.5	496.5	409.2	285.8	867.6	320.2	470.3	476.1	318.3	563.6	786.4
2015	442.9	432.6	435.9	248.2	516.8	290.7	439.3	451.0	357.1	565.0	1,000.1

Source: Calculated by the Central Bank of Jordan, the monthly newsletter.

Table 6

The Structure of the Jordanian Domestic Export (% of the Total of the Year Export)

Year	Food and live animal	Beverages and tobacco	Crude materials	Mineral fuels, lubricants	Animals vegetables and fats	Chemicals	Manufactured goods by material	Machinery and transportation	Misc. manufactured	Other
2001	10.0	1.7	18.5	0.0	3.2	25.5	12.5	9.1	19.5	0.0
2002	9.1	1.9	16.2	0.0	4.4	25.2	10.3	6.5	26.5	0.0
2003	9.4	2.7	15.4	0.3	2.5	23.3	7.9	4.6	33.9	0.1
2004	8.7	1.8	13.4	0.7	4.9	21.8	6.9	4.5	36.5	0.9
2005	10.7	1.9	13.6	0.2	2.8	22.4	7.5	4.9	36.0	0.0
2006	11.0	2.3	12.1	1.0	2.1	21.4	7.4	5.4	37.2	0.2
2007	12.7	2.1	13.7	0.8	0.5	24.1	8.4	5.4	32.2	0.1
2008	11.4	1.7	22.3	0.8	0.4	28.1	9.2	5.3	20.5	0.2
2009	14.3	1.7	17.8	0.6	0.2	24.6	11.3	5.7	21.6	2.3
2010	14.7	1.5	18.8	1.1	0.2	26.0	10.7	5.5	19.5	2.1
2011	15.2	1.1	23.7	0.2	0.2	22.9	9.4	5.4	19.0	3.0
2012	16.6	1.3	20.8	0.3	0.3	24.2	9.1	4.7	20.6	2.1
2013	18.6	1.5	15.7	0.2	0.2	25.9	10.0	5.5	22.3	0.2
2014	18.7	1.6	16.1	0.2	0.2	25.4	9.5	4.8	23.7	0.0
2015	19.2	1.6	18.0	0.1	0.1	21.6	9.0	4.2	26.1	0.0
Max	19.2	2.7	23.7	1.1	4.9	28.1	12.5	9.1	37.2	3
Min	8.7	1.1	12.1	0.0	0.1	21.4	6.9	4.2	19	0.0

Source: Calculated by the Central Bank of Jordan, the monthly newsletter.

Table 7

The Index Number of Domestic Exports by Commodity According to S.I.T.C.

Year	Food and live animal	Beverages and tobacco	Crude materials	Mineral fuels, lubricants	Animals vegetables and fats	Chemicals	Manufactured goods by material	Machinery and transportation	Misc. manufactured	Other
2000	100	100	100	100	100	100	100	100	100	100
2001	116.4	264.9	100.3	150.5	95.5	99.4	148.6	177.4	201.0	0.8
2002	121.4	352.4	101.2	100.0	151.6	112.9	140.6	146.1	313.4	26.3
2003	134.5	520.8	103.7	4,659.6	93.4	112.2	116.4	111.3	431.6	1,645.9
2004	172.5	482.3	124.4	15,893.9	252.5	144.7	139.5	148.8	639.6	15,546.6
2005	236.2	556.7	140.5	4,703.0	161.5	165.8	168.8	183.6	703.8	27.1
2006	277.1	768.0	141.9	30,090.9	137.6	180.1	191.8	226.8	828.0	4,782.0
2007	347.1	796.1	174.6	26,613.1	35.9	220.8	235.5	247.5	779.2	2,418.8
2008	435.7	884.3	396.3	34,671.7	40.5	358.8	360.6	340.8	689.9	6,680.5
2009	440.8	711.3	254.9	20,288.9	13.7	253.2	356.4	293.9	587.7	62,439.1
2010	533.8	727.4	317.2	46,464.6	17.5	315.9	396.7	332.3	626.3	65,506.8
2011	626.8	604.4	456.7	10,976.8	26.8	316.7	395.7	375.6	693.2	106,782.0
2012	675.7	700.5	396.2	13,721.2	32.7	330.7	381.5	323.9	744.9	76,207.5
2013	767.3	846.4	302.2	7,724.2	25.4	358.8	421.7	378.7	813.6	7,443.6
2014	830.5	939.7	333.0	8,740.4	17.7	378.1	429.7	354.4	929.2	318.0
2015	790.4	915.7	345.7	5,860.6	10.2	298.9	379.5	289.4	953.2	1,007.5

Source: Calculated by the Central Bank of Jordan, the monthly newsletter.

The Impact of the Crisis on Trade With Syria

To analyze the impact of the Syrian crisis on Jordan's external trade multiple regressions is used with dummy variable to evaluate the Syrian crisis. Table 8 presents the results of multiple regression analysis, which includes the values of F, and it is the level of significance to the analysis of the validity of the model used to measure the relationship between the independent and dependent variable, if the value of F is statistically significant, it means that the model is fit to measure the linear relationship between the independent and dependent variables. R^2 , measures the proportion of dependent variables that are explained by the independent variables used in the model.

The table also presents the parameters β of variables dependent, the values of t , and correspondent level of significance of each parameter. If the value of t is statistically significant at the level 0.05, this means that there is impact of the independent variable on the dependent variable and the value of the influence of the independent variable on the dependent variable equals to the value β , which is an increase or decrease of one unit of the independent variable causing increase or decrease in the dependent variables depending on the sign of the β , but if it is not statistically significant at a moral level 0.05, it means that the independent variable has no effect on the dependent variable.

