I reviewed the paper. This is a good paper subject to some revision. I have found a number of typos which I amended directly on the attached docusing track changes. (I could not use comments as the write comes from right to left like in Arabic). In the results section, the English is so bad that I could not make sense of the writing. I believe that this was written by a different person - the English in the review and comclusion was much better. I have highlighted in yellow the sentences or paragraphs that need rewording. Out of respect for ESJ readers, I highly recommend that this paper is not accepted unless these changes are made and that the paper is checked prior to publication. Also: - be consistent in use of % or percent (or per cent) - check whhole doc - avoid the term investigates successfully - why successfully? so if there were no significant findings, the investigation would be unsuccessful? this is a serious methodological flaw - The first sentence in the conclusion should either be removed or placed after the 1st sentence if necessary. - the term 'no serial correlation, normal distribution'.. is meaningless. Perhaps 'no serial autocorrelation' would make more sense. I believe that if the English is improved in the results section, this paper has the right qualities for publication in ESJ.

The Impact of Trade Account Deficit on Unemployment Scenario: An Empirical Study on Jordan during the period 2000-2012

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Abstract

This paper investigates successfully short-term causal relationship between unemployment and the volume of the trade deficit on Jordan for the period 01/2000-02/2012. This study provides evidence on the absence of a long-term relationship between the two variables. We use Granger causality test and propose an Augmented Dickey-Fuller (ADF) coefficient test for detecting the presence of a unit root in the model. The results show that trade account deficit causes unemployment, and unemployment causes the trade account deficit in the short run. This indicates that trade liberalization is also able to increase imports, decrease aggregate productivity

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in the differentiated sectors, and create inefficiency on economic performance; which will simultaneous decrease employment opportunities for Jordan's labour force. Trade account can be also become an additional negative effects of increasing Jordanian's unemployment scenario in future.

Key Words: Unemployment, Trade account, ADF test, and Unit root test.

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1. Introduction

Jordan has one of the highest rates of human development at the Arab level in terms of the high level of education and health, none the less it faces a growing unemployment problem affecting young people in particular. Social official figures show that unemployment in Jordan range from about 13% rate and appear likely to worsen due to the presence of more than a million and a quarter million citizens between the age of ten and nineteen; which threatens both the socioeconomic and sociopolitical environment.

Economists attribute the existence of deflationary gaps and the accompanying unemployment rates above the normal in Jordan to internal and external reasons. Internally, the behavioral patterns that lead young people to abstain from work in certain professions; in addition to the structural imbalances in the labor markets is one of the causes of unemployment. On the external level, the economic recession inherent political instability over the last three decades, in addition to migrations commodes from neighboring Arab countries such as Iraq and Syria (Arouri, 2008).

Another tension began to emerge in the Jordanian economy, a trade balance deficit side by side with low volume of exports all reflected on important economic indicators in Jordan, and most notably the issue of unemployment. Between 1990 and 2000, Jordan has recorded unstable trade balance and this happened because of global economic crisis, such as financial crisis in 1997. Consequently chronic deficit in the balance of trade for Jordan reached 822.2 million Jordanian dinars in 1990, and then continued to rise up to 5105 million dinars in 2007 (Momani, 1995).

Flowing closely, the contraction in trade account due to economic crisis continued to grow, as shown in Figure (1). This has generated a large volume of both theoretical and empirical literature. However, most of these studies paid more attention to developed countries (Moore and Ranjan, 2005; Porto, 2008; Felbermayr; Prat and Schmerer, 2011; Nanthakumar and Sukemi, 2011).

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Jordanian Trade Account Deficit (Million Dinars)

Figure (1)

Hence the dynamic integration between trade account and unemployment scenario has been a topical issue. Considering this background, identifying the reflection of unstable trade account growth rates on unemployment scenario in Jordan has become of great importance.

This paper will contribute significantly to the literature by providing new evidence on Granger causality relationship between trade account and unemployment in Jordan. We will use innovate causality test proposed by Granger; the causality test is considered an important statistical test which determines the direction of the relationship between economic variables, and allows to verify the direction of the relationship between the variables of time-series models (Gujarati, 2003). The purpose of this technique is to evaluate the relative importance of trade account and inflation variables in the movements of unemployment.

