

T.C.
ISTANBUL AYDIN UNIVERSITY
INSTITUTE OF SOCIAL SCIENCES



**THE IMPACTS OF FOREIGN EXCHANGE RATE VOLATILITY ON
IMPORT AND EXPORT OF CARS AT TURKISH ECONOMY:
2001-2018 PERIOD**

THESIS

Baslan MAKHSEDA

**Department of Business
Business Administration Program**

Thesis Advisor: Prof. Dr. Zelha ALTINKAYA

June, 2019

T.C.
ISTANBUL AYDIN UNIVERSITY
INSTITUTE OF SOCIAL SCIENCES



**THE IMPACTS OF FOREIGN EXCHANGE RATE VOLATILITY ON
IMPORT AND EXPORT OF CARS AT TURKISH ECONOMY:
2001-2018 PERIOD**

THESIS

Baslan MAKHSEDA
(Y1412.130072)

Department of Business
Business Administration Program

Thesis Advisor: Prof. Dr. Zelha ALTINKAYA

June, 2019

ONAY FORMU

T.C.
İSTANBUL AYDIN ÜNİVERSİTESİ
SOSYAL BİLİMLER ENSTİTÜSÜ MÜDÜRLÜĞÜ



YÜKSEK LİSANS TEZ ONAY FORMU

Enstitümüz İşletme İngilizce Anabilim Dalı İşletme Yönetimi İngilizce Tezli Yüksek Lisans Programı Y1412.130072 numaralı öğrencisi Baslan MAKHSEDA'nın "The Impacts of Foreign Exchange Rate Volatility on Import and Export of Cars at Turkish Economy: 2001-2018 Period" adlı tez çalışması Enstitümüz Yönetim Kurulunun 22.05.2019 tarih ve 2019/11 sayılı kararıyla oluşturulan jüri tarafından oybirliği/oyçokluğu ile Tezli Yüksek Lisans tezi 24.06.2019 tarihinde kabul edilmiştir.

	<u>Unvan</u>	<u>Adı Soyadı</u>	<u>Üniversite</u>	<u>İmza</u>
ASIL ÜYELER				
Danışman	Doç. Dr.	Zelha ALTINKAYA	Yalova Üniversitesi	
1. Üye	Prof. Dr.	Ahmet Sedat AYBAR	İstanbul Aydın Üniversitesi	
2. Üye	Doç. Dr.	Tevfik Mesut EREN	Marmara Üniversitesi	
YEDEK ÜYELER				
1. Üye	Dr. Öğr. Üyesi	Beyhan Hilal YASLIDAĞ	İstanbul Aydın Üniversitesi	
2. Üye	Prof. Dr.	Kadir DABBAĞOĞLU	İstanbul Arel Üniversitesi	

ONAY

Prof. Dr. Ragıp Kutay KARACA
Enstitü Müdürü



DECLARATION

I hereby declare that all information in this thesis document has been obtained and presented in accordance with academic rules and ethical conduct. I also declare that, as required by these rules and conduct, I have fully cited and referenced all material and results, which are not original to this thesis.

Kennedy Fonju NKONGHO





FOREWORD

This thesis is written in completion of the Master’s Program in Business Management at Istanbul Aydin University. The research main focus is on “The impacts of foreign volatility of the exchange rate on import and export of cars at Turkish Economy: 2001-2018 Period.”

If I stumbled several times without falling, it was because I leaned on a handful of individuals and groups to whom I am deeply indebted. My profound appreciation goes to my supervisor Assoc. Prof. Dr. Zelha ALTINKAYA whose ideas, criticisms, guidance, encouragement, and devotion spurred me, and gave the shape and form of this study. Despite her very charged commitments, she created appropriate time to guide me, read carefully through my manuscript, made necessary corrections and observations, making sure I was on the right track. I will rather say she was more of a mother and caretaker than just a supervisor .

My sincere gratitude and appreciation go to my beloved mother, all my siblings and wonderful friends like; Ilgar ASGARLI, Günel UMayeva, Sevinj ARIKOVA, Karlygash AMANZHANOVA and Elvisa MATAJ for their relentless encouragement and moral assistance during my study .

My profound gratitude also goes to the staff of Istanbul Aydin University; ISSA and the International Students Office staff.

I wish that this thesis would be useful for researchers in further study on fields related to this topic.

June, 2019

Baslan MAKHSEDA



TABLE OF CONTENT

	<u>Page</u>
FOREWORD	vii
TABLE OF CONTENT	ix
ABBREVIATIONS	xi
LIST OF TABLES	xiii
LIST OF FIGURES	xv
ABSTRACT	xvii
ÖZET xix	
1. INTRODUCTION	1
1.1 Research Problem.....	1
1.2 Purpose of The Study	2
1.3 Methodology	2
1.4 Types Of Research And Data Method	3
1.5 Revious Studies	3
2. THEORETICAL FRAMEWORK	7
2.1 Foreign Exchange Rate Volatility	7
2.1.1 Introduction	7
2.1.2 Theories on foreign exchange	8
2.1.2.1 The purchasing power parity.....	8
2.1.2.2 The portfolio balance approach.....	9
2.1.2.3 The fisher effect and the interest rate approach	9
2.1.2.4 The monetary approach.....	10
2.1.2.5 Payments' balance approach	11
2.1.2.6 Exchange rate systems	11
2.1.2.7 Bretton woods system	12
2.1.2.8 Flexible exchange rate system	13
2.1.2.9 Theories on exchange-rate pass-through.....	15
2.1.3 Definition of foreign exchange rate	16
2.1.4 Definition of foreign exchange rate volatility.....	16
2.1.5 Importance of foreign exchange	17
2.1.6 Factors influencing foreign exchange rates	19
2.1.7 Major currencies in the foreign exchange markets	22
2.1.7.1 Us dollar	22
2.1.7.2 Euro	23
2.1.7.3 British pound sterling.....	24
2.1.7.4 Japanese yen.....	25
2.1.7.5 Swiss franc	26
2.1.8 Classical international trade theories	28
2.1.9 New trade theories	30
2.2 Trade Policies	32
2.3 Effects Of Foreign Exchange Rate Volatility On Imports And Exports:.....	34
2.3.1 Introduction	34

2.3.2 Imports and exports	38
2.3.3 Definition of importing	39
2.3.4 Definition of exporting.....	39
2.3.5 Historical origins of importing and exporting.....	40
2.3.6 Importance of importing and exporting for the economy:	40
2.3.7 Theories explaining the effects of importing and exporting on the economy	43
2.3.8 Factors influencing imports and exports	44
2.4 Effects of importing and exporting on the economy	46
2.5 Challenges Associated With Importing And Exporting:.....	48
2.5.1 Impacts of Foreign Exchange Rate Volatility On Importing And Exporting	51
3. LITERATURE REVIEW.....	55
3.1 Turkish Economy	61
3.2 Export Policies And Export Performance	62
3.3 The Foreign Exchange Rate Volatility In Turkey	66
3.4 Impacts Of Foreign Exchange Rate Volatility On Car Export.....	67
3.5 Conclusion.....	68
4. RESEARCH METHODOLOGY.....	71
4.1 Introduction	71
4.2 Research Design And Setting	71
4.3 Data collecting.....	72
4.4 Stationarity And Unit Root Tests	73
4.4.1 Types of stationary series	73
4.4.2 Weakly Stationary	74
4.4.3 Stationarity/Unit Root Tests.....	74
4.4.3.1 Dickey-Fuller Test.....	74
4.4.3.2 Measurement of exchange rate effect.....	75
4.5 ARDL – bounds testing approach	77
5. STATISTICAL ANALYSIS.....	79
5.1 Test Of Normality Of Residuals.....	79
5.2 Test of Heteroskedasticity(Breush-Pagan-Godfrey Test)	79
5.3 Test Of Autocorrelation.....	80
5.4 Descriptive Statistics For Dependent And Independent Variables	81
5.5 Est The Stationary Of The Variables.....	81
5.5.1 First method: graphical analysis.....	82
5.5.2 Second method : using correlogram(autocorrelation function ACF).....	82
5.6 Unit Root Test	84
5.6.1 Johansen cointegration test.....	85
5.7 Autoregressive Distributed Lag (ARDL) Models, And Bounds Tests.....	86
5.8 The Distinguishes The Current Study From Previous Studies.....	87
6. RESULTS.....	89
REFERENCES	93
RESUME 107	

ABBREVIATIONS

ADL	: Autoregressive Distributed Lag
ADLM	: Autoregressive Distributed Lag Model
BEC	: Broad Economic Categories
CHF	: Confoederatio Helvetica Franc (Swiss Franc)
ELG	: Exports-Led Growth
ELGH	: Export-Led Growth Hypothesis
EME	: Emerging-Market Economy
EMU	: Economic and Monetary Union
EU	: European Union
EUR	: Euro
GARCH	: Generalized Autoregressive Conditional Heteroskedasticity
GBP	: Great Britain Pound
GDP	: Gross Domestic Product
GLE	: Growth-Led Exports
ICCT	: International Council on Clean Transportation
ILG	: Imports-Led Growth
IMF	: International Monetary Fund
JPY	: Japanese Yen
NER	: Nominal Exchange Rate
RER	: Real Exchange Return
RER	: Real Exchange Rate
RERMIS	: Real Exchange Rate Misalignment
TRY	: Turkey lira
TSKB	: Industrial Development Bank of Turkey
USD	: US Dollar
WB	: World Bank



LIST OF TABLES

	<u>Page</u>
Table 2.1: The International Theories of Trade (Developed by the Researcher).....	29
Table 3.1: Automobile Sales (Units) in Turkey During the Period 2005-2008	67
Table 4.1: Turkey Export of cars by unit and value.....	72
Table 4.2: Turkish lira price to US dollar.	73
Table 5.1: Test of Normality Of Residuals	79
Table 5.2: Test of Heteroskedasticity(Breush-Pagan-Godfrey Test)	80
Table 5.3: Test of Autocorrelation	81
Table 5.4: Normality and Descriptive statistics for dependent and independent variables	81
Table 5.5: VAR Lag Order Selection Criteria for variables	83
Table 5.6: Unit root test	84
Table 5.7: Stationary of the residuals of the models	85
Table 5.8: Unrestricted Cointegration Rank Test (Trace).....	85
Table 5.9: Unrestricted Cointegration Rank Test (Trace).....	86
Table 5.10: Autoregressive Distributed Lag (ARDL) models, and Bounds Tests....	87



LIST OF FIGURES

	<u>Page</u>
Figure 2.1: WB and IMF framework - economy influence.	13
Figure 2.2: The Flexible Regimes of Exchange Rates.....	15
Figure.2.3: ERPT Measurement (Gopinath and Rigobon, 2008).	16
Figure 3.1: Annual GDP Growth Rate (%) and Annual GDP (Billions US\$), 1990-2010.....	64
Figure 3.2: Historical Volatility of Exchange Rates in the (EUR/USD) and (USD/TL) Pairs between Q3 of 2004 and Q1 of 2009 (50-Day Moving Average).....	66
Figure 5.1: Graphs of the first difference between the dependent and independent variables	82
Figure 5.2: Correlogram(Autocorrelation function ACF)	83



THE IMPACTS OF FOREIGN EXCHANGE RATE VOLATILITY ON IMPORT AND EXPORT OF CARS AT TURKISH ECONOMY: 2001-2018 PERIOD

ABSTRACT

This study aimed to achieve different purposes including explaining the relationship between imports/exports of a country and changes of the foreign exchange rate, investigating the presence of the long-term relationship between the changes of the rate of foreign exchange and change in exporting of cars in Turkey, and ensuring the impact of the country's trade on its economy. To achieve these purposes, the researcher applied a widespread ARDL bounds testing method, where the researcher depended on data from the Electronic Data System Website (EVDS) of the Turkish central bank along with the Turkish statistical institute (TURKSTAT). Where this research is an analytical case study using data time series of data from 2001-2016. The basic analysis showed the high volatility of foreign exchange rate USD/TL especially on the period from 2004 to 2009, besides the decrease of Automobile sales over the years in the same period. For a deeper and more reliable analyzing of study data and with respect to the nature of data that considered as time series, a set of data tests performed in order ensure it's stationary and stability over time. The results showed that data is normally distributed and evidenced there is no autocorrelation problem between data variables which means each of the study variables has its own explanatory role in investigating the proposed study hypothesis. Besides, Unit root test used to ensure study variables and are stationary, results showed that no variables suffered nonstationary, which means that data appropriate to use to describe the purpose it used to. Moreover, will not affect negatively on standard tests used in the study models.

The results concluded that the foreign exchange rate volatility has a considerable impact on cars exports equations in the dynamics of the long term, indicating that there is a powerful correlation between the rate's volatility and exports of cars in Turkey. This is consistent with the economic model and the theory.

Keywords: *Foreign exchange, Foreign exchange volatility, Export, Import, Car market, Turkish economy*



TÜRKİYE EKONOMİSİNDE DÖVİZ KURU OYNAKLIĞININ OTOMOBİL İTHALATI VE İHRACATI ÜZERİNE ETKİSİ 2001-2018 DÖNEMİ

ÖZET

Bu çalışma, öncelikle, ithalat / ihracat ile döviz kurundaki oynaklık arasındaki ilişkiyi açıklamak ikincil olarak da Türk Lirasının döviz kurundaki oynaklığın ile otomobil ihracatındaki değişimler arasındaki uzun vadeli ilişkinin varlığını araştırmak amacını taşımaktadır. Türkiye’de ve ülke ticaretinin ekonomisi üzerindeki etkisini ölçmek için analitik bir örnek olay incelemesi , zaman serileri kullanılarak yapılmıştır. Bu amaçlara ulaşmak için, geniş bir ARDL sınır testi yöntemini uygulanmıştır. Türkiye merkez bankasının Elektronik Veri Sistemi Web Sitesi’nden (EVDS) ve Türkiye İstatistik Kurumu (TÜİK) ile birlikte veriler kullanılmıştır. Bu araştırmanın yapıldığı yerde, Temel analiz, özellikle 2004 ve 2009 arasındaki dönemde, aynı dönemde Otomobil satışlarının azalması da dahil olmak üzere, döviz kurunun yüksek USD / TL dalgalanmasının olduğunu göstermiştir. Çalışma verilerinin hatalı ve daha güvenilir bir analizi için ve zaman serisi olarak kabul edilen verilerin niteliğine göre, zaman içinde durağan ve kararlı olmasını sağlamak için yapılan bir dizi veri testi. Veriler normalde dağıldığını ve kanıtlandığını gösteren sonuçlar, veri değişkenleri arasında hiçbir otokorelasyon sorunu olmadığını, bu da çalışma değişkenlerinin her birinin, önerilen çalışma hipotezini araştırmada kendi açıklayıcı rolüne sahip olduğunu göstermektedir. Bunun yanında, Çalışma değişkenlerini sağlamak için kullanılan ve durağan olan Birim kök testi, sonuçlar hiçbir değişkenin durağan olmadığını göstermiştir; bu, kullanılan amacı tanımlamak için kullanmaya uygun verilerin anlamına gelir. Ayrıca, çalışma modellerinde kullanılan standart testleri olumsuz etkilemeyecektir.

Sonuçlar, döviz kurundaki oynaklığın, uzun vadede dinamik olarak otomobil ihracatı üzerinde önemli bir etkisi olduğu sonucuna varılarak, Türkiye'deki oynaklık oranı ile otomobil ihracatı arasında güçlü bir ilişki olduğunu göstermektedir. Bu ekonomik model ve teori ile tutarlıdır.

Anahtar Kelimeler: *Döviz, ihracat, İthalat, Otomobil pazarı, Türkiye ekonomisi*



1. INTRODUCTION

Business people and governments, all over the world, are intense about the consequences of foreign exchange rates' decline and rise on various things; for example, imports, exports, domestic prices, household items, etc. It is highly essential to analyze the effect of money variances on the export and import of a certain country. According to The Observatory of Economic Complexity, Turkey is the 29th biggest country in the world in export. In 2016, Turkey exported 156 Billion dollars and imported 186 Billion dollars, subsequent in a negative 29.6 billion dollars trade balance. According to Kandil, Berument & Dincer (2007), if the foreign exchange rate declines the increases in the country money rate, the domestic can import the products with shabby costs. Furthermore, if a state's currency declines because of the exchange rate increase, the nation's imports of origin will diminish and the exports will go up because of foreign exchange rate rises. At the point when foreign exchange rate increments or reduces, the progressions get to the entire business of the country at particularly degree.