The values of F and the level of statistical significance which is less than 0.05 indicate that the model is valid and suitable to measure the relationship between the independent variables of time and the Syrian crisis and the dependent variables.

The value of R^2 , which is equal to 0.794, means that the model explains 79.4% of dependent variable in the case of import, all the values of R^2 are above 0.61 that is the time and Syrian crisis explains more than 61% of the change in the Jordanian external trade.

Table 8

Results of the Regression Analysis of the Impact of the Syrian Crisis on Jordanian External Trade

Dependent var.	Independent var.	B	T-value	Sig.	R^2	F	Sig.
Import	Constant	645,187.2	26.46	0	0.794	243.49	0
	Time	4,683.565	8.35	0			
	Variable dummy	131,587.8	3.18	0.0019			
Total export	Constant	288,726.9	25.7	0	0.612	100.23	0
	Time	1,962.073	7.59	0			
	Variable dummy	-8,977.49	-0.47	0.6383			
Re-export	Constant	61,298.66	14.37	0	0.03	2.95	0.046
	Time	235.4203	2.4	0.018			
	Variable dummy	-16,371	-2.26	0.0254			
Domestic	Constant	227,428.2	25.46	0	0.704	151.01	0
	Time	1,726.653	8.4	0			
	Variable dummy	7,393.539	0.49	0.6264			
Trade balance	Constant	-356,460	-17.34	0	0.732	173.18	0
	Time	-2,721.49	-5.75	0			
	Variable dummy	-140,565	-4.03	0.0001			

The value β of the variable time and dummy variable, which reflects the impact of the Syrian crisis on import, is 4,683.565 and 131,587.8 respectively and value t , which is 8.35 and 3.18 with level of significance less than 0.05 indicates that there is impact of the Syrian crisis on imports of Jordan.

The value of t of coefficient β of dummy variables that represents the Syrian crisis is -0.47 which is insignificantly greater than 0.05 indicates that the crisis has no impact on the total export.

According to values β of the time and dummy variable, which reflect the impact of the Syrian crisis on the re-export of Jordan and equal to 235.4203 and -16.37 and values t which amount to 2.4 and -2.26 and its level of significance less than 0.05, it shows that there is impact of the Syrian crisis on the re-export exported from Jordan, and that the amount of this influence of -16.37, in other words the Syrian crisis has negative impact on the Jordanian re-export, and the Syrian crisis has led to a decrease of the re-exports of Jordan this may be due to the closure of Syrian-Jordanian Free Trade Zone.

For the domestic export the values β of the dummy variable, which reflect the impact of the Syrian crisis are 7,393.539 and value t , which is 0.49 with level of significance of the value of t greater than 0.05 mean that there is no impact of the Syrian crisis on Jordan's domestic exports.

The values β of the dummy variable, which reflect the impact of the Syrian crisis on the trade balance and are equal to -140.565 and value of t equal to -4.03 which is significant at 0.05, lead to concluding that there is impact of the Syrian crisis on Jordan's trade balance, and Syrian crisis negative impact on the Jordanian trade balance which increase the deficit in Jordan's balance of trade.

Results and Recommendations

This study is an analytical study of indicators and Jordanian foreign trade and the impact of the Syrian crisis on the trade variables, and the impact on the Jordanian trade has focused on two types of impact of the first effect by increasing imports to cover the resulting demand for the presence of about two million Syrian-Jordanian territory on the one hand and on the other hand road interruption through Syria to Jordan, which led to an increase in the prices of Jordanian imports also disrupted trade between Jordan and Syria, and had an impact on overall exports of goods and re-exported.

And there has been among the gradient of the impact of the Syrian crisis analysis that there is a significant impact on imports of Jordan and the Jordanian trade balance and the analysis did not show the impact of a moral Jordanian national exports, we note that there is a development in the bilateral trade between Jordan and Syria, and that this trade does not generally stop after a significant improvement in the trade between the two countries before the crisis.

On the other hand, the analysis showed that some Jordanian imports prices have raised sharply, especially chemicals and some strategic food commodities, as well as the amounts of these commodities due to the Syrian crisis, especially backed them and that has a direct impact on the Jordanian budget, which increases the burden on Jordan budget.

At the end of this research modest in the light of the findings of the van, there is an urgent need for further analysis on the level of commodities and commodity groups, as well as sectoral and macro-economic indicators.

There is also a great need for the government not to cooperate with international organizations and prepare plans and projects to meet the Syrian resort to Jordan and the Syrian and Jordanian economic crisis on the marketing of these projects and start to implement urgently.

References

Central Bank of Jordan. The monthly newsletter for the month of November 2015.

- Economic and Social Council. (2012). Economic and social impacts of the crisis of Syrian refugees on the Jordanian economy in 2011-2012.
- Ministry of industry and trade. (2017). Jordanian Syrian trade agreements.
- Ministry of Planning and International Cooperation and United Nations. (2013). Needs assessment review of the impact of the Syrian crisis on Jordan
- Ministry of Planning and International Cooperation and United Nations. (2014). Needs assessment review of the impact of the Syria crisis on Jordan.
- Ministry of Planning and International Cooperation and United Nations. (2015). Syria crisis-related needs and vulnerabilities in Jordan.
- Ministry of Planning and International Cooperation and United Nations. (2016). Needs assessment review of the impact of the Syria crisis on Jordan.