In contrast with the previous individual-country level researches, this paper is one of the rare studies addressing the asymmetrical integration between trade account and unemployment dynamics for Jordan using Granger causality test analysis, the multivariate cointegration test, the error correction procedure, and the impulse response analysis. Our sample will cover the quarterly data from 2000 to 2012. The rest of the paper is organized as follows: section 2 covers the theoretical framework, section 3 contains the related empirical evidence, section 4 deals with data and method, section 5 presents the results and discussion while section 6 contains the concluding remarks.

2. Theoretical Framework

This study will focus on testing and interpreting trade accounting and the phenomenon of unemployment in Jordan using a standard model based on macro-economic theories. Specifically, the Okun law linking the rate of real economic growth and the unemployment rate, and the main prediction for this important law that increased growth rates in real production will reduce the unemployment rate by a factor of sensitivity is equal to half. For example, an economic growth rate of 6 per cent per annum will reduce the unemployment rate of 3 percent per annum. On the other hand, Phillips Curve theory linking unemployment and inflation rates and includes an opposite relationship existing between the two in the short term. The significance of this relationship has implications with regard to options and the effectiveness of macroeconomic policies adopted in Jordan.

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3. Related Empirical Evidence

The role of trade liberalization in macroeconomic dynamics -specifically after 1970s- has generated large volumes of empirical studies with mixed findings using cross sectional, time series and panel data. Most of the global studies focused on trade liberalization, trade openness and the effects of globalization on labor market stability, while the local studies dealt only with the problem of unemployment. Few of the studies are selected for review as follows: Krugman (1981) and Melitz (2003) assumed homogeneous workers and full employment, and thus predict that all workers win from trade liberalization. Meanwhile, Shapiro and Stiglitz's (1984) linked product market mixing to labor market churning. It showed that workers care about their jobs because the model features aggregate unemployment and jobs that pay different wages to identical workers. Simulations show that, for reasonable parameter values, as many as one-fourth of existing 'good jobs' may be destroyed via liberalization.

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Papageorgiou, Choksi and Michaely (1990) studied the benefits of trade liberalization on unemployment in 19 countries. The finding showed that trade liberalization did not raise unemployment in manufacturing sectors of the economy.

Dollar and Collier (2001) recognized a significant transitional correlation between trade liberalization, skill premium and wage inequality. Moore and Ranjan (2005) by using a cross sectional data, concluded that the effect of trade on overall unemployment scenario is ambiguous. Dutt et al. (2009) investigated the effect of trade on unemployment and presented a model of trade and search induced unemployment, where trade resulted from Heckscher-Ohlin (H-O) and Ricardian comparative advantage. Using cross country data over the period 1990-2000 on trade policy, unemployment, and various controls while controlling for endogeneity and measurement error problems, this study found a strong evidence for the Ricardian prediction that unemployment and trade openness are negatively related. This effect dominated the positive H-O effect of trade openness on unemployment for capital abundant countries, which turns negative for labor-abundant countries.

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Bjornstad and Skjerpen (2006) studied the relationship between trade and inequality in wages and unemployment in Norway. The motivation for this study is increased globalization has shifted demand towards skilled labor at the expense of unskilled labor in developed countries. By using a large macro econometric model with heterogeneous labor, this study showed that the downward pressure on import prices has increased skill mismatch and somewhat surprisingly decreased wage differentials.

Menezes-Filho and Muendler (2007) found that, Brazil's trade liberalization 1990s led to the displacement of formally employed workers from protected industries and that comparative advantage industries did not absorb trade displaced workers in full and this indicated that trade liberalization was associated with transitions to unemployment cases in Brazil.

Besides that, Porto (2008) examined the links between trade liberalization and unemployment in Argentina. The findings of this study showed that, an increased in agro-manufactured export product lead to both lower unemployment rate and increase labor market participation rate; and wages also increase given an increase in export prices.

Hasan et al. (2011) investigated the relationship between trade liberalization and unemployment in India. The results showed that no evidence of any unemployment increasing effects of trade reforms. The state level analysis revealed that urban

unemployment declined with liberalization in states with flexible labor markets and larger employment shares in net exporter industries. Moreover, the industry level analysis indicated that workers in industries experiencing greater reductions in trade protection were less likely to become unemployed, especially in net export industries. The empirical results provided support for trade liberalization along with complementary reforms in domestic policies.