1.1 Research Problem

The topmost exports of Turkey are gold, cars, delivery trucks, vehicle parts, and knit T-shirts. Turkey's top imports are cars, refined petroleum, gold, vehicle parts and planes, helicopters, and/or spacecraft. From the observation of topmost export and import cars that come in the second top exports and first in the imports is booting the process of exporting and importing cars in an important place in the investment and international trading market. According to ICCT (International Council on Clean Transportation) (2015), about 0.6 million passengers of cars registered newly in Turkey in 2014, about 0.2 million was produced domestically in Turkey. The other 0.4 million, making 73% of total registrations, imported from abroad. During the previous five years, the local currency continues to losing value against the United States dollar. The

adjustment in the rate of forging exchange has had an influence on the process of exporting and importing

cars, whether the process is, directly and indirectly, occurring (Bari & Togba, 2017). When import levels go down the owners of the business and make them worried since almost everywhere, the imported goods are considered very necessary in instruction in order to run the manufacturing of the domestic goods in the country. Thus, this can highly affect the international export of a regional state. The changes in the exchange rate affect the procedure of importing and exporting goods which has a positive impact on the investment inside the country.

1.2 Purpose of The Study

The administrations and instabilities of the exchange rate have a crucial macroeconomic outcome in a country's systems and economy. Hypothetically, the changing of foreign exchange rate affects the foreign trading in price rises, investment accounts and other key variables in macroeconomy (Şendilmen, 2017). As long as Turkey is considered one of the important vehicle industrial in the world, the Turkish economy would strongly depend on the automotive industry (ICCT, 2015). The present study has some purposes that the researcher of the study wants to achieve, these purposes are:

- Explaining the correlation between foreign exchange rate changes and imports and exports of the country.
- Investigating the presence of the long-term relationship between the changes in the rate of foreign exchange and change in exporting of cars in Turkey.
- Ensuring the impact of the country's trade on its economy.

1.3 Methodology

Research on this study will be achieved through a playing widespread ARDL bounds testing method in order to investigate the presence of the long-term relationship between the change in cars export in Turkey and the change in the

foreign exchange rate. Depending on data from EVDS of the Turkey central bank and the Turkish Statistical Institute (TURKSTAT).

1.4 Types Of Research And Data Method

This research is an analytical case study using data time series of data from 2001-2016. In order to investigate the presence of the long-term relationship between the change in cars export in Turkey and the change in the foreign exchange rate, as well as the correlation between the exchange rate changes and care trade volume in Turkey, that will help to set the planes policy forward in the manufacturing business and trading.

1.5 Revious Studies

Ozmen and Furtun (1998) aimed at investigating the hypothesis of export-led growth, which depended on the Turkish data from 1970-1995. They used such seasonally adjusted series as well as they concluded that no cointegration was found with the actual income as well as actual export. With the models of the Autoregressive Distributed Lag (ADL), Upadhyaya (1999) analyzed (6) Asian states through the yearly data from 1963-1993 and data of GDP and RER. In addition, they concluded that all the factors are regarded as the integration's first orders. The main outcomes of the current study include the devaluation, which is in the contractionary monetary policy for the long term in Thailand and Pakistan, and expeditionary in other countries.

Kamin and Rogers (2000) stated that the income and interest rates were just incorporated in the demand equilibrium of finance for Mexico, other factors (the exchange rate depreciation and inflation) were not noteworthy. They examined the Mexican data by the use of the model of VAR with such four variables, endogenous, where the authors of the study employed the interest rate of US, inflation, actual rate along with the period's output of 1980 was mostly illustrated by its own transformation and innovations; indicating that the output's response is indefinite as well as the passive.

Kandil (2000) aimed to analyze "the effect of the exchange rate fluctuations on the output using cross country data." The study concluded that the positive and

unanticipated exchange rate shock caused the output contraction due to the considerable decrease in the output and increase in inflation.

The study of Bilgili (2000) analyzed the impact of the RERMIS (Real Exchange Rate Misalignment) on Turkish economic growth. The author of the study estimated the regression models of the annual data for 1978–1998. Regarding the model of the textbook, the study concluded that the research data have not proven any negative or positive effects of RERMIS on the economic growth and trade balance, which was not sensitive to RER changes. The study has some issues with the econometric approach, which was

implemented with its methods. The researcher analyzed the integration level of the research variables. In addition, it was concluded that all series are an integration of the first order. Unlike the unit root tests, the study implemented the series of levels required in the regression approach; as the error of the regression stochastic is regarded a nonstationary root, regression is referred to as the false regression. The reasons beyond that are standard t-test, which tends to be spuriously distinguished; when regression testing is statistically credible in the Ordinary Least Squares (OLS) regressand. The other negation is analyzing the inconsiderable model's coefficients statistically. If the coefficient is insignificant statistically, it cannot be analyzed.

Bleaney and Greenaway (2001) examined the impact of the trade terms and the RER volatility on the economic growth and investment in (14) sub-Saharan African states with the implementation of GARCH models. The researchers implemented the data from 1980-1995. For the GARCH approach/model, the RER volatility has such a passive effect on economic investment and growth.

Through implementing Kamin and Rogers model (2000), Berument and Pasaogullari (2003) studied the effect of the real depreciation over Turkish economic performance by regarding the data from 1987 to 2000. The researchers constructed (5) VAR models alternative, one of which is referred to as the “core”. They implemented the real exchange rate, real GDP, inflation, and the interest rate of a formal US. The RER is calculated by the NER basket (Nominal Exchange Rate), which is selected to coincide with the formal concept of the basket, which is embraced in the research period and dwindled by inflation. In the bivariate data and analysis, the researchers concluded the

negative correlation between RER and the output. The results proposed that the output respond is negative and constant after the actual devaluation.

Goldberg and Verboven (2005) analyzed the market convergence and integration to the One Price Law from the car market of Europe. The study examines the distinguished study of the market integration in Europe in order to analyze the relationship between worth convergence and integration in the global markets applying a panel set of knowledge regarding the costs of the automobile, we have a tendency to examine however the method of incorporation has influenced the cross-state value dispersion. we discover firm evidence of convergence towards the aspects of the Law of One Price (LOOP). The examination showed the most segmentation sources in the global markets and proposes the institutional forms of adjustments that might succeed.

Vinh and Fujita (2006) made investigations in their study to examine the effects of Vietnam economic performance and real depreciation through implementing the VAR method. The researchers concluded that even though the main variance sources in the output along with the level of the price, which is regarded as (own shocks). Devaluation process also had a favorable effect on inflation and output.

Ardic (2006) aimed at investigating the connection between the crises in Turkey, output, and the actual exchange rate. The study concluded due to the goods, devaluation, intermediate and imported, became so expensive as the production declined.

Sweidan (2013) analyzed the impact of the exchange rate on the imports and exports of Jordan from 1976-2009. The study examined if the remittances of Jordan's employees established an effect, comparable to the Dutch disease impact on Jordan's exports competitiveness. In addition, computing the Marshall-Lerner condition to analyze the stability of the foreign exchange market. The study implemented the bounds that are examining the method to the model of correcting errors and cointegration. The researchers concluded that Jordan competitiveness has a tendency towards deterioration. The impact of the exchange rate in Jordan on the exports and imports process is actually active just in the short-run. In addition, Jordan's workers' remittances really have such an impact which is similar to "the Dutch disease effect" through the increasing

of the living cost, thus reducing exports competitiveness. Moreover, the condition of Marshall-Lerner is less than one as well as the market of foreign exchange will never be stable if the policy devaluation of the exchange rate is taken. The implication of the policy of the article is just against adopting the devaluation policy in Jordan.



2. THEORETICAL FRAMEWORK

2.1 Foreign Exchange Rate Volatility

2.1.1 Introduction

The foreign exchange market is a domain that is mainly directed by up-to-date information that determines the fundamentals of the economy. Foreign exchange market has such major and vital importance within the world economy in general, as it highly affects various elements in the country's economy such as commodity prices, imports/exports cost, inflation, and international flows of capital. Both policymakers and the public tend to focus their attention on exchange rates due to their high significance in the economy (King et al., 2012: 3). Currency markets are the biggest financial markets which represent the liquid aspect of the economy and adopt millions of transactions performed among clients and governments on a daily basis. Major currencies are strongly related to the Foreign Exchange Market (FEM), which is mainly attributed to the fact that FEM is an open-ended system that also adopts numerous transactions using all types of financial information around the world. Major currencies reflect the economic balance, status, and position that countries, corporations, or small firms possess, which happens to be measured by the foreign exchange market. This further strengthens the relationship between major currencies and the foreign exchange market (Keskin et al., 2011: 719).

Analysts, economists, and policymakers have been paying attention to foreign exchange rates and taking their changes into consideration for a long time. There are foreign exchange rate regimes that multiple countries utilize, some of these regimes could lead to massive fluctuations, especially in these countries that have open capital accounts. The pros and cons, and negative and positive traits of volatility growth of foreign exchange rate have been a central topic, as many argue that the volume of exports might be reduced due to the volatility

increase of fluctuations and foreign exchange rate, and these fluctuations would represent a major risk to exporters and importers alike. This indicates

that the volatility of the foreign exchange rate has a considerable impact on the trade volume for countries all over the world (Safuan, 2017: 4). Nations' currencies are characterized, evaluated, and measured by foreign exchange rates. The foreign exchange rate can be classified into two categories, the first is called the nominal exchange rate, which simultaneously measures two units of currency (e.g. US dollar in relation to British pound sterling).

The other category is called the real exchange rate, which measures the relationship between domestic goods that cannot be traded and tradable goods by comparing their prices and values. Nominal exchange rate fluctuations can lead to fluctuations in the RER on the short-run (Zamir et al., 2017: 168).

2.1.2 Theories on foreign exchange

The exchange rate's traditional models search for a balance identification between two systems or economies to estimate the general worth of rate. Such balance is established on inflation, on the evaluation of similar services/products, on the respective level of Real interest rate, etc. These are the essential models/theories of the exchange rate and the relative method of pricing implemented (Chen, 2017).

2.1.2.1 The purchasing power parity

The PPP estimates the change required on the rate of exchange among two economies or systems for the exchange rate to be indistinguishable to each purchasing force of a system's currency. PPP essentially presume that if no limitation to free global trade exists, the general expenses of the same goods have to be the same value on an international scale. Based on such fact, the rate of exchange between two countries must vary towards a long-term cost to ensure the balance state of the product pricing (Tari, R., & Gözen, M. Ç., 2018).

- PPP Analysis
 - The analysis is established on many assumptions, the absence of trade restrictions and homogeneous commodities.
 - It could be only applied for tradeable goods.

- The prices of the traded products only are liable to be balanced out.
- It is beneficial for the long-run evaluation of a currency
- Significant divergences can be found between the PPP and the currency's short-term evaluations.
- It is beneficial, particularly, for carrying traders, corporations, and other long-run developers.
- The analysis process is generally useless for the currency traders.

2.1.2.2 The portfolio balance approach

The theory is a new method developed on the correlation between relative prices of bonds and exchange rates. The method is an expansion of the financial approaches of exchange rate regarding the bond's effect. For the method, any modification in the state of a certain economy; an immediate impact will occur on the demand and supply for the domestic and foreign bond. This bonds' adjustment will mainly affect the rates between the domestic and foreign economies. The essential advantage of this approach, when put into comparison with the conventional method, is that the financial assets tend to significantly alter faster to new sets of economic conditions than the tradable output (Chen, 2017).

The method is established on many assumptions:

- The PPP approach does not hold.
- The rate is predicted unchanged
- The available assets for household investment are the domestic and foreign bonds and money.
- Bonds are not ideal substitutes
- The theory assumes the ideal mobility of capital without any forms of controls and similar obstruction to investments
- The theory assumes the narrow costs of the transaction and high realization in the markets of money.

2.1.2.3 The fisher effect and the interest rate approach

The correlation between the interest rate differentials and the currency's exchange rates was presented after the end of the Bretton Woods Agreement in

the early 1970s. The interest-rate theory assumed that the international capital had suitable mobility and will instantly exploit any interest rates differentials.

A certain status referred to as rate arbitrage of the covered interest; where, for the approach, the arbitrage of the interest rate is generally active and establishes the rate equivalence of the global covered interest (Nusair, S. A. 2008).

- **The Interest Rate Parity (IRP)**

The theory presumes that interest rate's differentials between two countries mainly stay balanced to the evaluated differential by applying the forward exchange rates and the average spot. Meaning, the forward premium/discount of the exchange rate match the differential of interest rate:

The Discount/Premium (%) = Differentials of Interest Rate (%)

2.1.2.4 The monetary approach

This method focuses on the financial strategies of two countries in order to set the rates of exchange for their currency. The approach implements two functions that determine the price dynamics, the interest rates' dynamics, and exchange rate. An adjustment in the regional monetary supply causes an adjustment in the level of prices; such an increase/decrease in the prices cause an adjustment in the rates of exchange. The model assumes that (Chen, 2017):

- An exchange rate regime (not a constant regime) equipped with a freely-floating system.
- Minimal banks interventions.
- The total curves of supply are vertical.
- Tradable products' costs are immediately altered to any change in the effective dynamics.
- The transmission mechanism through prices to the rates of exchange is immediate.

Mainly, a monetary strategy concentrates on the supply of money for a certain economic system.

The current process of supply is generally set by:

- The interest level of rates, and,
- The aggregated money in circulation.

Nations that implement expansionary policies of finance to raise the mass circulation of finance, will be challenged with inflationary difficulties, which will lead to a currency's devaluation within the rates of exchange. While certain economies that implement strict finance strategies and policies in order to reduce the massive amount of finance in the dissemination and observe the value of their currencies.

2.1.2.5 Payments' balance approach

For the approach, alterations in a country's income affect the system's account. Thus, the rate is changing into a new level to accomplish the balance of the payment. *Balance of Payments* is an account that combines the receipts and payments of a country's residents in their daily deals with the individuals of foreign states. This essentially involves a significant transactions assortment (Min, H. G., & McDonald, J., 1993) :

- Exchanging services and products.
- overseas income from investments.
- Modern investments.
- Overseas aid.
- The flows of capital between treasuries and central banks (the gold of cash) (Krugman, Obstfeld, and Melitz, 2018).

2.1.2.6 Exchange rate systems

As mentioned, the exchange rate indicates one currency's price to another. The rate is the main rate among the unit of a currency and the value of other currency; thus, the unit could be traded at a specified time (Ngerebo and Ibe, 2013). Therefore, the rate of exchange is the currency's price in relation to other currencies and is the units' value required to buy other currencies (Inoue and Hamori, 2010). The currency's exchange rate is the connection between the local and foreign prices of products and services; it either could appreciate or depreciate. The estimation/appreciation in the rate occurs if the little units of the regional currency exchanges for currency's overseas unit. The depreciation/devaluation happens if more local currency's units exchange with the foreign one. Economy's history has shown two main concepts; the nominal exchange rate and the actual exchange rate. RER is an actual measure the

relative price of two products-tradable products (imports and exports) relative to the non-tradable products (products and services locally developed and consumed). The Nominal Exchange Rate (NER) is a financial notion that measures the price of two currencies. The NER is the set value of the regional units that have to be given up to acquire a foreign unit (Obi and Oniore, 2016).

Several complex exchange rates measurements go behind the binary differentiations to include the multilateral differentiations. For example, the REER. REER is regarded as a measured rate of the binary actual rates of exchange while considering the trade's share with the partners the aggregative trade of a certain economy. Looking at the subject of the convertibility of currency, the convertibility of currency generally indicates that a certain currency could be transformed to diverse currencies without forcing any constraints by the government (Obi and Oniore, 2016)

2.1.2.7 Bretton woods system

At the end of the Second World War, Allied gathered in 1944 to plan a new economic, to avoiding the repetition of disastrous policy mistakes in the 1920s and 1930s.

At the Bretton Woods conference, forty four Allied countries met under the intellectual leadership of Harry Dexter White (a senior US Treasury official) and John Maynard Keynes.

The conference envisaged new rules of the game to prevent countries following the 'beggar-thy-neighbour' policies that had led to the Great Depression. It also established the International Monetary Fund (IMF) and World Bankas, the key institutions to manage this new world order. The International Monetary system created to ensure exchange rate stability, prevent competitive devaluations, and promote economic growth (Dooley, M. P., Folkerts-Landau, D., & Garber, P., 2004).

