

THE RELATIONSHIP BETWEEN EXCHANGE RATE, EXPORT AND VACANCY: LEBANON CASE

Noor ABDULGAFFAR

Kirkuk University

ABSTRACT

Globally differentiation of growth between countries, being in close economic relationships between countries today, and the differences in terms of development depend on some conditions. Some economies are seen as financial centres, some are seen as technology centres, and some are seen as having over production with low-cost production factors. It can be said that factors, which have certainly become important today, such as innovation policies, monetary policies, labour productivity and wealth of factor of production, differentiate the development between countries, within this direction, all economic activities can affect each other. In this study, firstly the effects of exchange rate on export and unemployment were addressed in terms of theoretical and political aspects. In the later chapters, the validity of these effects in terms of Lebanon was tested with Toda-Yamamoto causality analysis. As a result of the causality test, a bidirectional relationship between real effective exchange rate and export, a bidirectional relationship between the rate of unemployment and export were ascertained.

Key Words: Exchange Rate, the Rate of Unemployment, Export

7

MAIN BODY AND INTRODUCTION

Some economies are seen as financial centres, some are seen as technology centres, and some are seen as having over production with low-cost production factors. It can be said that factors, which have certainly become important today, such as innovation policies, monetary policies, labour productivity and wealth of factor of production, differentiate the development between countries, within this direction, all economic activities can affect each other.

One of the most basic factors in the global competitive power is to increase the quality of human capital and bring it a science-technology innovation-oriented quality. Labour force turns into qualified labour force that would realize qualified production, and its contribution would be demanded in every field of business process. Therefore, qualified production (product) has become a function of qualified labour force. Hence, skilled labour force has come to fore for technological progress and production of differentiated technology. The increase in the qualified labour force opens doors to countries for an efficient and sustainable growth. In recent years, Lebanese economy takes important steps, even at a lower level than global developed economies, on the road to technological development in order to join global competitiveness. As a result, the importance of trained labour force in Lebanese economy

increases and the rates of unemployment tend to increase in recent years with the effect of the growing population because the majority of population is not under this category.

The most important claim in terms of floating exchange rate regime is that it allows for the usage of monetary policies for different goals. The only aim of monetary policy under fixed exchange rate regime is to fulfil the commitment regarding the fixed rate. However, exchange rate is only one of the macro economic variables that affect monetary policy. Floating exchange rate regime makes thing easier for policy makers within the direction of other goals such as employment and price stability.

1990s witnessed cases that remind how fixed exchange rate regime would be potentially destructive. As a result, collapsed fixed rate system gave its place to floating regimes in order to prevent further disruptions. One of the reasons of reaching the stability that began in December 1999 and establishment of an exit mechanism for reform programme is the necessity of alienation from soft peg (adjustable exchange rate). On the other hand, as a result of the unresolved problems of banking sector, as corrective fiscal measures could not be taken and current accounts and political difficulties increased, crawling peg failed. Consequently, the exchange rate in Lebanon was pushed to float in February 2001. Most of the developing countries can take lessons from crises.

For the proper evaluation of employment in the developing countries, there are three indicators that should be taken into consideration: the share of registered employment in total employment, the rate of production and unemployment per worker in the informal employment. As is known, the lower unemployment rate is, the better employment situation is. With reference to this information, the relationship between export and exchange rate was analysed in the analysis made for Lebanon by including the variable of unemployment rate.

From this point of view, by analysing the relationship between the variables of real effective exchange rate, unemployment rate and export for Lebanon in the study, obtained results were interpreted theoretically. Variables used in the analysis were obtained from The Central Bank of the Republic of Lebanon. Variables consist of monthly data and cover the 2010:1-2017:3 periods. The stationarity of variables is a prerequisite for obtaining correct results in time series analysis. The variable of unemployment rate was cleared of seasonality and determined as stationary without the need for differentiation as intercept and trend as a result of the unit root test. Nonstationary real effective exchange rate became stationary by taking its first difference and the variable of export was determined as stationary at level. Because of the variables that were determined as stationary at different grades, analysis was made with Toda-Yamamoto causality tests in order to reach correct results.

2. THE THEORETICALLY AND POLITICALLY EVALUATION OF THE EFFECT OF THE CHANGE IN EXCHANGE RATE ON ECONOMY

The value of a country's currency vs. that of another country is defined as the exchange rate. Exchange rate affects economy and our daily lives. While the appreciation of a country's currency makes difficult for domestic sellers to sell their products in abroad, it increases the competitiveness of foreign products in country. Because the prices of foreign products would become much easier. Hence, the exchange rate policies to be applied in Lebanon affect firstly export and import. Therefore, the policies of exchange rate can be made for economic goals such as price stability and balance of payments. Making a policy over

exchange rate such as revaluation and devaluation is made to secure the export and import goals of country and balance of payment. However, within the direction of changes in exchange rate, every parameter in the economic structure of a country can be affected; the changes in employment or the rates of unemployment may be among these effects even though the same results are not valid for every country.