Felbermayr, Prat and Schmerer (2011) observed the relation between trade and unemployment for the 20 rich OECD countries. This study used panel data and pure cross-sectional data on a larger set of countries. The time structure of the panel data allowed controlling for unobserved heterogeneity, whereas cross-sectional data made it possible to instrument openness by its geographical component. In both setups, the data of business cycle effects include a host of institutional and geographical variables, and control within the countries trade. The main finding established an empirical regularity, where trade openness does not increase structural unemployment in the long run. That mean is robust to various definitions of unemployment rates and openness measures. The benchmark specification suggested that a 10% point increase in total trade openness reduced aggregate unemployment by about three quarters of one percentage point.

Al-Dairi (2004) linked inflation with unemployment in Jordan. It used cross country data over the period 1967-2001. The empirical results provided support for a strong positive relation. Arouri (2007) observed the problem of unemployment in Jordan, and discussed whether foreign direct investment flow helps in solving the problem of unemployment in Jordan. The empirical results indicated no existence of contributing foreign direct investment flows to the reduction of unemployment in Jordan, due in part to being capital-intensive investments and relying on foreign labor significantly.

Finally, Awad (2011) studied unemployment issue in Jordan over the period 1977-2010. This study included an important result that to return unemployment rates in Jordan from the current level (14%) to normal level (4%) requires real economic growth rate of 25%. This showed how difficult it is to achieve this goal.

Most of previous studies focused on trade openness which is measured using empirical formation of import plus with export relative to nominal gross domestic

product (Dinopoulos and Thompson, 2000; Alcalá and Ciccone, 2004). Although the trade openness measure reflect the actual exposure of an economy and easily measurable; but it does not indicate the real effect of trade stability of a nation. Therefore, in this study we employ the volume of trade account to ensure the effects of trade stability can be measured collectively.

The main objective of this paper is to test for the direction of causality between trade account and unemployment in the case of Jordan. This paper will be able to contribute significantly to the literature by providing new evidence on Granger causality relationship between trade account and unemployment in Jordan. We used innovate 'causality test' proposed by Granger (1969) to test the direction between the two variables. In this relation, the focus of this study is to investigate both the long run and short run relationship between trade account and unemployment in Jordan over the period from 01/2000 to 02/2012. Figure 2 shows unemployment rates among Jordanian labor force according to gender.

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Moreover, the study examines Granger causality between trade account and unemployment. It uses commodity terms of trade and income terms of trade. The Dickey and Fuller (1979) unit root test statistic is used to examine the stationarity of the data. The Johansen (1991) cointegration method is used to examine the long-run relationship between trade balance and unemployment. The impulse response analysis is used to show the impact of the shock trading balance.

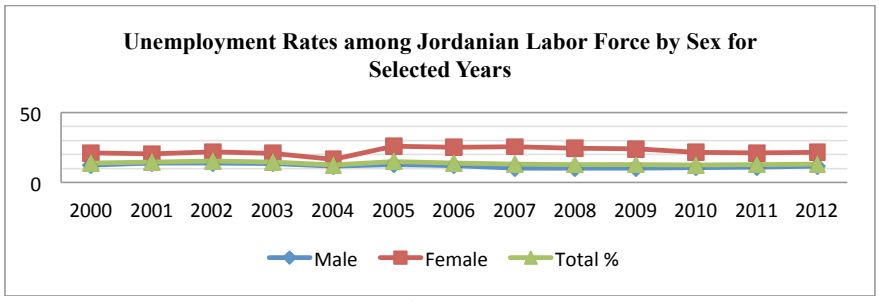

Figure (2)

Unemployment Rate

Source: Data unemployment in Jordan, various surveys, the Department of Statistics.

4. Data and Method

4.1 Data

The data used for this study are basically time series covering 2000 – 2012. The data were sourced from Central Bank of Jordan (CBJ) and Department of Statistics (DOS).

4.2 Model Specification

The econometric technique employed in this study is a multivariate cointegration and error correction procedure with the hypothesis that unemployed labor is a function of trade balance. Based on the theoretical arguments presented in the literature, the relationship between trade balance and unemployment can be specified as follows:

$$UE_t = f(TB_t) \quad \ldots\ldots 1$$

Where 'UE' is logarithmic value of unemployed labor in Jordan and 'TB' refers to logarithmic of trade balance volume for Jordan. Data for variables of interest were converted into natural logarithms so that they can be interpreted in growth terms after taking the first different.