After the Soviet Union collapse in 1991 are assorted as developing nations with an open financial system or economy. In the initiation of the nation's economic sovereignty, they set to become included in the BW institutions. The main aspect of their economy is distinguished from other developing systems, although the merits of macroeconomy look the same, for example, Latin

America systems (Chornyy, 2011). BW's evolution, when it was Washington Consensus (1989-2009), shows the alteration of the market's philosophy and showed the necessity of thorough alterations in the company's format and the basics of the operational challenges in the WTO Development negotiations round, which are the examples of the BW's response to the modern global difficulties. There are no grounds to deny the shortcomings of the contemporary international regulation of the market system created by the BW (Chornyy, 2011).

Indeed, several outcomes of the empiric examination showed that the liberalization influence is not the essential one and the market and government's power are generally determinant factors of economic development (Popov, 2007).

In addition to the conditionalities effect that have actual impact on the nations' economic policies, other methods can be found for the BW's influence: the financial and technical loans or aids, the work of the advisors and missions, the outcomes of the multilateral and bilateral negotiations with other nations, the effect of moral hazard, etc.

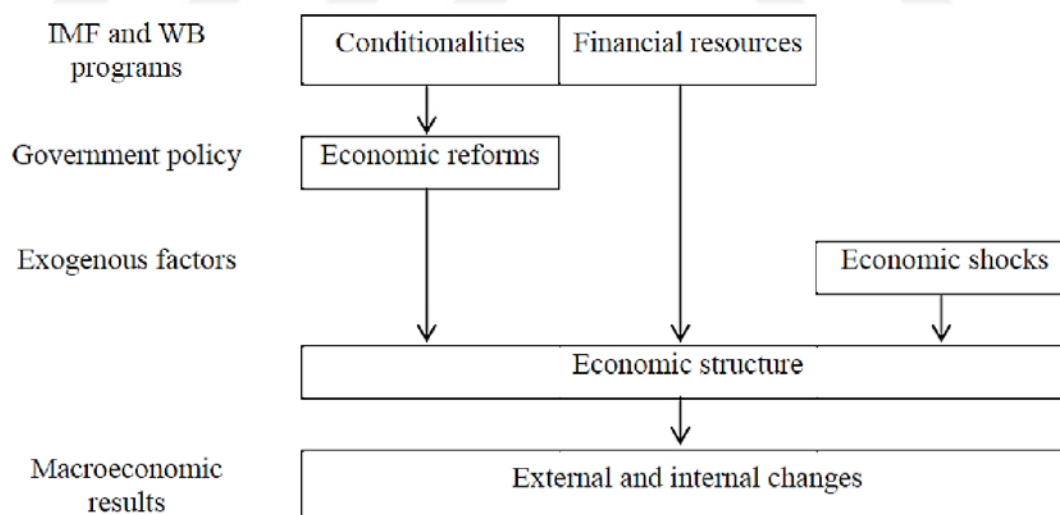


Figure2.1: WB and IMF framework - economy influence.

Source: (Chornyy, 2011).

2.1.2.8 Flexible exchange rate system

The movements of the exchange rate can have a substantial effect on the performance of a small open economy. Exchange rate fluctuations, for example,

affect the exports/imports demand along with the inflation rate (Pölder, 2018). Following the ending of the BW era in the 1970s, the exchange rate's fixed system was discarded; while the nations had to change their finance. The nations enforcing a rate's floating system, volatility has turned out to be an unavoidable reality. Exchange rate's volatility coincides to the massive finance variation with the balance value of exchange rate or the short-period fluctuations around the long-period trends of the exchange rate (Giannellis and Papadopoulos, 2011; Oaikhennan and Aigheyisi, 2015). Meaning, an exchange rate's volatility is the variation between the prices of a certain currency for other ones. Volatility indicates all the changes and movements that are efficient in depreciation or appreciation of the currency. transactions' profitability of a foreign rate is influenced by the assessment or the currency loss (Martins, 2015).

Flexible exchange rates refer to the rates determined by the international supply and demand of a certain currency. Meaning, they are prices of foreign exchange set by the international/local market, which can change rapidly because of the supply and demand levels and are not generally controlled by the central banks. However, the opposite approach is called the fixed exchange rate, where banks generally interfere in the market with the sales and purchases of the domestic and foreign currency to preserve the rate inside a certain limit (O'Sullivan and Sheffrin, 2003).

There are two forms of flexible exchange rates: the managed floating regimes and pure floating regimes. The managed (dirty) floating regimes are the flexible regimes of exchange rate regimes where some sort of official intervention occurs. Yet, pure floating regimes exist when there are no official sales or purchases of the currency. The flexible regimes of exchange rate were rare before the late 20th century. Before WW2, countries used to sell and purchase foreign and domestic currency to maintain a desirable rate of exchange, especially in accordance with set policies of trade with every country (O'Sullivan and Sheffrin, 2003).

After several experiences with the flexible exchange rates during the 1930s, most nations returned to the gold standard. In 1940, before the new wave of flexible regimes began, over 60 nations were on the gold standard. However,

most nations abandoned such standard before the beginning of World War II. The International Policy Coordination in 1944 was attracting several countries. As mentioned earlier, the Bretton Woods (BW) agreement was developed, along with other international organizations established during such period, creating a modern fixed system: the dollar fixed currencies, which was also gold fixed (Carbaugh, 2012). Figure (2.4 1) presents the various flexible regimes according to the four diverse variables and factors: the loss of monetary policy independence, the flexibility of exchange rate, rate's credibility commitment, and anti-inflation effect (O'Sullivan and Sheffrin, 2003):

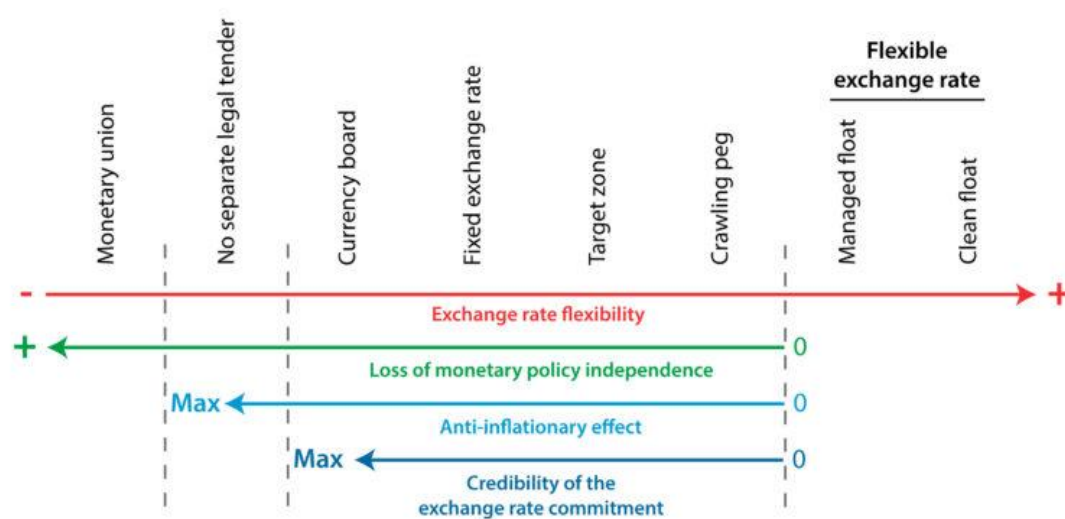


Figure 2.2: The Flexible Regimes of Exchange Rates.

Source: (Policonomics, 2017).

2.1.2.9 Theories on exchange-rate pass-through

ERPT is a general process of knowing the responsive changes in exchange rates in comparison to the international cost. Fundamentally, the ERPT is the main flexibility of the local-currency prices of importation regarding the domestic-currency cost of the foreign currency (percentage change) in the local currency of prices of imports caused from a (1) percentage of rate's change between the importing and exporting nations (Goldberg and Knetter, 1997). Prices change in imports influence retail and consumer prices. When the ERPT is greater, more inflation transmission occurs between the countries. The ERPT is directly associated with the law of one obtaining and Price Power Parity (PPP) (Campa and Goldberg, 2005).

The process of measurement of ERPT is typically executed by applying the indexes of aggregate price. Studies have examined how companies differ in their exchange rates' responses. Studies of firm-level differences proposed the reason behind the ERPT state of inequivalent to another one and globalization actions in the ERPT's reduction (Cook, 2014; Berman, Martin, and Mayer, 2012).

The measuring process through "General Pass-Through Regression" is:

$$\Delta \ln \ln p_t = \alpha + \sum_{i=0}^N \gamma \Delta \ln \ln e_{t-i} + \delta \Delta \ln \ln c_t + \psi \Delta \ln \ln d_t + \varepsilon_t$$

Figure. 2.3: ERPT Measurement (Gopinath and Rigobon, 2008).

2.1.3 Definition of foreign exchange rate

The foreign rate is the rate enabling the exchange of one currency for another, in accordance with the cost of this currency compared to the other currency (Zamir et al., 2017: 168). The foreign exchange rate could also be defined as a system that can be implemented in either a fixed or a flexible way, with the fixed aspect being permanent, and the flexible being wavering and may move up or down. The foreign rate is presented as one of the most significant elements in macroeconomics, which directly affects international trade balance (Kamal et al., 2012: 2830). The foreign exchange rate is the most prominent element in economics, which determines the degree of economic growth for any country and it is deemed responsible for the levels of international trade. These traits make foreign exchange rate such an important key factor within most free market economies on the global scale (Asari et al., 2011: 49).

2.1.4 Definition of foreign exchange rate volatility

The volatility of exchange rate is a much useful instrument or gauge that works on evaluating and assessing the changes in the foreign exchange rate (Coudert et al., 2011: 3011). The volatility of exchange rate is the result of three main factors: the economic dynamics that happen internally, the instruments that measure economic policies, in addition to the financial and economic improvements within international markets (Gherman et al., 2013: 40). Foreign exchange rate volatility is what countries' economies have to tolerate as a

burden that creates instability to the foreign exchange rate, as an outcome of inflations that occur within a domestically-oriented framework (Pontines, 2013: 26).

2.1.5 Importance of foreign exchange

The foreign exchange market is essential for international finance, as it determines the strength, development, and growth of a certain economy and has an important role in international trade.

Neither the geographical boundaries, culture, nor language can limit the influence and significance of the foreign exchange market, and it actively functions and operates every day of the week, without missing a beat. The foreign exchange market exhibits the contrast amongst the economic and financial participants within the market, supported by a massive and ever-growing volume of trade, and it also involves a huge number of institutional investors and businessmen who deal with billions of units of currencies.

These currencies are regulated by the rate, which serves as the main engine of the economic and financial activities that take place in the foreign exchange market (Daru, 2016: 79). Countries, governments, and businessmen must consider the significance of investment as a factor that enhances the financial status, In order to attain high levels of output, productivity, and economic growth. The foreign exchange rate is entitled to provide a stimulus for the improvement of various investments and the profitability of manufacturing and production. If the magnitude of effects of foreign exchange rates on the demand for domestic products is higher than that on the cost of imported capital, then both the domestic products demand and imported capital expenses will increase with the increase in foreign exchange rates, which confirms once more the essentiality of foreign exchange rate for various economic aspects, especially for investment (Lotfalipour et al., 2013: 14). Foreign exchange rate influences other essential aspects of the economy such as the capital flow, services, and goods in a certain country because it also provides an open economy for participants, which adds another dimension to the exchange rate importance. The importance of rates is clearly indicated as it regulates multiple macroeconomic variables. Foreign exchange rates are highly important for

exerting some sort of pressure on inflation and the payments' balance, among the factor of the macroeconomy. When a particular foreign regime of exchange rate is appropriately managed, a plethora of benefits like financial growth stability on the macroeconomic level will occur (Obi et al., 2016: 115).

The importance of foreign exchange rate can play a brilliant role in raising corporations' values. For example, when the domestic currency depreciates, total revenues of corporations that undertake international financial and business activities will increase in proportion to this depreciation in the currency, which in turn allows these corporations to increase the levels of their commercial competitiveness benefitting from the decrease in the price of exported goods on an international level (Šimáková, 2017: 2106). The concept of conducting and implementing proper monetary policies are essential for the economy of a particular country in general, and for the banking system of this country in particular. The slight changes in foreign exchange rates might drastically influence decision-making processes undertaken by the bank administration, or by the government itself, which also significantly influences processes of monetary policymaking. Therefore, it is widely considered that the foreign exchange rate, by having great informative value, is highly important in monetary policymaking.

Foreign exchange rates are banks' most reliable ally, by fully understanding the nature of factors influencing foreign exchange rates, these rates can effectively indicate strengths, weaknesses, and the overall state of the economy which prepares banks, especially central banks, for any immediate or instant fluctuations in foreign exchange rates, and allows them to quickly and efficiently respond to these changes and fluctuations, instead of depending on observations that might not be accurate. To put it more simply, when countries, banks, or investors fully utilize the positive traits of foreign exchange rates as economic indicators, understand the factors that affect foreign exchange rates, and eliminate any uncertainties that could be related to the rates, the informative aspect of the rates will clearly become apparent, asserting the importance of foreign exchange rates (Bańbuła et al., 2011: 287). Financial systems that are related to properly valid and managed foreign exchange rate regimes usually seem to be characterized by a great deal of stability, as monitoring foreign

exchange rates are perceived to dictate the organization's economic status. The financial structure is intertwined with the identification of the best foreign exchange rate regimes, to help achieve economic growth and total financial liberalization. It is also important to mention the importance of implementing these regimes for countries' economies, as these regimes allow these countries to maintain their international reserve holdings (Stoica, 2016: 29).

The foreign exchange rate is of great importance; it works as a highly essential factor or a determinant in the financial market, deeply influences the economy of any country and dictates its growth. The foreign exchange rate sheds a light upon how financial markets operate nowadays because it reflects multiple financial elements like the evaluation of levels of competitiveness among organizations and economies in the world. Competitiveness is an essential factor in the financial process that influences economic growth. In order for economic participants to make the right decision within international trade practices, they must observe the movements and fluctuations of foreign exchange rates, if foreign exchange rates fluctuations are extremely high the economic participants will have to instantly react by enabling the international trade to take place, and if foreign exchange rates happen to depreciate, the economic participants will have to apply some international trade policies and regulations. This clearly indicates that foreign exchange rates influence the sense of economic and financial competitiveness by allowing countries and organizations alike to monitor their movements, and take the right decision to financially prevail as a result (Bostan et al., 2018: 1-2).

2.1.6 Factors influencing foreign exchange rates

There are multiple factors that influence foreign exchange rates. It has been observed that these factors could range from monetary to non-monetary or from macroeconomic to microeconomics. Maybe two of the essential variables that affect exchange rate are the inflation rate and current account deficit. However, there are many other factors that play the same role toward foreign exchange rates, such as stock market, macroeconomic and microeconomic factors that might cause variations in the foreign rate, psychological factors like having confidence in a specific investor or a shareholder which control various economic variables affecting foreign exchange rates, the correlation between

interest rate and inflation, post-globalization, as well as imports and exports among other factors (Venkatesan & Ponnamma, 2017: 22). Media and the news are also considered to be major factors influencing the foreign exchange rate, along with other determinants that operate on the long-run such as trade terms, capital flows, and the development of a specific economy. Studies have revealed that news is important for major currencies around the world. For example, bad news works on depreciating the currency whereas good news brings appreciation to the value of the currency. However, foreign exchange rates have been found to be more responsive when depreciation occurs (Parveen et al., 2012: 671).

Factors can also be related to microeconomics. The economic status of the country strongly affects foreign exchange rates. When a certain country spends more money to fund the public sector and uplift people's social status, its debt rates will increase exponentially. National debts drastically weaken the country's domestic economy and force investors and shareholders alike to avoid investing in the country, as high rates of national debts might eventually cause inflation, which destroys the currency's value, which alter the map of the foreign exchange rates on a global scale. Speaking of which, the country's gross domestic products in addition to employment data are both regarded as factors that influence foreign exchange rates. Gross domestic product measures and evaluates the country's currency and how healthy its economy seems, countries with more efficient activities related to the importation and exportation of goods and services attract investors and shareholders to invest in their economic system.