For the competitiveness of countries at global scale, cost minimisation has become important. Today, Chinese economy's having an important share in production at global scale is attributed to the cheapness of production factors (especially labour factor). On the other hand, developed countries try to increase their efficiency with innovation policies, new technology research and developing technologies. With the increase in efficiency, more production is made with the same production factors and costs decreases. In developing economies like Lebanon, the situation is a little bit different, they keep the real exchange rate high to import technology in a cheaper way because of being foreign-dependent in terms of technology. Hence, labour factor is met with higher costs in economies which have a currency with higher value. In other words, the production structure of a country changes and effects on the unemployment can be seen with the increase in real rates in some foreign-dependent developing economies.

With reference to basic macroeconomics, an increase in the exchange rate causes the decrease in total demand by decreasing export. Hence, it is known that there would be a surplus and companies would decide reducing production in response to that, and economy would balance again in the given economies. Within this period, reducing production by companies may result in consequences like employment termination. Such a consequence is not desired in favour of economy (the decrease in the consumption costs with the termination of employment would reduce further the total demand), i. e. the stability in the economy would deteriorate.

In the study, carried out by Kassem for Lebanon, the relationship between exchange rate volatility, foreign trade and employment was analysed by using the monthly data between 2005 January and 2014 February periods. The stationary grades of variables were found as different, therefore; the co-integration relationship was analysed with the bound testing approach, developed by Pesaran et al. (2011). In all analysed models, co-integration relationship between variables was found, Autoregressive Distributed Lags (ARDL) model was used to determine the short-term and long-term period relationships. As a result of the study, it was found out that exchange rate volatility and real exchange rate affect negatively the export and exchange rate volatility affects negatively the employment in Lebanon. However, the relationship between exchange rate volatility and employment was found statistically insignificant.

Tze-Wei Fun and Monli Lin (2012) analysed the change in Chinese exchange rate regime during 2001-2009 periods after the adoption of both stable and floating exchange rates and discussed whether the interest rate and unemployment rate have an effect on exchange rate. Findings obtained in the study show that the unemployment rate plays a significant role in Chinese exchange rate regime.

Hashem analysed the effect of real exchange rate volatility of Lebanon on the export to USA, Germany, France and Italy. In the study, he chose the 1991:1-2000:12 period in order

to minimize the effect of changes in exchange rate policies of Lebanon. Findings obtained in the study show that real exchange rate volatility has a significantly negative effect on export.

In the study regarding Chinese economy, carried out by Xiangqian and Guoqiang (2005), the long-term relationship between international trade flows of the 1994-2003 period and real effective exchange rate was analysed empirically. The empirical results show that the exchange rate affects significantly the export and import of China.

Samira analysed the relationship between real exchange rates and export and import during the 1990:1-2006:8 period by using monthly data set in the study, carried out for Lebanon. By using time series techniques, a co-integration relationship between variables was found and the Granger causality relationship was tested. As a result of the analysis, a unidirectional relationship from export and import to real exchange rate was found.

Aisha made regression analysis by using the unemployment rate and percentage change in exchange rate of the 1991-2004 period, and real exchange rate index of the 1995-2004 period variables in the study, carried out for Lebanon. As a result of the established models, a high relationship between exchange rate and unemployment rate was found.

Samolin analysed the effect of real exchange rate volatility on export flows of eight Latin-American countries during 1973-2004 period in the study. Obtained results show that the real effective exchange rate volatility has a negative effect on the export demand of every Latin-American country in both short-term and long-term.

4. MODEL ESTIMATION AND OBTAINED INFERENCES

Series should be stationary in order to make predictions in time series. In addition, series should enable the stationarity hypothesis for several statistical inferences. Therefore, whether series are stationary or not should be tested firstly and other steps should be taken after the enabling of stationarity. However, it is proper to use Toda-Yamamoto (1995) test, which was used for the variables, which are stationary at different levels. Because Toda-Yamamoto (1995) stated that VAR model can be estimated in which the level values of series can be found even though they are not stationary, and standard Wald test can be applied. Toda and Yomamoto allow us to make analysis regardless of related series whether they are stationary or stationary around trend or co-integrated.

$$\text{lag length} = k + d(\text{max})$$

k : proper lag length in VAR model

d(max) : Maximum integration degree of variables

For the Granger causality test in Toda-Yamamoto method, VAR model is estimated from $[k+d(\text{max})]$ grade and Wald test is applied to first k piece of matrix of coefficients. K , stated here, refers to the proper lag length of estimated VAR model, and $d(\text{max})$ refers to maximum co-integration grade of variables in the model. Hence, k and $d(\text{max})$ should be determined and Toda-Yamamoto test should be estimated. One of the important features of Toda and Yamamoto method is that there is no need for preliminary tests with potential trend which are used to determine the property of unit root and co-integration.