Before conducting causality test, we begin our estimation by performing the unit root analysis using Augmented Dickey-Fuller (ADF) test. This is important to avoid the spurious regression and random walk problems, stationary tests will be conducted for each variable to ensure they are stationary. The simplest version of the model to be analyzed is the random walk as shown in equation (2):

$$y_t = \gamma y_{t-1} + \varepsilon_t \qquad \text{where } \varepsilon_t \sim N[0, \sigma^2] \quad \ldots\ldots 2$$

Where, 'γ' symbol denotes time trend,'y' is the variable in estimation procedure,'ε' represents the distributed random error term with zero value of mean and constant variance.

The standard Dickey-Fuller test is conducted by estimating the following regression equation:

$$\Delta y_t = \alpha + \beta_t + \delta y_{t-1} + \varepsilon_t \quad \ldots\ldots 3$$

Where Δ is the differencing operator, 'y' represents the variables to be estimated (i.e. $LRUE_t$, LTB_t), is constant, 'β' is the trend coefficient, and 'ε' is the white noise residual of zero mean and constant variance and t is the time or trend variable.

The null and alternative hypotheses may be written as follows:

$$H_0 : \delta = 0$$
$$Ha : \delta \prec 0 \quad \text{.....4a}$$

Accepting the null implies there is a unit root (the series is non-stationary) where as rejecting the null implies Y_t is a stationary time series.

According to Rao (1994) the problem associated with the simple Dickey-Fuller unit root could be avoided by running the ADF test, which is derived from the regression equation:

$$\Delta y_t = \alpha + \beta_t + \delta y_{t-1} + \sum_{i=1}^{m} \gamma_i \Delta y_{t-1} + \varepsilon_t \text{.....4b}$$

Where Δy_{t-1} is equal to $(y_{t-1} - y_{t-2})$, and 'm' is the maximum lag length on the dependent variable to ensure that 'ε' is the stationary random error.

The null hypothesis of a unit root is rejected if the t-statistic associated with the estimated coefficients exceeds the critical values of the test. The ADF specification accounts for possible autocorrelation in the error process 'ε' through the lagged dependent variable on the right hand side. The practical rule for establishing the value of m (i.e. the number of lags) is that it should be relatively small in order to save degrees of freedom, but sufficient to remove serial correlation in the residuals. The weakness in this test is that the power of the test may be adversely affected by miss-specifying the lag length (Rao, 1994).

The next step is to find out whether the variables share a common stochastic trend, i.e. to test whether two or more variables are cointegrated. Cointegration can be regarded as the empirical counterpart of the theoretical notion of a long run relationship among the variables. In other words, a cointegration of two or more variables suggests that there is a long run, or equilibrium relationship between the variables (Rao, 1994).

Cointegration technique provides a means of identifying and hence avoiding spurious regressions generated by non-stationary series. When variables are cointegrated, the OLS estimates from the cointegrating regression will be super-consistent.

After that we seek in this study to determine the long run relationship between trade balance deficit and unemployment, the Johansen (1991) multivariate cointegration test will be employed, which involves three steps[(1)]. The Johansen procedure not only determines the number of cointegrating vectors but also provides estimates of the vectors. For the purpose of testing the number of cointegrating vectors, Johansen and Juselius (1988, 1990) propose the use of two likelihood ratio test statistics namely, the trace test and the maximum eigenvalues test.

The trace statistic for the null hypothesis of r cointegrating relations is computed as follows:

$$\tau_{trace}(r) = -T\sum_{i=1}^{m}\log\left[1-\lambda_t\right] \quad \ldots\ldots 5a$$

The maximum eigenvalue static tests the null hypothesis of r cointegrating relations against r+1 cointegrating relations and is computed as follows:

$$\tau_{\max}(r, r+1) = -T\log\left(1-\lambda_{r+1}\right) \quad \ldots\ldots 5b$$

If variables are cointegrated, an error correction model exists. Error Correction Model 'ECM' combines both the short run dynamics and long run properties and at the same time eludes the 'spurious regression' problem.