Although, high employment rates might be a good sign of a prospering economy and an attractive economy, sometimes they lead to an increase of purchase power which brings higher inflation as a result in the country, diminishing the value of the country's currency and affecting foreign exchange rates (Patel et al., 2014: 54). Regarding macroeconomics, a strong connection was found between interest and foreign exchange rates. Interest rates suggest that government and monetary policies, valuation of financial securities, and the practices of risk management present a great deal of importance towards various financial markets. This encourages international economies to focus more on the effects o

interest rates as a determinant of foreign exchange rates. Interest rates are ultimately driven by a few economic fundamentals such as the differences between home and abroad, as estimated by the majority of standard theoretical models of foreign exchange rates (Islam & Raza, 2014: 11).

Macroeconomic stability is strongly determined by the degree of success in implementing a certain foreign exchange rate regime, these regimes can vary between flexible and fixed, and they have their advantages and disadvantages. For example, flexible regimes can easily adjust to international economic shocks, without forcing the government to keep massive reserves of foreign currencies, and it has the ability to restore equilibrium. Fixed regimes increase the potential of trade and investment, and decreases risks that could be involved with this investment as long as decreasing the transactions' cost. The volatility of foreign rate usually occurs and rises in a primary approach when developing and developed countries cannot keep a stable foreign exchange rate, whereas other countries maintain more flexible foreign exchange rate regimes (Elsherif, 2016: 1209). The economic and non-economic factors can be categorized into short-term factors (i.e., current account balance, currency speculation, capital account balance, inflation rate, national and international interest rates, and rate of economic growth), and long-term factors (i.e., capital flows, size of the foreign debt, competitiveness of the economy, budget deficit, relative domestic and foreign prices, economic development level, and technological and technical development), while non-economic factors (i.e., policy approaches, political risk and armed conflicts, psychological factors, and natural disasters). These factors can globally affect foreign exchange rates fluctuations, especially within the states with a basic high market share of business organizations, as more transaction with foreign investors create a phenomenon that causes foreign exchange rates to be positively or negatively altered (Twarowska & Kąkol, 2014: 892).

According to a particular study that has been conducted on a number of countries, it was asserted that the high levels of trade in manufacturing decrease the volatility of foreign exchange rates, and when these levels are reduced, foreign exchange rates go up. It has also been revealed that changes in emerging market economies, along with other "soft power" variables, lead to a drastic

effect on foreign exchange rates volatility. Foreign exchange rates volatility is majorly affected by multiple factors such as government expenditures, domestic output movements, foreign direct investment flows, terms of trade stock, economic or trade openness, external debt, foreign reserves and assets, and money supply growth (Kilicarslan, 2018: 206). Another monetary aspect involves a payments balance, which is a declaration that indicated economic and financial transactions between corporations and countries both on the microeconomic and macroeconomic level, money supply, flow-equilibrium in the asset market, and relative price levels. All of these aspects represent factors that characterize effective and nominal movements in foreign exchange rates (Benazic & Kersan-Skabic, 2016: 129).

Supply and demand are two main factors that affect foreign exchange rates in the global market. Supply and demand can be illustrated as two curves that seek equilibrium between price and quantity. Thus, they both link several combination points where various services that provide a certain currency correlate with the value and price of the currency. When prices increase, quantities will be increasingly supplied, and when prices go down, a supply shortage will immediately be expected to occur. This positive relationship between supply and price rates monumentally affects the supply and demand of currencies, which influences foreign exchange rates (Sugeng et al., 2010: 292).

2.1.7 Major currencies in the foreign exchange markets

2.1.7.1 Us dollar

Bimetallism is a widely used terminology in the field of economics, and it indicated that a monetary unit can be equivalent to specific quantities of gold in large trade transactions, or silver in modest trade transactions. Maintaining bimetallism was adopted by many theorists and in order to distinguish the dollar's value. Spanish dollars were weighed as the result was 371.25 as the average value of silver they contain. Thus, the US dollar was born. The reason behind the quick acceptance of the dollar in early America could have been attributed to the fact the American dollar bore a close resemblance to the already existing Spanish dollars (Eichengreen, 2011: 12).

As previously mentioned, the US dollar was an equivalent for gold, nowadays this equivalence is drastically decreasing in value and getting closer to zero. However, by the beginning of the year 2014, over one trillion dollars were issued and started circulating the whole world, which helps the American economy play its role as a facilitating factor in US economy and the global market as well. It is fundamental to state that the US dollar's value is constantly raising and getting higher with time, showing a positive sign for the American economy, this rise has occurred between the year 1910 with more than \$ 3.148 in circulation, and the year 1960 with more than \$ 32.065 in circulation. This further internally reinforces the US dollar's value and in the markets of foreign exchange(Gulyaeva, 2014: 15).

The US dollar is of high value and it is regarded as the most important element of the international trading system. Countries all around the world, including developing and transition ones, tend to purchase securities so that they cannot face any difficulties with payment, which creates a flow of resources and fund from these countries to the US economy. This idea is what places a great value on the US dollar, improves and grows income rates through imports, and enables American citizens to enjoy a higher standard of living. Although US dollar can no longer be converted to gold, there are still other reasons for the US dollar being of high importance among different economies around the world, these reasons include the democratic system and principles that the country maintains, the extensive American infrastructure, and the vastness of the American economy. All of these reasons allow the US dollar to dominate most transactions undertaken within the foreign exchange market (Panda, 2016: 66).

2.1.7.2 Euro

The official currency in 19 sovereign countries in Europe is called the Euro. These sovereign nations include Spain, Luxembourg, Austria, Slovakia, Ireland, Portugal, Greece, Belgium, Estonia, Germany, France, Malta, Italy, Cyprus, the Netherlands, Slovenia, Latvia, Lithuania, and Finland. With Belgium being the first country to join, and Lithuania being the last, since the Euro's issuance in 1999. Although joining the Economic and Monetary Union (EMU) in Europe might seem easy, certain criteria known as 'The Maastricht Criteria' have to be met by any nation that wants to join. These criteria have served as standard

criteria since 1992 which encompasses a stable interest rate on the long term, balanced public finances, exchange rate stability, and stable or somewhat low levels of inflation. Therefore, The European Central Bank has announced and imposed a monetary policy that applies to all sovereign nations within the (EMU) (Steurtewagen, 2013: 10). The promising features of the Euro did not prevent the European continent to witness one of the most horrifying economic crises of all time, as it caused a great number of suffering around the world. The buildup of both private and public debt might have been the reason behind this tragedy. However, it is widely considered that the most impactful reason behind this drastic decline in economic activities and practices was the dilapidated monetary policy that has been previously addressed. This has reduced the value of the Euro in the markets of foreign exchange for a certain period, which encouraged a new policy to be conducted (Beckworth, 2017: 114).

The map of trade and economics was forever changed in Europe and the whole world after the creation of the European Monetary Union, and despite not being as impactful on trade and foreign exchange market as it has been thought, the Euro-influenced Foreign Direct Investment flows to Eurozone countries, and from Eurozone countries to other nations. The advantages of using the Euro as a single currency in various financial transactions worldwide, appear to eliminate any fluctuations within the nominal exchange rate movement which enhances the global economic growth and create a sense of convergence amongst Eurozone members which, would cause high levels of growth and output. This indicates the Euro role as a main currency in the economy and exchange market in particular (Ioannatos, 2018: 1390).

2.1.7.3 British pound sterling

The increasing prominence of Great Britain's economic position among other countries in Europe and the entire world is undeniable. This prominence has to raise the value of the British pound sterling in a major way, especially when the gross domestic product has shown some sort of growth within the past few years. Today, Great Britain is the fifth biggest economy according to gross domestic product levels, exceeding other countries and further amplifying the significance and strength of the British pound sterling. According to several economic forecasts, the British pound sterling will continue to attract more

investors, and increase in value within the foreign exchange market due to the exponential growth of Great Britain economy (Markevych & Yurchyshyn, 2014: 49). The British pound sterling has been going through economic difficulties that resembled an obstacle for the British economy. Before the World Wars, Great Britain was economically dominant, and its currency was regarded as the number one major currency in the world. However, Great Britain's post-war economic status was getting weaker, and the government was motivated to restore the British pound sterling's value in the market in order to retain international financial confidence, bring the old price back, and return to the country's economic position before the two wars. This plan had to come with a hefty price, and serious costs had to be borne on a domestic level, but Great Britain was prepared to set an example regarding monetary discipline for other countries. Several American corporations managed to financially assist Great Britain so that it can go back to the old Pound rate; where the Pound's stabilization meant overall stability in other currencies and economies all over Europe (Igwe, 2018: 110).

The British pound sterling is facing a brand new challenge after "Brexit", which refers to a decision that Great Britain made about leaving (EU) the European Union. So far the country has witnessed a sense of the major decline of the financial markets due to that political decision that deeply affects the country's economy and currency. This eventually causes the British pound sterling to drop in value, for example, in 2016 it reached its 31-year low since the 1980s, which put the British pound sterling in a bad situation even worse than "Black Wednesday" in 1992. The records assert that the British Pound had a rapid devaluation in just one day, approximately losing 10% of its total value. This decision single-handedly makes investors and governments anxious and uncertain about the possibility of them depending on the British pound sterling as a major currency (Plakandaras et al., 2017: 206).

2.1.7.4 Japanese yen

Although a share of the Japanese yen is not considered to be that significantly large in some currency markets, it is still common for it to be internationally recognized, and viewed as the third major currency in the market. It is essential to mention the Japanese corporations always export their products to other

countries in Asia using the Japanese yen as a payment or settlement currency, which increases the value of the Japanese yen against other Asian countries (Ogawa & Muto, 2017: 318-319).

The Japanese yen had entered a critical phase of instability before it finally found the perfect economic position. In 1905 Japan was involved in a war against Russia which doomed the Japanese economy and forced Japan to spend almost fifty percent of its national income, almost six years later, Japan was able to establish a new era of economic growth during the Meiji period. However, in 1914 Japan entered World War I, this time Japan was not ready to face the same economic losses or casualties that occurred in previous wars. Thus, Japan managed to take advantage of the international rise in interest rates, transforming Japan from a borrower country to a lender country, but this lending experience was not successful, which caused the yen to drastically depreciate (Flath, 2014: 4).

The Japanese yen has finally established an international reputation of having such a grand role in the market. Japanese yen appreciated in spite of Japan's outward investment, and that might have been due to a drastic drop in the value of other major currencies, or Japan's great export strength. The Japanese yen enjoys another reputation of being almost a shelter currency for businessmen and investors when other major currencies depreciate or drop in value, on the other hand when other major currencies gain more strength and start retaining their value, the Japanese yen would naturally appear to be weak. This happens regardless of Japan's export or trading position and proves that the Japanese yen deserves the status of being among the most tradable currencies in the exchange system (Li, 2017: 279).

2.1.7.5 Swiss franc

The official inception of Switzerland as a country with a well-established economy and a new constitution was recorded in history during the 1840s. The implementation of this constitution allowed the entire country to unify under one centralized administration and had various aspects that included creating a more unified and powerful system of banking with the adaptation of a single currency, which all cantons can use. This currency was the Swiss franc. Although several banking systems around Europe were deeply affected by the

two World Wars, Switzerland managed to withstand all the war difficulties, and maintain its economic status. For example, Germany needed to buy raw materials during the war and many countries would not accept its gold as a method of payment, so Switzerland intervened by buying gold from the German banks at the time, which allowed Germany to pay for required raw materials with Swiss francs. This shows how Switzerland mainly depends on foreign trade and that amplifies the value of its currency (Groux & Jesswein, 2011: 66).

The Swiss franc's status is highly regarded by investors and governments alike, as it has been strongly appreciated in comparison with other major currencies. The positive characteristics and reputation of the Swiss franc lead to less inflation, and compensation for inflation that occurs naturally over the past thirty years, while other commercial partners suffered from severe and negative fluctuations in exchange rates and inflation. This further enhances the stability of the Swiss franc (Danthine, 2011: 5).

The Swiss franc may seem like a safe haven to all investors, due to its stable properties. However, it may also formulate a challenge for investors and businessmen in Switzerland, and the national Swiss economy in general. The excessive demand for Swiss francs can become an obstacle for investors, and cause severe losses on the long-term. The immediate and sudden appreciation of the Swiss franc that massively took place during the economic crisis did not enable Swiss citizens to utilize the benefits that the Swiss franc can bring, and that is due to the nature of the Swiss franc, as it tends to appreciate in actual terms opposed to other currencies, which manifests an obstacle for investors, especially Swiss-based investors and businessmen, when their

investments income are changed back to their original currency. This clearly highlights the negative effects of the increasing value of the Swiss franc as a major currency (Danthine & Danthine, 2018: 1).

2.1.8 Classical international trade theories

Trade of production and goods between countries has happened throughout the history of human civilization and as scholars and theorists started to create the mind of the economy; they began seeking and explaining such phenomena; therefore, the theories of international trade were intensely developed. According to the economic literature, the theories of trade can be assorted in two essential blocks that are standard or classical theories, which were created in the history of the economic intellect and the modern company-based theories (Vaišnoraitė, 2018).

To understand the new trade changes, it is essential to understand the countries' approach to trade with each other throughout history. Over the years, economists have developed theories that have the ability to explain global trade mechanisms (Sen, 2010). Classical theories (Historical theories) are created from the perspective of a certain country or country-based theories. Theories started to change explaining the trade from a firm's point rather than a certain perspective of a country. Such theories are known as the "Modern/New Theories" and are company-based or firm-based. Both of the mentioned categories, the classical and modern, include many trade theories (Umutesi, 2018).

As one of the oldest trade theories, "*Mercantilism*" can be tracked down to the 16th century. As per the Mercantilism's concept, the wealth of a certain country was mainly measured by the country's holding of treasure, which was often gold. The main aim of the trade, for the Mercantilism theory, was to create a suitable trade balance and create the stability, which the country was viewed by the amount it would export its goods and production more than what it imports (Panda, Sethi, and Chaudhuri, 2016). For the Mercantilism ideology, countries followed and adopted the self-interest schemes and strict mechanism for prices in order to benefit itself. Several liberal economists (Leitao, 2010; Panda, Sethi, and Kumaran, 2016) condemned this later on; nonetheless, the concept of

mercantilism lead to the formal idea of “standard theory of international trade”. The theory dates back to 1775 when Smith created the “*Absolute Advantage*”. Adam Smith promoted the free trade concept, as opposed to the Mercantilism

Table 2.1: The International Theories of Trade (Developed by the Researcher)

Trade Theory	Author	Year	Findings
Merchantilist Law		1500-1800	The wealth of a county is measured by its holdings and it should export more than import.
Absolute Advantage	Smith, A.	1776	Free trade can increase international efficiency.
	Hume, D.	1776	Few countries were witnessing constant flow. Thus, the automatic adjustment was created.
Comparative Advantage	Ricardo, D.	1817	International efficiency trade gains would result when nations specialized in producing goods more efficiently regardless of others producing more efficiently as well.
Factor-Endowment Theory or Heckscher-Ohlin Theory	Heckscher and Ohlin	1933	Nations with “abundantly endowed factors” tend to export products, which are created by utilizing such factors.
	MacDougall	1951-1952	Comparison of exports of (25) industries in the UK and US Found strong endorsement for Ricardo’s theorem.
Factor- Price Equalization Theorem	Samuelson, P.	1948	Global Trade would cause a state of equal relative and absolute returns to comparable factors.
Leontief Paradox	Leontief, W.	1956	Testing the theory in 1947 in the U.S concluded that the U.S, as a capital-intensive, was exporting labor-intensive products
Contineo of table 2-1 : The International Theories of Trade Developed by the Researcher			
H-O Theorem	Robert M. Stern. Keith E. Maskus	1981	Testing in the U.S. concluded that the 1958 data supported Leontief Paradox.
	Bowen, et al.	1987	The result stated that Leontief Paradox was at a broader phase
	Golub and Hsieh	2000	Relative unit labor costs and trade for several countries proved that relative unit labor cost assisted in explaining the patterns of trade for the countries.