Before adding the unemployment rate to the unit root analysis, series was cleared of seasonality. According to Augmented Dickey-Fuller (ADF) test, one of the unit root tests, the unemployment rate is stationary as intercept and trend at level value. Phillips-Perron (PP) test also gave same inferences with ADF test.

The logarithm of export variable was taken to interpret figures easily by making them lower. The inferences of Augmented Dickey-Fuller (ADF) unit root test of export and the inferences of Phillips-Perron (PP) unit root test are seen. According to these inferences, the export variable is stationary at level value.

The variable of real effective exchange rate was not found statistically significant at real effective exchange rate series level in the inferences of Augmented Dickey-Fuller (ADF) unit root test and Phillips-Perron (PP) unit root test and the difference was applied and it was stabilized. It was shown in the inference in tables that the variables of unemployment rate and export were stationary without applying difference while the variable of real effective exchange rate was stationary at first difference. In order to test the relationship between them, Toda-Yamamoto causality will be applied.

In order to get statistically significant inferences for the causality relationship of the real effective exchange rate, whose first difference was taken, the unemployment rate and export variables, which were stationary at level value, normality, oto-correlation, heteroscedastic hypotheses were tested and an inference which did not conform with hypotheses, was not found. The determination of proper lag length (k) was made by setting VAR Model and the proper lag was found as the second lag according to inferences of 12 lags (i.e. $k=2$ was found). The maximum integration grade of variables in the model was found as one because the stationarity of real effective exchange rate variables was enabled by taking its first difference (i.e. $dmax=1$). Within the light of these findings, a test can be applied for Toda and Yamamoto model.

As a result of Toda-Yamamoto causality test in Table 4, a bidirectional relationship between unemployment rate and export, and a bidirectional relationship between real effective exchange rate and unemployment rate were found. What is interesting is that a relationship between unemployment rate and real effective exchange rate was not found. However, even though they are not the causes of each other, a relationship between export and unemployment rate and real effective exchange rate was seen in Figure 1. Within this regard, unemployment rate and real effective exchange rate may be their causes not directly but indirectly in Lebanese Economy. Hence, as a result of knock-on effect, they may be effective on each other over export in an indirect way. When the literature analysed, same results could not be found in some studies because of period and country differences. However, in general, literature is in the direction that there is a relationship between exchange rate and export and this conforms to the economy theories.

5. CONCLUSION

Within the direction of economy theories, the main aim of countries is to keep unemployment and price stability at an effective level with growth and development, adaption to global competition in terms of foreign trade, monetary and financial policies. Unemployment problem, one of the biggest problems especially for developing countries should be solved by policies and policy makers should give priority to unemployment in

economies, especially developing countries, including Lebanese economy. In the light of these, Lebanese economy was analysed by explaining theoretically the relationship of real effective exchange rate and unemployment rate with export.

For Lebanese economy, real effective exchange rate and export, unemployment relationships, consisting of monthly data of 2010 January and 2017 March, were analysed and findings were determined as supporting economy theories. The determination of the relationship between exchange rate and export and the relationship between unemployment and export are within the direction of both theoretically and several studies. However, while a relationship between exchange rate and unemployment was expected at the beginning of the study, a relationship in terms of Lebanon could not be found. That exchange rate and unemployment are in a relationship with export, in other words; their relationship was mutually found as export shows that there is a possibility to affect each other not in directly but in an indirect way.

Lastly, it would not be a correct prediction that unemployment decreases in the economies, growing with the increase in export. Today, uneducated and non-productive labour gives their place to productive labour, and the importance of human capital increases. In addition, the production of countries turns into technology-intensive from labour-intensive and the changes in export are found as related to the changes in unemployment within the light of the findings of the study. Therefore, Lebanese economy should aim to increase its export with increasing its competitiveness at global scale, innovation policies, R&D, training and, as a result; unemployment should be decreased to an effective level. With exchange rate policies, effective level should be provided in rate and improvements in export should be supported with monetary policy.