The VECM can be expressed as follows:

$$DLR\mathrm{UE}_t = \alpha_0 + \sum_{i=1}^{a}\alpha_1 DLR\mathrm{UE}_{t-i} + \sum_{i=1}^{b}\alpha_2 DLR\mathrm{TB}_t + \gamma Z_{yt-1} + \varepsilon_t \quad \ldots\ldots 6a$$

$$DLR\mathrm{TB}_t = \beta_0 + \sum_{i=1}^{m}\beta_1 DLR\mathrm{TB}_{t-i} + \sum_{i=1}^{n}\alpha_2 DLR\mathrm{UE}_t + \gamma Z_{xt-1} + \varepsilon_t \quad \ldots\ldots 6b$$

Where, Z_{yt-1} and Z_{xt-1} represent the error terms lagged by one period for the real trade balance and unemployment equations, respectively. The coefficient 'γ' measures the

(1) For an intuitive insight into the Johansen method, refer to: Johansen, S. (1988). Statistical Analysis of Cointegration Vectors. Journal of Economic Dynamics and Control, 12(2), 231–254.

long run equilibrium relationship, while 'α' and 'β' measure the short run causal relation.

5. Results

This study examines the degree of integration of the variables and test Augmented Dickey Fuller (1981) for the statement whether variables are stationary or not. This test is performed at the level, the first difference and the second difference with intercept together with a constant and trend. Results of ADF test are presented in Table (1), which shows the fact that all the variables appear to be integrated in an order of zero (i.e. I(0)). Accordingly, the results of unit root tests show that the variables are not able to reject the null hypothesis at their levels. After applying the first differencing, only 'UE' was able to reject the null hypothesis.

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Table 1: Augmented Dickey Fuller test (variables logarithm)

	Variables	Model	ADF	lags
		Augmented Dickey Fuller test for levels		
Trade account	TB	With a constant and without a trend	-2.832*	1
Unemployment	UE	constant and a trend	-6.898***	2
	Δ	**Augmented Dickey Fuller test for First Difference**		
Trade account	TB	With a constant and without a trend	6.900***	0
Unemployment	UE	With a constant and without a trend	14.340***	1

Note : (*), (**), (***) indicate the rejection of null hypotheses in a level of 10 %, 5 % and 1 % respectively.

The next procedure is to test for cointegration. The Johansen procedure (1988, 1995) was used for detecting the number of cointegrating vectors. Since Johansen method is sensitive for autocorrelation in residuals, it will be determined by the appropriate lag lengths to estimate a model that is not suffering from autocorrelation problem. Schwarz criterion (1978) is used to determine the lag length periods (lagged one period), and then testing autocorrelation lengths for a specific lag [(2)]. For choosing the acceptable test of cointegration, we use Pantula (1989) principle for determining the cointegration rank. Results were estimated and presented in a statistical trace as shown in table (2), which shows that model (2) is the preferred model. Accordingly, the results of model (2) report that there is a cointegration between the variables.

Table 2: Cointegration Rank and Model Selection: Trace Statistics

[(2)] It is defined as $-2L_m + m\ln n$ where n is the sample size, L_m is the maximized log-likelihood of the model and m is the number of parameters in the model. The index takes into account both the statistical goodness of fit and the number of parameters that have to be estimated to achieve this particular degree of fit, by imposing a penalty for increasing the number of parameters.

	Model 2	Model 3	Model 4
	(Without Constant "Without trend") in CE and without Constant or trend in VAR	Constant in CE & VAR and without trend in CE and VAR	Constant in CE & VAR and a liner trend in VAR
R	*VAR Lag Order Selection Criteria: SIC (Lag 2)*		
0	**18.78(20.26)***	18.63(15.49)	33.00(25.87)
1	2.82(9.16)	2.75(3.84)	12.86(12.51)

Note :Figures in parentheses represent the critical value at the level of significance of 5%.
* Includes the first case we encounter, we cannot then reject the null hypotheses

Table (3) indicates that the statistical trace and maximal eigenvalue tests confirm these results. Since the variables are cointegrated, the vector error correction model (VECM) is used [(3)].