2.1.9 New trade theories

The paradox of Leontief caused that creation of modern firm-based trade approaches that explained the international trade. The alternative theories to the classical ones, which tried to fill the existed gaps left by the classical approach of trade and explained why the classical ones could not exist with real data of the world (Süreci, 2015). *Country Similarity Theory*. Linder (1961) proposed the theory, which was one of the first international trade theories examined from the demand rather than the perspective of supply. For Linder, the endowment of factors is generally significant in realizing the trade of primary products, though it is the demand's structure that is most essential when the trade of manufactured products is addressed. The market's demand is set mainly by "Revenues-Per-Capita". The consumers' preferences are directly determined by the level of Revenues-Per-Capita, meaning that the nations with similar development stage share indistinguishable demand structure. The main hypotheses of the theory are (Süreci, 2015):

- Countries with indistinguishable levels of income have indistinguishable preferences.
- Goods are differentiated.
- Increasing the country's returns to scale is a must.

As a company expands and increases its productions, it becomes restricted by the market's demand. Thus, if the market's demand is pleased, excessive goods production is needed for foreign markets. Linder (1961) stated, "The trade is the general extension across the foreign frontiers of a nation's web of economic activity". *Krugman New Trade Theory*. The New theories seek to explain the intra-trade, which occurs among similar nations that trade similar production in similar manufacturing condition. One of the theorists who attempted to explain this state was P. Krugman (1983). For Krugman, this occurs due to the economies scale. He also addressed the costs of trade, which were not discussed in the classical era of economic geography and trades as to the reason some industries are focused on one location. Krugman (1983) explained that the classical

theories where the returns are fixed, the competition is significant and the technology implemented is exogenous that cannot explain the real trade of the world. Majority of global trade is established on the increasing returns rather than *comparative advantage*.

The reality that the industrial nations with similar endowment goods that need similar factors amounts demonstrate the fact that the classical era failed to explain the trade on an international scale. Krugman sought to understand the international trade by assimilating the intra-trades, which happens due to the economies of scale and the inter-trade, which happens due to the factor endowments and comparative advantage. Therefore, if a country has a comparative advantage and an exporter of one certain industry, it will also import its goods because of the specialization of the intra-industry (Krugman, 1983). Krugman (1991) also formed another concept, which was “*New Economic Geography (NEG)*”. Previous theories had little-to-no interest in geography, assuming the costs of transportation to be quite little, though the economic geography has an essential part in international trade. Krugman analyzed the economic geography with unequal territorial development. Away from the endeavors discussing the economic geography that questions the reason why industries focus on a certain location, he examined focusing in certain regions leaving other untouched. The massive demand incline to attract industries as producing near massive market decrease the costs of transportation to the main home market. Manufacturing to other places would be distributed directly from the production location. Manufacturing near or in a large domestic market with urban residents would be attractive as well since other services and products of industries are also produced there. Krugman emphasized the territorial agglomeration away from the national one.

International Product Life Cycle Theory. Another method that analyses international trade through the conception of the product life cycle. The theory focused on the timing of innovation, the economic scale, and the role of uncertainty and ignorance. Raymond Vernon (1966), as the to incorporate the product life cycle into the theories of international trade, established the IPLC, which viewed how the premier exporter of new goods could be deprived of its foreign markets and become an importer in the end.

IPLC is put into (3) levels (Vernon, 1966):

- Modern Product. IPLC's first level; where the firms decide to establish and release the innovative product into the market. The market of new products would begin in a developed nation with technology, qualified labor, the capacity, and high-income customers. The product is mainly domestic, unstandardized and the price flexibility is significantly low.
- A Full-Developed Product. At this second level, the product's demand increase as do the product's standardization, this causes the drop in prices and allows the *economies of scales*. The product's demand increases and appears also in the overseas markets; thus, export still elevates but as do the FDI (Foreign Direct Investment), which causes higher levels of competition in the other markets
- The Standardized Product. In the IPLC's last level, the economies of scale significantly increase and products become highly standardized; thus, relocating production to low-cost non-productive countries. This allows and increases knowledge and technology leakage, which will also increase the competition from foreign rivals; therefore, the exports significantly drops at this level. The import from the overseas markets could appear because of the lower costs of production abroad.

2.2 Trade Policies

A tariff, the trade's simplest policies, is a tax charged when a product is imported. Specified tariffs are charged as a constant charge for every unit of imported products (For instance, \$4 for an oil barrel). The *Ad Valorem Tariffs* are tariffs levied as a portion of the products' worth (For instance, a 30% U.S. tax on the imported cars/trucks). In either case, the impact of the tariff is to increase the expenses of shipping products to another nation. Tariffs are the oldest type of developed policy and have been implemented as an essential source of income for the governments. The government of the United States gained most of the country's revenue from the tax, before introducing the income tax. Tariffs true aim has been often twofold: to protect the special sectors domestically and to essentially provide the country's revenue (Krugman, Obstfeld, and Melitz, 2018).

Trade among nations is generally possible due to the benefits gained from trading. The main motivation for trade between countries is the financial and domestic gains for them. The general benefits from the international trade are like the benefits from all sorts of trades; where they increase due to specialization's allowance for the resources to be essentially allocated to their most fundamental implementation in every trading nation. It is primarily known that it is ill-advised for a province or a region to be self-sufficient without realizing that labor division and specialization also exist within the aspects of international trade. (Umutesi, 2018).

The creation of trade, its diversion, and the effect of a traditional union was first introduced by Viner (1950) who indicated that the agreements of the regional trade could be harmful or beneficial to the participating nations relying on whether the arrangements of trade had led to the creation and diversion of trade. The diversion of trade refers to a trade shift from a less costly (or a more effective foreign manufacturer) to less effective manufacturers within the trading mass; while its creation is a trade shift from more costly to less costly manufacturers in the arrangement of trade.

The regional incorporation can be more interesting if a more competitive and compatible environment of trade is available. The main fields that they can concentrate on to establish a suitable environment are the massive differences of cost in the products; the high tariffs (tax) between countries/regions and the low tariffs for the foreign countries/regions; and the highly flexible curves of supply and demand. If discussed well enough, consumers and producers can be targeted effectively based on their responses to the trade policies (Neddy, et al., 2013). The general norms of policy, that are pushed and accepted by developed nations, seem to depend on two theorization strands. For advanced countries, the suggestion is to open up and liberalize in order to take advantage of the trade's benefits resulting from the doctrine of trade (Sen, 2010).

The development in trade policies and theories have not kept its pace with several matters concerning most of the nations in guiding the trade policies. Therefore, policies of trade, recommended by the mainstream neo-classical economists, exclusively dwell on the perfect conditions in the multiple local/foreign markets that are accomplishable under the policies created for

international trade. The literature addressing the suboptimal conditions has discussed all differences from the competitive symmetry as deformations. It is natural that the conclusions of trade policies that emerged have provided the required environment for international trade (Sen, 2010).

Classical theorists and economists provided important ideas on the trade's benefits, although the regional incorporation economics was still a future concept at that period. The modern economic theorists emphasize the complicated issues of international trade and policies and on the increase of trade benefits through the regional incorporation caused by the agreements of regional trade (Ulaşan, 2012).

Eventually, reducing the trade barriers and opening the borders essentially changes most of the countries into globally massive markets where these countries could manage their prices on their own through the developed policies of trade (Sen, 2010). The market's consumers are able to purchase products on a domestic level only; yet, they can exploit the chances and expand their interest in order to go overseas and purchase these products from other firms. Domestic manufacturers can sell both for domestic customers and have benefited from competitors in the overseas markets. However, as domestic manufacturers relocate from the domestic aspect to the overseas markets, they might lose their existing customers due to their expansion process (Ulaşan, 2012).

2.3 Effects Of Foreign Exchange Rate Volatility On Imports And Exports:

2.3.1 Introduction

Policymakers and economic theorists have been concerned with the impact of foreign rate volatility on trade flows that includes import and export. This concern has been amplified within the countries that happen to have relatively low levels of financial development. The fact that these countries rely heavily on exporting raw materials and demanding high commodity prices is the reason behind the economic growth of these countries, which further asserts the necessity to study the importance and significance of the relationship between foreign exchange rate volatility, economic performance, and import and export. Researchers and theorists have constructed a great body of literature to examine

the theoretical aspects of the foreign exchange rate volatility and its effects on import and export, mixed results were generally obtained, as the findings of these theoretical studies were either positive or negative. In order to explain this phenomenon, the characteristics of the foreign exchange rate volatility must be taken into consideration. For example, if any foreign exchange rates fluctuations seemed to exist, importers and exporters would augment the volume of their trade so that they could counter and offset any decreases that might occur to the revenue in the future, which actually improves the trading process, because it allows both importers and exporters to avoid any anticipated risks that the foreign exchange rate volatility might bring (Bahmani-Oskooee & Gelan, 2017: 2).

It has been argued that the cost for the risk-averse importers and exporters is increased by high levels of foreign exchange rate volatility, while foreign trade is drastically reduced by high levels of foreign exchange rate volatility, and this might be attributed to the fact that changes and alterations in the foreign exchange rates are unpredictable in nature,

therefore the profit and revenue is not guaranteed to be gained, which as a result decreases the benefits of the import and export. For example, importers and exporters are not allowed to participate in the forward market because of the absence of hedging in the foreign exchange rate volatility risk due to the limitations and high cost of implementing hedging in the forward market. This alone obstructs the flow of import and export (Panda & Mohanty, 2015: 305).

The relationship between the foreign exchange rate volatility and import and export has been introduced through multiple theories, as the foreign exchange rate volatility has a drastic effect on import and export, in a negative and, sometimes, positive way. Basically, it is commonly known among theorists and researchers that foreign exchange rate volatility has a negative effect on import and export and international trade in general. This view stems from the idea that importers and exporters are risk-averse, which illustrates a theoretical concept asserting that importers and exporters, in the absence of suitable hedging, normally tend to reduce the levels of their trade when they notice an emergence of high levels of foreign exchange rate volatility. However, a few studies suggest that there could possibly be some positive impact of foreign exchange

rate volatility on import and export, as the relationship between foreign exchange rate volatility, and import and export cannot be determined analytically, and that the possibility of the foreign exchange rate volatility to have a positive or negative impact on import or export totally depends on the underlying source. Bringing the concept of competitiveness back allows us to have an insightful look through this relationship between foreign exchange rate volatility, and import and export. For example, when two countries are trading specific amounts of goods in accordance with the levels of foreign exchange rates, they can both be affected by foreign exchange rate fluctuations of another country that is not involved in the trade at all. The foreign exchange rate volatility of this country might transfer importers in the domestic country from one trading partner to another; this same concept might drive some exporters in the same domestic country to sell their products to other countries that may offer them better prices (Choudhry & Hassan, 2015: 2-3).

For Bari & Togba (2017), their study “The Effect of Foreign Exchange and Real Exchange Rate on Foreign Trade in Liberia: An Application of Autoregressive Distributed LAG (ARDL) Approach” concluded, with the (ARDL) model, that there is a long-run and short-run relationship between the real exchange rate, nominal exchange rate, import, export, and the balance of trade. Bari and Togba’s research further presents a long-run statistically considerable positive relationships between the real gross domestic US product and export, nominal exchange rate and export, the trade terms and export, and the (intervention) of the central bank and export. The research also indicates that there is a long-run and short-run statistically important positive relationship between import and real exchange rate and the trade terms and import. In addition, the nominal exchange rate is related inversely to the Liberian imports in both the long-runs and short-runs. Additionally, the research shows that there is a long-run and short-run relationship between the (foreign) real gross domestic product and the balance of trade, the (domestic) real gross domestic product and the balance of trade, the nominal exchange rate and the balance of trade, and the real exchange rate and balance of trade.

Findings refer to the negative effects of foreign exchange rate volatility on import and export; these effects are accompanied by a relationship between

foreign exchange rate uncertainty, price competitiveness, and the volumes of trade. The hazards of unexpected fluctuations in foreign exchange rates are unmistakable, as they increase export prices and reduce the volumes of trade. These negative impacts that the foreign exchange rate volatility brings forces importers and exporters to adjust levels of prices and quantity in order for them to avoid these negative impacts (Hasan et al., 2015: 23). Volatility mainly affects import and export in three different ways. Firstly, it creates uncertain prices and returns on investment especially for countries with no forward markets. Even in other developed countries where importers and exporters could have access to forwarding markets that exist, foreign exchange rate volatility still could not be eliminated completely. High levels of foreign exchange rate volatility give importers and exporters no other choice but to buy goods from local markets, which hinders the flow of import and export. Thirdly, foreign exchange rate volatility drastically reduces and decreases direct investment and as a result affects international trade i.e., and import and export in a negative way. Fourthly, foreign exchange rate volatility slows down the process of trade as importers and exporters tend to reduce the intensity of their commercial activities so that they can avoid losses that may spring from any fluctuations in foreign exchange rates (Nyambariga, 2017: 6).

Foreign exchange rate volatility was shown to negatively affect the flow of exports and imports in the long run. The studies and statistics show that a slight increase in the foreign exchange rate in one country might lead to a huge economic drop, and a slight decrease in the foreign exchange rate might activate the economy in this country. The negative effects of foreign exchange rate volatility on import and export might lead to devaluation in the currency of this country; the vast majority of developed countries represent a clear example for such dramatic devaluation and depreciation (Twamugize et al., 2017: 84). Foreign exchange rate volatility plays a major role in determining price levels in modern economies. Due to the resulting high level of uncertainty, one of the major effects of foreign exchange rate volatility on the economy is hurting domestic demand on goods and services (Iyke & Ho, 2018: 514).

2.3.2 Imports and exports

Economists, philosophers, and researchers have been focusing their efforts on studying the aspects of international trade and how it can be developed for centuries. They have addressed in detail the causes of international trade, the impact of international trade on the nation's economy, and most importantly the two main components of international trade, these components are importing and exporting (Dorobăț, 2015: 106). The relationship between imports and exports has attracted the attention of both policymakers and researchers; the fact that imports and exports constitute a major part of the balance of payment in a country, unsustainable trade deficit depicts a violation of international budget constraints over time; and the existence of a long-run relationship between imports and exports is desirable for nations (Al-Khulaifi, 2013: 1122). Several studies address the significance of imports and exports on economic growth, the findings of these studies point out that imports and exports have a statistically significant positive effect on economic growth (Hamdan, 2016: 101). Generally, rapid export growth facilitates the acquisition of technology transfer and capital goods that pushes economic growth, and speedy growth provides the means to finance investment in human and physical capital, which supports more speedy export growth (Kalaitzi, 2018: 1). A number of empirical and theoretical studies have shown results in favor of exports as an economic growth engine, the results have provided significant information on the relationship between exports and growth (Cota, 2017: 21).

Exports of services and goods are seen as a stimulant of social and economic development due to their capability of alleviating poverty levels and stimulating economic growth. Moreover, exports are a major source of inflows of foreign currencies, which can be used, in turn, in import transactions; in several cases, imports are viewed as important instrumentation for foreign knowledge and technology to stimulate the economy (Bakari, 2017b: 34). Firms, corporations, and governments have a tendency to get involved in importing and exporting processes, these processes represent the most effective trading activities that enhance productivity levels of any institution on a macroeconomic and microeconomic level. Importing and exporting affect each other, as they have a significantly close relationship. When a certain institution or organization

carries out some exporting activities, the cost of importing is found to be reduced as a result, and that could have something to do with the fact that it either improves the institution's innovation and productivity levels or paves the way for more information channels to be established, which explains how the procedure of two-way trade works (Aristei et al., 2013: 56).

2.3.3 Definition of importing

Importing is defined as a process in which a country buys products from another country for the purpose of selling it domestically (Sharif, 2013; 7). Importing is also defined as an economic activity in which services and products are bought from a foreign country with the purposes of bringing them to the buyer's home country (Riska, 2017: 172). Importing could be considered an economic procedure in which agreements are concluded by economic agents who are seen as foreign suppliers or candidates. This procedure is associated with negotiation, sunk fixed costs, contract formulation, and also inspecting of goods (Vogel & Wagner, 2010: 644).

2.3.4 Definition of exporting

Exporting is defined as the selling of services or goods from one's own country for use in other countries; exporting is usually considered as having a lower level of commitment and risk in contrast to other market entry modes such as joint ventures (Amarasena, 2013: 4). Exporting can be considered as a kind of risk diversification through extension of sales in different markets in a different stage of the product cycle or with different business cycle condition, thus, exporting might provide an opportunity to replace sales at home by sales abroad when a negative demand shock hits the home market and would force a firm to close down otherwise (Wagner, 2013: 114). Exporting is also defined as selling services and goods that are produced in the seller's home country, to other countries (Riska, 2017: 172). Exporting is simply an international venture between two parties (firms, corporations, or governments) which allows the exporting party to use its advantages to enter the foreign market by selling goods or products (Cassiman & Golovko, 2011: 56).