Table 3: Cointegration Test Results

Null Hypotheses	*The Optimal Lag*	*Statistical Test*	
		Trace Test	**Eigenvalues Test**
	2		
$r = 0$		18.78187	**15.95521***
$r \leq 1$		2.82666	2.82666

Table (4) specifies the results of the causality test, and the degree of significance for the error term of the dependent variable. It shows that the error term of the balance deficit - *as a dependent variable* – growth is insignificant at the 10% level, therefore the growth of unemployment does not cause the trade balance deficit over the long term. It also shows that error term of unemployment - *as a dependent variable* - growth is insignificant at 10%, implying that trade balance deficit does not cause long term unemployment.

Given the parameter lagged the growth of variables, it is possible to see short term relationship; coefficient lagged growth of the trade balance deficit showed statistically significant at the 1% level of significance in the growth of unemployment equation. The coefficient between the growth of unemployment in the growth equation trade balance deficit that is statistically significant at the 1% level of significance; implying that unemployment is important in influencing the growth of the trade balance deficit

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[(3)] For more details refer to Phillips, and Ouliaris, (1990). Asymptotic Properties of Residual Based Tests for Cointegration, Econometrica 58, 165-193.

in the short term. Also, trade balance deficit emerges as important in influencing the growth of unemployment in the short term.

Table 4: Results of Granger Causality in multivariate, Summary Statistics, 2000-2012

Dependent Variable	Trade Account Deficit Growth Lagged	Unemployment Growth Lagged	ECT
Trade account deficit growth	-	11.425***	-0.068
Unemployment growth	9.763***	-	0.264

(*), (**), (***) indicate the moral degree of 1% and 5% and 10% respectively.
Note: Numbers are the calculated value for statistical $\chi 2$

The Autocorrelation LM Test accepted the null hypothesis that there is no serial correlation, normal distribution, and the equation is stable during the study period, and this was confirmed by testing AR Roots Graph which displays five roots inside the circle indicating that the model was stable and meets the requirements for stability as shown in Figure (3), and therefore this model does not require any modification.

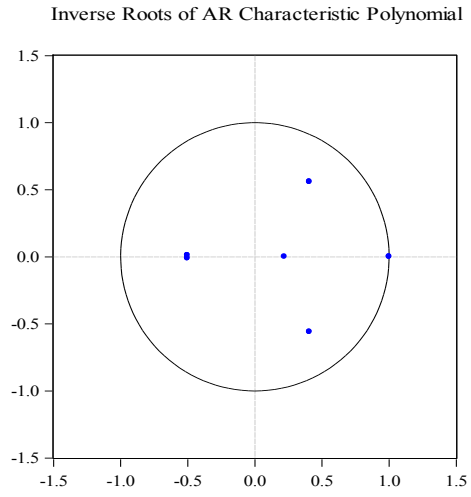

Figure (3)

To complete the study of the multivariate causality relationships, and to have a better understanding of the dynamics of relationships; especially how shocks are transited and how long it takes the end of the impact of trauma. Therefore, it is useful to examine the effects of shocks to sample system variables, to analyze the dynamic

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characteristics of the model when the relationship cointegration interactive relationship between variables using impulse response function and variance decomposition of the variables estimated in the model.

The response function shows paths of each variable response to a shock in the other, taken into account the short term adjustment to reach the long term balance of the dependent variable, and it provides a method of analyzing the components of variance information about how a response happened. And tracking response function affects shock variable one internal to the other variables in the model VAR, and separates analysis components contrast variations variable internal component shock model VAR, and thus provides analysis components contrast information about the relative importance of each shock random in influencing variables in the VAR.

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This study provides analysis of variance components explanatory power for the trade balance deficit and unemployment, and variance components were calculated along the 50 period to capture the effect of changing the trade balance deficit on unemployment and the trade balance. Table (5) as a result of analysis of variance components, where the second column contains the standard error (S.E) for a trading balance account expectations and unemployment forecast horizon, and the remaining columns show the percentages of the different trading balance as a result of unemployment variable.

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The sample in Table (5) shows trading balance twice the impact of unemployment on the value of the trade balance for 50 period and reached the highest contrast ratio 5.76%, while the trade balance can change the unemployment rates increased from 5.0275% the second period, to 28.97% after 8 periods and to 71.967% after 50 period.

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Table 5: Summary Statistics, 2000-2012

	Variance Decomposition of LTD		Variance Decomposition of LUN	
Period	S.E.	LUN	S.E.	LTD
1	0.081554	0	0.075193	5.028991
2	0.118059	0.375541	0.075246	5.027598
3	0.144822	4.178485	0.07854	4.614881
4	0.16155	4.546319	0.08213	8.828571
5	0.174841	5.764055	0.085175	15.03113

6	0.186896	5.500852	0.089058	22.25076
7	0.199119	5.34368	0.091911	26.08361
8	0.211447	5.081924	0.093988	28.9739
16	0.290397	4.902016	0.108974	45.88694
24	0.351768	4.822411	0.122433	56.17095
32	0.403921	4.779521	0.134555	62.91346
40	0.450072	4.75329	0.145671	67.67586
48	0.491912	4.735607	0.155997	71.21902
49	0.496894	4.733793	0.15724	71.59914
50	0.501827	4.732051	0.158474	71.96747

The next procedure is to use the impulse response analysis which estimates the impact of one variable interpretation on the dependent variable for several future periods, and in this study we study the impact of the shock trading balance on unemployment, apparently to increase standard deviation; such as increased change deficit current trade balance in subsequent periods through the model structure VAR, were obtained on the average response and contrast the trade balance deficit for 50 future period. The change order variables may alter the reactions, and economic logic in the order of variables is not unique, and can provide different interpretations when relocation variables, did not get reactions replacement order variables to see if the results change significantly or not.

Figure (4) shows a graph of impulse responses for the time intervals (the 50 for the period 2000Q1 to 2012Q2) for lags of 1 to 50. Figure 4 (a) graphs the impulse response for interval LTD against the impulse response values for interval LUN for lags of 1 to 50. Figure 4 (b) graphs impulse response values for interval LUN against the impulse response values for interval LTD for lags of 1 to 50.

The trading balance response to one unit pulse is equal to one standard deviation of the variable unemployment up to 50 periods. Figure (4) shows that unemployment in response to the shock trading account is significant after two periods, and it shows the impact of shock trading balance which is stabilized after the period 11. This means that the impact of unemployment is significant after two periods on the trade balance in Jordan, and that the impact of the shock trading balance is settled after period 11.

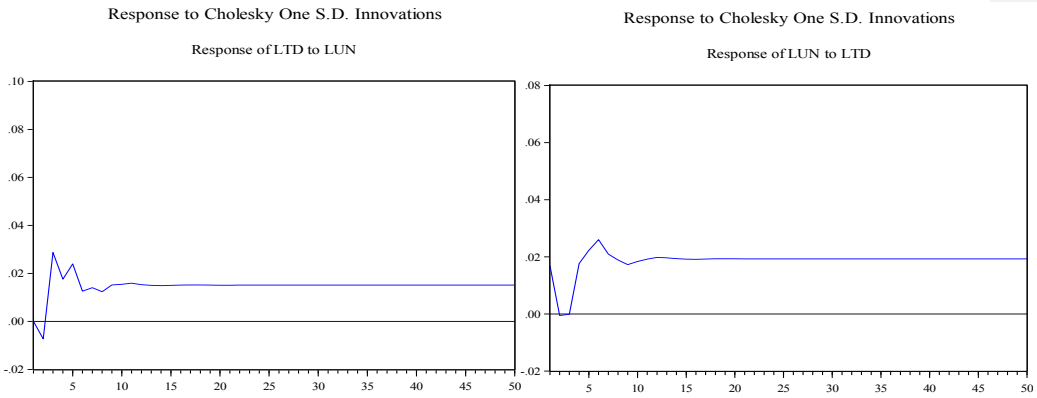

Figure (4)

6. Conclusion

The results indicated the absence of a long term relationship between the two variables. This study investigated the causal relationship between short-term unemployment and the volume of the trade deficit to Jordan for the period 01/2000-02/2012. The results indicate trade account deficit causes unemployment, and unemployment causes the trade account deficit in the short run. The causal relationship of increasing the trade deficit is able to increase unemployment in Jordan. This indicates that trade liberalization is also able to increase imports, decrease aggregate productivity in the differentiated sectors, and create inefficiency on economic performance; which will simultaneous decrease in term of employment opportunities for labor force in Jordan. Trade account can be also become an additional negative effects of increasing Jordanian's unemployment scenario in future.

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