2.3.5 Historical origins of importing and exporting

From the beginning of time, trade had not had the same significant role in the world economy, as more than 80 percent of any nation's economic activities extremely depended on agriculture. The fact that trade had not been the vehicle of the economy in the ancient world might have been attributed to the high cost of transportation and the limited purchasing power of citizens and commoners in urban or rural areas respectively. Trade and most specifically long-distance trade has been almost a secondary financial activity, an activity that specialized in trading luxurious products and only with those who could afford these products. The elite segment of society was not associated with trade, they were more involved with agriculture as trade was not as large as today and aimed at a narrow segment of the community (Wilson & Bowman, 2017: 3).

As the importance of trade grew, the elite communities were able to foresee the potential of an efficient international trade activity carried out amongst empires and nations, using the advantage of transactions recording within the empire, such as payments, wages, and installments to verify the quality of goods and repairing ships. This trade activity required the establishment of a road that links the majority of empires and nations together, a network that can connect North Africa, Asia, The Middle East, and The Mediterranean region, with each empire importing its very unique product, such as cedar from Phoenicia, gold from Bactria, lapis lazuli from Sogdia, ivory from India, and ebony and silver from Egypt. This road was called the Silk Road, and it is recognized to be the very first international market that had allowed different nations to import and export different goods and products for centuries (Frankopan, 2015: 3).

2.3.6 Importance of importing and exporting for the economy:

In today's world economy, international trade is considered a driver of economic growth in the long run. There is an inseparable link among importing, exporting, and economic growth. It has been suggested that bigger volumes of imports are associated with higher rates of economic growth, which is, in turn, associated with larger volumes

of exports. Some researchers have also suggested different directionalities for the relationships among these three variables; for instance, the growth of both

importing and exporting activities is a catalyst for economic growth, and, at the same time, stimulating importing and exporting activities requires healthy rates of economic growth (Bakari & Krit, 2017: 11). The export-led growth hypothesis (ELGH) is among the most prominent theoretical assumptions concerning the importance of exports for economic growth.

According to this hypothesis, not only is economic growth driven by increasing the numbers of high-quality workers in the economy and volumes of attracted investments, but it also relies on exporting as the main pillar of progress (Saaed & Hussain, 2015: 13).

International trade is a process that encompasses two important aspects, importing and exporting. This process helps jumpstart the economy of multiple participating countries, this eventually leads to the development of the economy of the whole world. Importing and exporting grants particular countries access to be exposed to several kinds of products that they might not enjoy the luxury of having in their own market, these products may take the form of goods (e.g., clothes, spare parts, food, and automobiles) or services (e.g., tourism, transportation, and banking services). Importing and exporting also aid developing countries in efficiently utilizing their natural and human resources in order to take advantage of the traits of international trade. These countries can then sell goods they have produced at a cheap price compared with other competitive countries. On the other hand, if one country does not happen to have the same amount of natural or human resources can buy well-produced goods and services from other countries that do not experience any limitations within their national resources. Importing and exporting positively influences the economic growth of various countries and nations as it financially liberates their economies and opens them up to the entire world, in order to make all countries benefit from what every economy has to offer (Vijayasri, 2013: 113).

International trade including importing and exporting increases levels of per capita income, which is one person's average income earned in a specific country. By raising levels of per capita income, levels of capital stock, total factor productivity, gross domestic product, and stock of education raise as well. This allows the country to have the ability to enhance their economic growth exponentially. To further simplify this concept, one should realize that

in order for a country to maintain economic growth, it should work on producing more goods, services, and products, exporting these products, and gain enough capital to help heighten levels of per capita income. This clearly sheds light upon the importance of importing and exporting at internationally achieving economic growth (Mogoe & Mongale, 2014: 61). On the domestic level, Exporting contributes to enhancing the gross domestic product, widens numerous markets for domestic production, and help businesses and enterprises highly benefit from this characteristic. Importing directly affects investment, expands the economy, and enriches domestic markets with the beneficial competition that help consumers completely benefit from it. This shows how international trade encourages greater levels of efficiency and improves the overall economy by allowing domestic firms to be exposed to international and foreign markets, and to the demands of distinct and special consumers and clients (Soi et al., 2013: 131).

In order to comprehend the importance of international trade for the economy, the two main ingredients of international trade must be fully understood with respect to large markets. Importing and exporting provide a larger market, allowing countries to produce their products in larger quantities at a cheap price according to the laws of supply and demand. Smaller and medium-sized firms, in particular, can greatly benefit from this feature, as it forces them to charge more market-value which enables them to quickly grow their capital and goodwill since they cannot participate by trading within larger markets. This understanding of the facets of importing and exporting within large markets, the economic competition must be understood first. The efficiency of economic procedures and activities depend on the intensity of economic competition. Economic competition creates an innovative atmosphere for economic participants as they get exposed to novel ideas on a regular basis so that economic growth can be achieved as a result (Lamaj, 2015: 1534).

When the activities of international trade are internationally undertaken, developing countries' economies are simultaneously improved and growing. Importing and exporting programs and procedures that have been implemented by international economies have contributed to the creation of what is known as emerging market economies, these programs and procedures encouraged many

developing countries to adopt importing and exporting policies in order to improve their economy, trade, and investment (Hassan et al., 2014: 24). As for countries that cannot import as many products as other advanced countries, exporting becomes the number one approach for them. Exporting positively affects these countries' economies on so many levels, it generalizes the use of technology within other industries and sectors encouraging workers and employees to produce more polished and well-crafted products so that they can efficiently participate in the exportation process and growing their economy as a result, enhances the capacity of utilization of raw materials and natural resources, increases the numbers of specialized employees and workers who are equipped with the required skills, increases the spillover effect of exporting, and affects the importation of other capital products and goods from other countries (Adeleye et al., 2015: 164).

2.3.7 Theories explaining the effects of importing and exporting on the economy

Numerous theories have been suggested to explain the effects of importing and exporting on the economy. However, three theories have attracted the largest proportion of researchers' interest, which is as follows (Werner Kristjanpoller & Olson, 2014: 7).

- The exports-led growth (ELG) theory: this is the most discussed theory explaining the relationship between international trade and economic progress. According to this theory, increases in the volumes of exports result in increasing the country's GDP. Moreover, the theory also suggests that increases in volumes of exports indicate that the country's resources have been reallocated in a manner that makes them more productive, which implies the occurrence of economic growth,
- The growth-led exports (GLE) theory: according to this theory, increasing economic progress and growth leads to larger volumes of exports. Economic growth results in generating more investments that are advantageous to economic growth, such as investments in technology and infrastructure. Such impacts lead to increasing the country's production and exporting capabilities.
- The imports-led growth (ILG) theory: this theory proposes that imports are a major factor stimulating economic growth. For example, in many emerging

economies characterized by low levels of technology production, technology imports are indispensably important for improving the economy's production capabilities, and that, in turn, leads to increasing the country's gross domestic product (GDP).

2.3.8 Factors influencing imports and exports

Imports are a central channel for knowledge and technology transfer, which are fundamental for improving economic growth and productivity; economic growth can lead to an expansion of exports, which can offer knowledge spillovers and other externalities, leading to virtuous circles of cumulative causation; further economic growth creates new

needs, which cannot be covered by domestic production, resulting in a further increase in imports (Kalaitzi, 2018: 1). Various studies address the significance of export expansion on economic growth, on one hand, and economic growth on export expansion on the other; indeed, the higher level of production is one of the basic reasons for export expansion, because the surplus of output can be exhausted in international markets; one study confirms the positive effect of gross domestic product on exports (Epaphra, 2016: 472). Growth impacts trade and vice versa, this is known as the relationship between growth and outward orientation/trade regime in the development economics literature, bidirectional causality between growth and exports is possible (Shahbaz & Rahman, 2014: 157).

The export of authentic goods leads to the assimilation of new experiences and skills, and creates demand for new technologies that are useful for enhancing the quality of national technology, this effect enhances international competitiveness and accelerates the need for the import of technically developed goods, which makes national manufacturing convenient and efficient (Kilavuz & Topcu, 2012: 203). One researcher argues that importing stimulates economic growth in the same level of magnitude exporting does; evidence indicates that in order for export stimulation strategies to be effective, they have to be implemented in combination with import stimulation strategies with a similar level of effectiveness. The explanation for this is that importing help in

facilitating export strategies by securing supplies of critical production inputs (Kababie, 2010: 3).

Recent decades witnessed a huge growth in importing, which is a result of the accelerated globalization of the world economy; advancements in the transportation, communication, and information technology; the growing tendency by many manufacturing firms to move their plants to other countries; intensified competition on a global scale; and the improved role that purchasing plays in many organizations (Aykol et al., 2013: 216). If importing enhances productivity, this can lead to companies to self-select into exporting and help improve their success in these markets, which might participate in the explanation of the empirical regularity that two-way traders are the most productive companies on average (Vogel & Wagner, 2010: 644). Trade liberalization, by supporting export growth, might accelerate the change in GDP structure, the result would be a simultaneous increase in GDP ratio of intermediate imports and manufactured exports, thus, what regressions reveal as a rise in the income-elasticity of intermediate imports may reflect the change in GDP structure towards manufactured exports (Ibarra, 2011: 359). Trade liberalization preferable based on standard trade theory which presumes that a country with a plentiful labor supply reallocates resources toward labor-intensive goods, leading to an increase in production and production; from standard theory context, it is expected that trade liberalization causes a considerable increase in promotion of exports, production and employment, and hence enhancements in trade balance (Yasmin, 2012: 73-74).

Some reveal that nations which liberalized their trade have enhanced their export performance, while other studies have discovered little evidence of a positive relationship between trade liberalization and growth in exports; in terms of imports, it would appear that trade liberalization exerts a positive strong effect on the growth of imports (El-Wassal, 2012: 2). Tariff reductions reduce the price of imports and enhance the real income, thus, both the intertemporal substitution effect and real income effect enhances imports; the substitution effect reduces the domestic consumption of exportable goods, while the real income effect enhances it, assuming the former effect prevails, trade liberalization will increase exports (Ju et al., 2010: 428). Trade policy reforms

motivate and support trade liberalization which tends to eventually enhance welfare derived from efficient allocation of domestic resources; efficient allocation of domestic resources increases production exportable goods and decreases production of import substitutes, simultaneously, trade liberalization helps enhance welfare by reducing price of import goods and import substitutes (De Silva et al., 2012: 243).

Trade liberalization measures attempt to reduce anti-export bias, raise competition, enhance resource allocation, maintain a stable balance-of-payments, and achieve realistic exchange rates; such measures improve economic growth, raise investment, and cause structural transformation in favor of non-agricultural sector (Hossain, 2013: 390).

2.4 Effects of importing and exporting on the economy

Imports and exports play a significant role in economic growth in developing and developed countries, economic growth is one of the most important determinants of economic welfare; exports help economic growth in many ways, economies of scale; greater capacity utilization; pressure of foreign competition; and stimulants of technological improvement, leading to more efficient management (Hamdan, 2016: 100). It has been established that export trade is an engine of growth, it improves balance of payment, increases foreign exchange earnings, creates employment, improves government revenue through taxes, tariffs and levies, and development of export-oriented industries in the manufacturing sector; these benefits will turn into better living conditions of the exporting economy (Afaha & Oluwatobi, 2012: 28). Both the empirical and theoretical literature support the significant effect of exports on economic growth; as a study explored the effect of trade liberalization on import, export, economic growth, and net export, the results indicated the major role of the variables in economic growth; another study showed the significant and positive effect of the number of exported firms and total exports value on economic growth of Sweden (Ali, 2017: 4).

It is known that exporting benefits the economic growth of nations; increase in exporting helps nations improve their macroeconomic situation by overcoming their ongoing account deficiencies, encouraging economic success and stability

with employment generation and income growth; at the microeconomic level, increase in exports enhances the competitiveness of companies and affects them to apply new technologies (Amarasena, 2013: 5). In the case of Export-Led growth hypothesis, export growth boosts the inflows of investment in the sectors where a country has comparative advantage and this can result in improving human capital accumulation, enhancing economic growth, and adoption of advanced technologies, in addition, the increased inflows of foreign exchange enhance the country's capacity to import technologically advanced capital goods, improving economic growth (Kalaitzi, 2018: 2).

Exports contribute to economic growth by enhancing capacity utilization, economies of scale and competition that supports incentives for better management and technological developments, as a result, the marginal higher in export industries; also, exports are concentrated inefficient economic sectors and, therefore, export expansion enhances the economy's overall total productivity (Cota, 2017: 21). A trade model of a developing economy shows exporting consumer goods in exchange for capital goods from developed economies, a typical trade model of a developing country displays that it imports machinery and other intermediates and exports light manufacturing or consumer goods; the imports of capital goods bring the growth of a developing economy with them by the effects of knowledge embodied with the goods (Kim, 2016: 237). Various macroeconomic policies have been identified as having a considerable effect on long-term economic growth; and exports are generally added up to participate in a definite way in economic growth with indulgence to means giving the go-ahead to encourage the spread of technical knowledge and give preferential treatment to the exploitation of economies of scale (Bakari, 2017a: 40-41).

Recent research has demonstrated that there is a strong relationship between levels of economic growth and exports. This is attributed to that exporting helps in improving several economic variables influencing economic growth. Nowadays, in the light of increasingly complex relationships and dependencies among countries worldwide, the role of exporting in stimulating economic development and growth has attracted increasing attention from economic researchers (Sunde & Ogbokor, 2018: 144). Import plays a significant role in

the relationship between growth rate and export, some researchers have the view that imports lead to higher exports by providing quality intermediate goods, therefore, import can also lead to higher economic growth; economic growth as also one of the objectives of developing countries, they made many programs to achieve economic growth, increasing import and export is one of these programs (Yüksel & Zengin, 2016: 147). Export plays a major role to increase economic growth and production, which reduces the cost of production and enhances efficiency, due to openness, the country gets benefits by comparative advantage; due to comparative advantage in other countries, production becomes cheap for the country and encourages the country to export-led growth (Muhammad et al., 2012: 382-383).

The classical-neoclassical trade theories explain the patterns of, and the rationale for trade flows, they emphasize the role of foreign trade in the efficient utilization and allocation of resources; most trade-theorists consider exports and imports equally important and intertwined in improving a country's welfare, in the sense of utility maximization (Hossain, 2013: 389). According to a group of economists, increase in exports means increase in employment in export sector industries which enhance gross domestic product and income, reallocating resources from less productive sectors to exports growth and exports industry supports growth of gross domestic product, and exports promote foreign exchange earnings which help to import capital goods (Abdus Samad, 2018: 2). Imports are beneficial for economic growth because they promote innovation through import competition; they provide factors of production, which are used in domestic and export sectors; and they are a source of technology transfer; given that, it is not surprising that the increase in imports can frequently prompt the increase in exports; both imports and exports are important for an outer-oriented economic strategy (Kababie, 2010: 3).

2.5 Challenges Associated With Importing And Exporting:

The volatility of foreign exchange rates is among the biggest challenges encountered in international trade. In many countries, foreign exchange rate volatility adversely affects volumes of exports. In such cases, economic programs aiming at increasing the country's exports could stumble if the

national currency's exchange rate's volatility is high. Moreover, volatile exchange rates usually result in an increased possibility of occurrence of a crisis in the country's balance of payments (Omojimate & Akpokodje, 2010: 24).

Removing excessive importing and exporting fees and eliminating restrictions and limitations that might be set on international trade has always been the most important requirements to help liberalize the economies of different countries across the globe, as this liberalization financially and positively influences the diversification of exports and imports, in the exporting country or the importing country. However, reality does not seem to be compatible with this plan, as there are still many economic and financial barriers, tariffs and trade policies that make it difficult for everybody to functions operates within the global market, as well as create obstacles for importers and exporters alike to achieve trade diversification. Economic barriers, tariffs, and trade policies can easily harm the import and export performance of a certain country. Duties and charges imposed on importation and exportation increase the prices of finished products shifting the production process from exporting to national and domestic sectors, which raises the values and prices of products and goods that can be traded. Moreover, tariffs imposed on exporters who use intermediate inputs force the range of foreign inputs to be drastically reduced, squeeze margins, and raise the cost of production. On the other hand, economic barriers and trade policies in a country that majorly depends on imports increase the change for this country to access the global market and extensively damage new potential markets and products that could have been established by this country. The absence of free trade agreements between countries may also lead to a narrowing of countries' exports and imports (Hollweg & Cusolito, 2015: 92).

It is highly important to mention that countries and governments might impose economic barriers, tariffs, or trade policies as a method of protecting small and medium-sized firms and industries, this way they cannot fall prey for large corporations within the arena of global economic competition, which can help these firms develop and improve gradually over time. However, multiple studies show that there could be some down effects on other aspects of the country's economy, as a result of maintaining such practice (David-Wayas, 2014: 1).

International conflicts, boycotts, wars, and sanctions all represent other hampering challenges that could be associated with importing and exporting. These previously mentioned challenges are not economic but political in nature. Ongoing political events that overwhelm the entire world deeply affect world economies in general and importing and exporting in particular. For instance, boycotting a specific product by a specific nation against another can resemble the intention of the boycotting nation to directly attack the entire economy of the boycotted nation, this occurs as an alternative to the severing of any diplomatic ties between countries or waging war. Although this alternative might not seem to bring as many human casualties as wars might bring, it still diminishes the country's economic status and annihilates the country's infrastructure on the long-term. Sanctions are another form of international disputes. Some countries can impose economic sanctions on other countries over some political events as a prevailing tool to carry out conflicts. Economic sanctions and boycotts are found to be much more harmful to importers and exporters. Various catalysts that accelerate the process of harming international trade can be added into the equation, such as the internet and the media, as these factors make it easier and quicker for these forms of boycotts and sanctions to take place in real life. Hence, importing and exporting are both highly affected in a negative way by these political procedures that represent a huge challenge for importing and exporting (Heilmann, 2016: 180).

The declaration of wars can also directly or indirectly affect importing and exporting in a negative way, as highlighted by the economic literature. Firstly, wars most definitely demolish human capital and natural resources of involved countries. Secondly, wars force citizens and governments of involved countries to focus their attention to fund the war itself rather than spending this amount of money on improving and growing their economies, this alone can completely diminish national income and production, and severe diplomatic ties with all economic partners who may be involved in the same war. Such funding can cause the country's currency to dramatically drop in value due to hyperinflation which occurred on multiple occasions throughout history. Thirdly, wars affect importing and exporting indirectly, through the increase in transportation costs

which resembles another challenge for importing and exporting (Lamotte, 2012: 558).

Another challenge that can become a major obstacle in the way of importing and exporting is maritime piracy. Maritime piracy can cause significant amounts of harm to import and export. The literature indicates that many traders around the world have claimed immense losses that can be estimated at billions of dollars as a result of maritime piracy in particular, this can also directly or indirectly harm the economy, for example, direct costs such as ransoms, breach of contract, a decrease in the values of products, delays in delivering cargo, or the extension of staff salary. Maritime piracy can also strike fear into the hearts of workers and sailors, leading to a grave economic recession as a result (Johnson, 2014: 2).

2.5.1 Impacts of Foreign Exchange Rate Volatility On Importing And Exporting

Countries rely heavily on imports and exports. Together they serve as the vehicle of the economy, and they play such a vital role in international trade. Foreign exchange rate volatility has an inextricable relationship with both imports and exports because they are mainly directed by currency. Therefore, the overall economic growth and balance occur when countries face fewer fluctuations and more stability in foreign exchange rates (Sahabandu & Asanka, 2018: 1). A great body of research has been conducted and dedicated to examining foreign exchange rate volatility and how it affects trade, imports, and exports. Numerous countries in the world have been experiencing foreign exchange rate fluctuations since their adoption of policies that were meant to financially liberate them, which encouraged further research to be conducted in regard to this matter.

The dynamics of foreign exchange rate volatility are deeply associated with how economies are formulated in many countries, this could either be attributed to the way foreign exchange rate volatility functions as an economic shock absorber, or the fact that foreign exchange rate volatility is involved with other economic variables, such as the financial development variable (Barguelli et al., 2018: 1303). The collapse of the Bretton Woods international monetary system has given rise to more liberalized forms of trans-national financial

transactions. This has resulted in dramatic changes in the volatility of currency exchange rates worldwide. It is widely argued that the increased volatility of foreign exchange rates has been an adverse factor in the global economic scene, with particular attention to effects on trading activities, and these effects are more pronounced in the case of underdeveloped countries with struggling economic structures. Proponents of the assumption that foreign exchange rate volatility is economically detrimental argue that its adverse effects are direct, in the form of rising levels of uncertainty and increasing costs of adjustments, and indirectly, in the form of more resource allocation and adverse effects associated with issuing or amending governmental policies. The unpredictability of changes in exchange rates drives agents who are highly avoidant of risks to severely shrink the size of their import/export activities. The significant risks associated with exchange rate volatility have echoed internationally, leading to mobilizing efforts towards limiting this phenomenon's potentially detrimental effects. For instance, the European Monetary Union (EMU) was established with the aim of limiting the levels of uncertainty associated with cross-border trading activities among European countries (back when the Euro currency had not been issued yet) (Chit et al., 2010: 239-240).

Although foreign exchange rate volatility might seem to be absolutely hazardous for some countries and that is because it serves as an obstacle for the citizens in these countries that prevents them from participating as importers or exporters, international firms and corporations may use foreign exchange rate volatility to benefit from its positive traits that have been referred to before. An increase in foreign exchange rate volatility promotes export activities and creates profit for international firms and corporations that export their products abroad, only if they can take calculated risks and learn how to fully protect their business or adjust volumes of trade in accordance with the fluctuations in foreign exchange rates. High levels of foreign exchange rate volatility can also enable firms and corporations to adjust their output as a response to any changes in prices.

As for firms and corporations that happen to possess a vast domestic market base, they can definitely benefit from foreign exchange rate volatility through the allocation of their products between the foreign and domestic market,

therefore high levels of foreign exchange rate volatility was found to increase the potential advantages of export and import, and create more benefits from international trade. The increase in foreign exchange rate volatility can eliminate and restrictions on import and export by facilitating the adjustment of the balance of payments, which improves import and export operations for these firms and corporations. This confirms the idea that foreign exchange rate volatility has a positive side to it, and it can be utilized (Chit et al., 2010: 242). The points that have already been addressed clearly reveal the asymmetric characteristics of foreign exchange rate volatility across different countries. Mainly, foreign exchange rate volatility has negative effects on import and export, but these negative effects only appear to influence import and export on the short-run. Thus, sometimes these effects happen to have positive aspects to them. The asymmetric nature of foreign exchange rate volatility and the way it affects import and export occurs when two countries of different economic positions trade products, industrial and developed countries do not seem to experience any problems compared with less developed and developing countries. For developed countries, foreign exchange rate volatility is found to be heavily positive for developed countries. The majorities of industries in these developed countries do not get significantly affected by foreign exchange rate volatility especially the automotive industry, on the other hand, agriculture and agricultural products produced by developed countries get negatively affected by foreign exchange rate volatility, these differences might be attributed to the maturity of importers and exporters as well as the depth of the financial markets in these countries (Tsen, 2014: 2).



3. LITERATURE REVIEW

Ozmen and Furtun (1998) aimed at investigating the hypothesis of “Export-Led Growth”, which depended on the quarterly information of 1970-1995 in Turkey. They used such seasonally adjusted series as well as they concluded that there was no cointegration existence with the actual income and the actual export. Upadhyaya (1999) had the models of the Autoregressive Distributed Lag (ADL) for (6) countries in Asia implementing annual data from 1963–1993 and data of GDP, and RER. In addition, they concluded that all the factors are regarded as the initial integration order. The main outcome of this study includes the devaluation, which caused contraction for the long-term in Thailand and Pakistan, and predictive in other states.

The study of Kamin and Rogers (2000) concluded that income and interest rates were just the main demand equilibrium of cash flow for Mexico, several variables, such as the rate of depreciation of exchange rate and inflation was not important. They examined the Mexican data by the use of the model of VAR with such four variables, endogenous, where the authors of the study employed the interest rate of US, inflation, output of 1980, and actual exchange rate, which were illustrated by its own transformation and innovations; indicating that the output’s response is indefinite as well as the passive.

Kandil (2000) analyzed “the impact of the exchange rate fluctuations on production. The researcher implemented a cross-state information base. The study concluded that the positive and unanticipated exchange rate shock caused the output contraction due to the considerable increase in inflation and the decrease in output.

The study of Bilgili (2000) examined the impact of the Real Exchange Rate Misalignment (RERMIS) on growth in the Turkish economy. The researcher estimated the regression models of the annual data for 1978–1998. Regarding the model of the textbook, the researcher concluded that database did not present any of negative or

positive RERMIS effects on the economic growth and the trade balance, which was not affected by the RER changes. The conclusions showed contradictions with the econometric analysis and theory, which was mainly about the implemented approaches. The author examined the integration level of factor; moreover, she concluded that the entire series is considered the integration's first order. Facing unit root's examination, the study applied the needed level series in the approaches and models of regression. When regression stochastic process and default are regarded as a nonstationary root, such regression is referred to as a spurious relationship or regression. The reasons beyond that are standard t-test, which does tend to be presented as spuriously considerable although when regression is mainly dependable on regressand in the OLS. A second contradiction is examining the essential model's coefficients. If the coefficient is not considerable, it cannot be elucidated

Through examining the impact of the volatility and trade terms of RER on the investment and growth in (14) sub-Saharan states with the implementation of GARCH approach, Bleaney and Greenaway (2001) implemented the database from 1980-1995. The study concluded that RER volatility has such a passive effect on investment and growth.

With the model of Kamin and Rogers (2000) Berument and Pasaogullari (2003) examined the effect of actual depreciation on the Turkish economy performance with the database from 1987-2000. They constructed (5) VAR alternatives, one of was referred to as the (core). They implemented a real exchange rate, actual GDP, the interest rate of nominal Us, and inflation in the implemented model. The actual rate is calculated through the nominal basket of the exchange rate, which is selected to match up the formal introduction of the basket, which was implemented in inflation and the chosen period. In the bivariate examination, for lags and transformations, the study concluded a negative relationship between real exchange rate and output. The outcomes of such examination proposed that the output's answer was constant and negative after the actual devaluation.

Vinh and Fujita (2006) made investigations in their study to examine "the impact of the real depreciation on the economic performance in Vietnam using the VAR approach." The researchers of the study found out that even though the

primary sources of the variance in the output, as well as the price level, are considered “own shocks” and the real devaluation has such positive impact on the output and the inflation.

Ardic (2006) aimed at investigating the “link between real exchange rate, output, and crises in Turkey.” The researcher found that, due to the devaluation, the goods, imported and intermediate, became so expensive as the production declined.

Dincer and Kandil (2011) examined the impact of the rate’s fluctuations on the disaggregated database. The study analyzed (21) Turkish exporting sectors. Establishing the theoretical approach of the study, which deteriorates the rate’s movements in the expected and unexpected elements, an investigation that examines the impacts through channels’ supplying and demanding. The anticipated appreciation of exchange rate matches up to the movements in the fundamentals, underlying ones, has such important adverse effects, that is contracting the export of growth across various sectors. According to the casual exchange rate’s fluctuations, divergence around the steady-state of balance, With the symmetric impact on the sectoral export increase. The study indicated the increased constriction of the export supply and demand for the assessment of currency. Opposite to that, the depreciation effect in the stimulating of the export increase had lost its movement. However, exchange rate fluctuations had a favorable net effect on export growth before 2003 and the effect of the net was unfavorable for the hereafter 2002. Implications anticipated the exchange rate movement, which guided the export strategies and the gesturing process importance of administrating the grounds of another reasonable forecasting. Furthermore, less exchange rate variances developed the sectoral export growth in of Turkey.

Alam and Ahmed (2010) presented a detailed estimation of the effect of exchange rate volatility on import demand in Pakistan during the period lasting from Q1 of 1982 to Q2 of 2008, with the use of the autoregressive distributed lag model (ADLM) for performing data analyses. The study adopted the documentary approach, relying on reviewing a number of previous studies illustrating the changes in exchange rate volatility, macro-economic indicators, and volumes of imports between Q1 of 1982 and Q2 of 2008. The study

introduced a number of results, of which the most important were the following: there are significant correlations among real effective exchange rate volatility, real effective exchange rates, relative prices of imports, levels of demand on imports, and rates of real economic growth; there is a significant positive correlation between aggregate import demand and real GDP, which implies that more economic growth is accompanied by demand on imports; and there is no correlation between relative prices of imports and demand on imports.

Hall et al. (2010) conducted an investigation of the impacts of real exchange-rate volatility on emerging-market economy countries (EMEs) and a number of developing countries. The study adopted the library descriptive approach, which relied on reviewing data-panel sets concerning exchange rate volatility for the period spanning from Q1 of 1980 to Q4 of 2006 in a number of EMEs (Argentina, Brazil, Hungary, Israel, Korea, the Philippines, Singapore, South Africa, Thailand, and Turkey) and for the period spanning from Q1 of 1980 to Q4 of 2005 in a number of non-EME developing countries (Bolivia, Colombia, Costa Rica, Dominican Republic, Ecuador, Guyana, Malawi, Morocco, Pakistan, Paraguay, and Venezuela). The most prominent results presented by the study include the following: there is a significant negative correlation between exchange rate volatility and volumes of exports, and EMEs patterns of adaptation to exchange rate volatility are more similar to that of developed countries than developing countries.

Bakhromov (2011) examined the impact of exchange rate volatility on importing and exporting in Uzbekistan. The study's adopted methodology was the library descriptive approach, which relied on reviewing previous literature containing macroeconomic data describing real exchange rate volatility and volumes of imports and exports in Uzbekistan during the period 1999-2009. The study presented a number of results, of which the most important are the following: there is a significant positive correlation between the level of both real domestic and foreign income and the level of import/export flows; there is a significant negative correlation between the level of the real exchange rate and volumes of imports; there is a significant positive correlation between the level of real exchange rate and volumes of exports; and there is a significant negative

correlation between exchange rate volatility on one hand and import demand and export demand on the other.

Erdal et al. (2012) investigated the relationship between the real effective exchange rate volatility and both agricultural imports and exports in Turkey. In order to achieve the study's main objective, the researchers adopted the documentary approach, relying on reviewing literature providing data on exchange rates and volumes of agricultural imports and exports in Turkey between 1995 and 2007, with the use of the Generalized Autoregressive Conditional Heteroskedasticity model for calculating exchange rate volatility. The study presented a number of key results, the most important of which are that there is a significant positive correlation between the real effective exchange rate volatility and volumes of agricultural exports and that there is a significant negative correlation between the real effective exchange rate volatility and volumes of agricultural imports.

Nazlioglu (2013) examined the effects of exchange rate volatility on the volumes of exports in Turkey. For the purpose of this study, the researcher adopted the historical approach, which relied on reviewing previous studies containing data about the volumes of exports of Turkey's leading 20 industries to leading international trading partners, which involved the use of the panel cointegration method for analyzing the data. The study's most significant results include that the effects of foreign exchange volatility on exports vary by industry, that there is a significant positive correlation between currency depreciation and volumes of exports, and that there is a correlation between the level of foreign income and the level of industrial exports.

Brun-Aguerre et al. (2012) presented a detailed investigation of the effect of exchange-rate pass-through on prices of imports in a number of emerging-economy countries. For that aim, The researchers used the historical research approach, which involved reviewing recent literature providing data on exchange rates, import prices (by local currency), and export prices (by foreign currencies) in (18) emerging-economy countries and (19) developed countries. The researchers presented several results, which include the following: exchange-rate pass-through in emerging-economy countries is influenced by exchange rate volatility, levels of openness, inflation rates and relative wealth;

exchange-rate pass-through is influenced by both protectionism (protecting the country's domestic products through imposing taxes on imported products) and output gap in both emerging-economy countries and developed countries.

Nicita (2013) discussed the role foreign exchange rates play in imports/exports movements worldwide by examining the effects of currency misalignment and exchange rate volatility on international trading activities and decision-making processes in governments of a number of countries. The study utilized the documentary approach, which involved reviewing previous literature containing detailed macro-economic data of (100) countries over the period spanning between 2000 and 2009. The study yielded several results, of which the most prominent are that there is an insignificant correlation between exchange rate volatility on the short run on one hand and both importing and exporting volumes on the other, that there is a significant correlation between currency misalignment on one hand and both importing and exporting volumes on the other, and that government policies impact the outcomes of currency overvaluation.

Bahmani-Oskooee et al. (2013) explored the trade relations and movement of imports and exports between Brazil and the United States during the period 1971-2010. The researchers adopted the library descriptive approach, which relied on reviewing previous literature discussing detailed data of international trade activities between Brazil and the United States during the period 1971-2010. The study's most significant results include the following: there is an insignificant correlation between exchange rate volatility and volumes of imports/exports in the long run; increased risk significantly affects volumes of imports/exports; there are statistically significant differences among companies, based on the size variable, in responsiveness to exchange rate volatility-related risks, for the favor of small companies; and the effect of exchange rate volatility differs significantly among economic sectors (e.g., tangible effects on exports of the agriculture sector in Brazil, and no effects on machinery imports in the United States).

Sendilmen (2017) discussed in his study the impact of real effective exchange rate volatility on the trade between the U.S. and Turkey while implementing the ARDL approach. The study analyzed the relationship between the exchange rate

volatility and trade using disaggregate monthly data from 2003-2015. The study concluded that there was not strong existence evidence for a long-run co-integrating relationship in all the (20) industries. Among the models used for several industries, two with a long-run relationship. Unsurprisingly, the index of industrial production in Turkey is a considerable regressor for the Turkish imports in most of the country's industries in the long-run relationship. The exports, however, are affected by the real effective rate of exchange on the Turkish Lira. In a short-run relationship, the autoregressive elements have the largest effect on themselves, for instance, the imports and exports, respectively.

3.1 Turkish Economy

As the Republic of Turkey got in the economic IMF program in 1994, a sequence of stabilization policies and reforms were implemented and economic retrieval was underway. With the 1996 integration into the Customs Union, the liberalization of trade in the country was accelerated, causing an increase in both imports and exports. The constant increase in inflows of capital in the 1997- 1998 provided other resources to finance the account deficiency at that period. At the same period, the accumulation of the foreign reserve contributed to a wide monetary strategy, which supported the increase of economy and investment (Yilanci and Ozcan, 2010).

Beginning the economic strategy and program in 1995, the Turkish policy for the exchange rate was developed in order to stabilize the country's real exchange rate. The CBRT (Central Bank of Republic of Turkey) decreased the nominal value of the exchange rate parallel to the system's expectations of inflation. The Turkish process of developments illustrates that the modifications in the economy's exchange rate have had an essential role in forming the conditions of the Turkish economy; where the relationship between the exchange rate and the Turkish economy had been in a constant improvement (Aydin, 2014).

The analysis of the Turkish economy can be covered within two periods: 1995-2002 and 2002- 2009. The starting period of the first time marks the country's integration to the Customs Union of the EU. Subsequently, changing the country's export profile. After the 2001 crisis, several structural reforms were

established in order to speed up economic recovery. As the improvement agenda paid off through increasing the exports of the country in the two periods of development. The econometric connection between economic growth and export in Turkey has been infrequently examined as stated by Takim (2010). However, significant modifications have been done for the Turkish export since the 1960s. With these modifications, the country followed “The policies of import substitution” in order to increase its exports. This year of 1960 was referred to as “The Planned Period” (Aydin, 2014).

The country followed a similar approach to the other developing countries during the past years. The economy had manifested recession signs in the late 60s while the government attempted to continue the import-based process of industrialization with the assistance of bureaucratic capitalist industrialists’ alliance and elites’ in the country’s economy (Akçay and Üçer, 2008).

After the military coup in 1980, the once rejected liberalization program was initiated by force and the country was ruled under military rule for the next 3 years to ensure civil and political stability while executing the neoliberal reforms. For the following years, GDP per capita growth annually in Turkey became negative for 8 times while causing 4 major economic recessions (World Bank Data). After the economic crisis in 2001, Turkey somewhat sustained stable GDP per capita growth for the following years, thus it started to be presented as an example of a successful developing country in the international arena. However, the sustained growth in GDP per capita did not have a visible repercussion on the balance of payments, nor curbed the inflation or unemployment rates.

3.2 Export Policies And Export Performance

Generally, Turkey has been applying an export-oriented approach since the 1980s. The main objective of such an approach is to constitute a foreign-oriented structure of the economy in the framework of a free-market approach and to be directly integrated with the markets of the world. With such an approach, the intense measures of Turkish export strategies consisting of several supportive elements, arrangements directed to the liberalization of foreign trade. In addition to the liberal arrangements done to improve the process of exports,

several support strategies and policies have been implemented. The facilities done for the exporters were to; tax refund, corporate tax exemption, the premium to the Support Fund and Resource Utilization, subsidies acquired from the Support and Price Stabilization Fund. However, the mentioned supports policies have been eliminated gradually according to the Turkish international commitments ever since the 2nd half of the 1980s (Demirhan and Ercan, 2018). Related to particularly exports support, the policies of the approaches required for the foreign trade, that were implemented under the conditions of the 1980s, have been modified in view of the economic developments done in Turkey in the 1990s.

As it is known that export is a necessary aspect for sustainable economic growth, understanding the financial behavior of export relations at a country-level aspect is one of the main topics considered in the international trade movement. Various forms of economic crises have affected the country several times in the last decades, and, consequently, the Turkish economy has undoubtedly provided firm strategies for such crises. The process of market-oriented economic reforms and trade liberalization had begun in Turkey in 1980 with the “24th of January Decisions”. For the Turkish economy, instead of implementing policies for import substitutive, the country depended on free trade regime and has started to apply the model of export-led growth since the 1980s. During the 1990s, and with further liberalized trade and capital accounts, the country economy became fragile against the external factors and shocks. Since then, the economy

experienced many disruptive economic crises and downturns. Three severe crises happened in 1994, 2001, and 2008 (Demirhan and Ercan, 2018).

The general perspective regarding the 1994’s triggering episodes during the crisis was the ill-fated endeavors by the government to mitigate the burden of the public debt with cash advances of the Central Bank, after calling off auctions of short-term bills of the treasury in the last quarter of 1993. When the 1994 budget of the government failed to include fiscal measures for strict and tightening policies, the financial markets’ anxiety has triggered a downgrade in the credit score of the country in 1994. Reducing the abilities of borrowing by

the government from the local market led the country to depend more on cash advances derived from the Central Bank. The surplus liquidity promoted imbalances between the official and rates of market exchange. The Turkish Lira's depreciation directed depositors and commercial banks to the foreign exchange. The intervention of the Central Bank to the exchange rate caused the loss of half of the global reserves. The overnight rates of interest sharply increased from 70% in January to 700% in March. The main characteristics of the crisis in 1994 are that it has started in the last quarter of 1993 and occurred in 1994 (Yücel and Yıldırım, 2010). The account deficit has increased to 6.5 billion US\$ from one billion dollars, the interest rates nearly 400%, significant external debt increased to nearly 12 billion US\$, the whole index of sale prices nearly 121% and the index of the consumer price has reached 106%. In addition, the rates of unemployment have reached 20% and the economy decreased to 5.5%. Eventually, the level development of the gross domestic production (GDP) presented the devastating effect of the crisis more plainly; the GDP level decreased its 1989-1990 level as shown in Figure (3-1) (Yücel and Yıldırım, 2010).

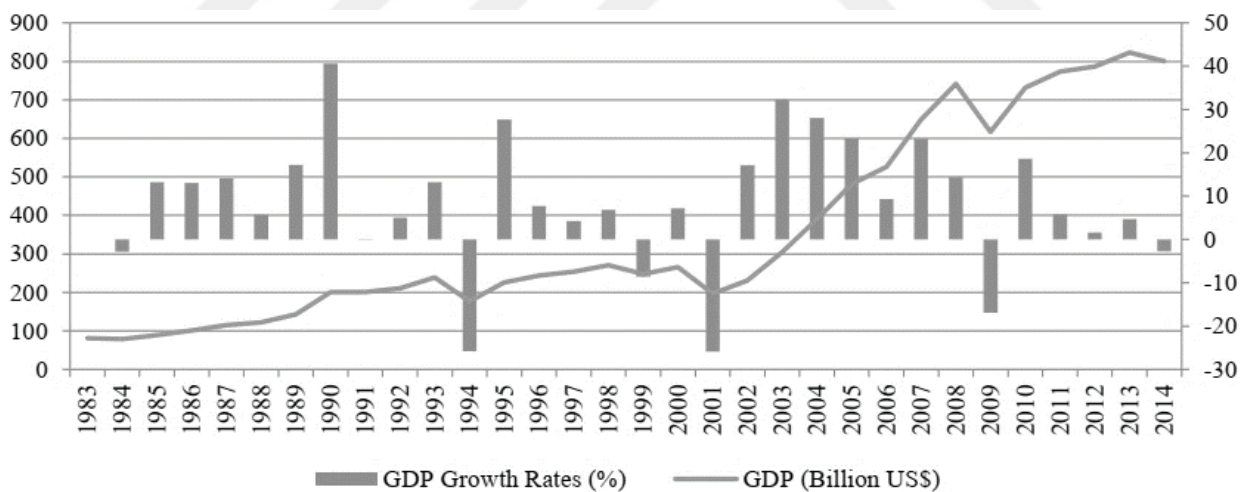


Figure 3.1: Annual GDP Growth Rate (%) and Annual GDP (Billions US\$), 1990-2010

Source: (Yücel and Yıldırım, 2010).

For two decades of the 1960s and the 1970s, Turkey pursued the development and industrialization strategy of import substitution. This approach, implemented and formulated through five-year strategies and annual policies, was justified due to the two-gap model, which was directly relevant to Turkey.

The domestic savings insufficiency and the earnings of foreign exchange were regarded to be the two elements that restrict the global investments and, consequently, affect the growth rate of the output. A considerable rise in the foreign exchange gains was considered to be challenging because of the fixed exchange rates and due to the low-income flexibility of the country's exports. Therefore, import substitution was considered to be the easiest approach to eliminate the constraints on foreign exchange (IDRC, 1998).

The export policies, including the promotion schemes of the country's exports, were implemented fully even in the heyday of the country's strategy of import substitution. The central merit of the 1970s adjustment policies, which were applied in a fixed regime of the exchange rate, was the devaluation. This merit was mainly accompanied by developments in the measures of export promotion. The system of the tax rebate, dating back to the 1960s, was done simpler, and two funds were created in the supporting efforts to the export credit strategies and the foreign exchange availability was growing for the manufacturing exporters. Such measures were required in order to eliminate the balance of payments challenges and to fulfill the needs of foreign exchange of the growth strategy of the import substitution (IDRC, 1998; Demirhan and Ercan, 2018).

The country's journey in its economy since the 1950s presents a significant transformation in prevailing perceptions regarding the trade's role in the economic development, which has occurred throughout the improving exports and imports policies in Turkey during the last two decades. This sweeping adjustment is not just a drive outcome to evade the bottlenecks caused by the shortages of foreign exchange, yet, perhaps more essentially, to accomplish more sustainable and higher growth. Thus, discussions on trade and its policies, and the exports and imports performance have become main debated matters in the last decades on the diverse issues as growth and stabilization. The export schemes of promotion, the policies of the exchange rate, and the policies of domestic demand are essentially central matters in the export policies analysis as the Turkish experience through the years shows many changes in its policies regarding the exports growth and performance, and its foreign trade policies.

3.3 The Foreign Exchange Rate Volatility In Turkey

Recent years have witnessed shifts in demand trends resulting mainly from high levels of foreign exchange volatility in Turkey. The automotive market has been among the most prominent sectors to be influenced by the foreign exchange rate volatility in the US Dollar/Turkish Lira (USD/TL) foreign exchange pair. Figure (3-2).

demonstrates the historical volatility of exchange rates in the USD/TL and EUR/USD foreign exchange pairs during the period 2004-2009.

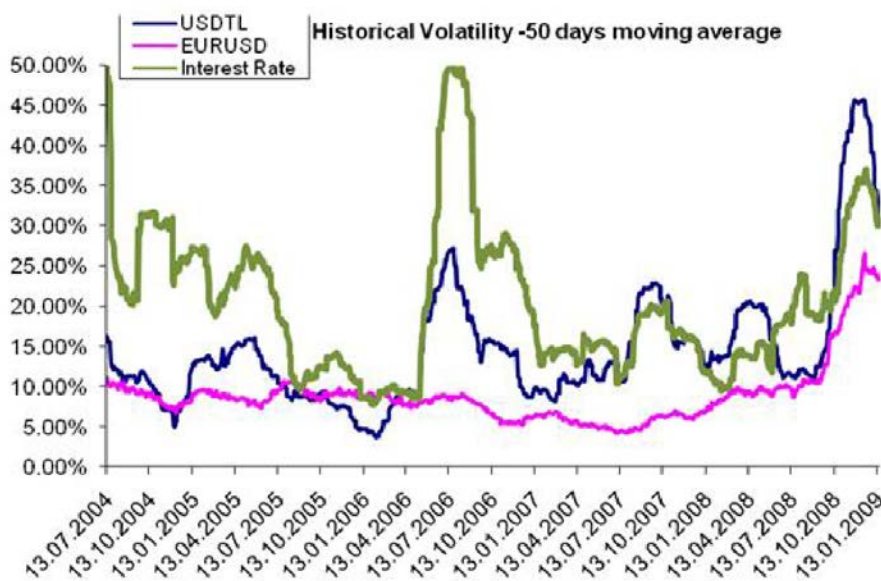


Figure3.2: Historical Volatility of Exchange Rates in the (EUR/USD) and (USD/TL) Pairs between Q3 of 2004 and Q1 of 2009 (50-Day Moving Average)

Source: (OSD, TSKB Research, 2008: 5).

Based on Figure (3-2), it is evident that the USD/TL pair experienced high levels of volatility between Q3 of 2004 and Q1 of 2009. The high volatility had its reflections and was pass-through to prices in the automotive market during the same period. The resulting uncertainty led to a steady decline in domestic demand on vehicles in Turkey within the same period. Table (3-2) demonstrates the resulting declining demand trend during the period 2005-2008:

Table 3.1: Automobile Sales (Units) in Turkey During the Period 2005-2008

2005	2006	2007	2008
332,238	288,145	277,101	229,781

Source: (OSD, TSKB Research, 2008: 6).

From Table (3-1), it is evident that price uncertainty resulting from high volatility in the EUR/TL foreign exchange pair severely affected demand on vehicles during the period 2005-2008. During that period, demand for automobiles witnessed a steady decline, dropping from 332,238 in 2005 to 229,781 in 2008, with a staggering decline rate of 31%.

3.4 Impacts Of Foreign Exchange Rate Volatility On Car Export

The local and foreign Exchange rates directly affect the real prices of production and goods traded among the nations in the world, as it shows the price paid when every transaction is performed. Similarly, domestic inflation has a vital part in setting the changing prices patterns of tradable goods (Jalil Khan, Parvez, and Shabib, 2014). For the developing nations, the issues concerning trade increase when the external factors appear in the form of “News” or “Shocks” and break the general flow of the international costs paid for the stocks or commodities. Exchange rates usually show highly indeterminable and unstable patterns responding to such news and shocks, causing a pattern known as “Volatility”. If this new/shock stays for a long period with a temporal effect that results in a wave in the exchange rates flow where the consequent patterns of trade will heavily disturb the stream of anticipated returns by increasing the loss probability for the concerned traders (Irfan, Irfan, and Awais, 2010). It is essential to understand how regularly these shocks could happen and the time they could persist. This requires the direct formulation of effective policies and strategies to protect the country’s exports and interests of its traders.

Currency and its evolution in relation with other international currencies are essential for both: the external stability (The sustainable deficit of current account) and the internal stability of the country’s economy (employment,

domestic money demand, and supply, price stability, rates of interest). Moreover, exchange rate volatility, exportation inflation, and the nominal exchange rate are generally interdependent factors, which reflect the fundamental evolution of a sustainable and balanced economy (Gherman, Ștefan, and Filip, 2013). The literature presents several results regarding the relationship between exchange rate volatility and exportation. Soleymani, Chua, and Hamat (2017) investigated the part of external exchange rate volatility for the ASEAN-4 countries (Malaysia, Indonesia, Thailand, and Singapore) and their (5) main partners of trades. The results showed a considerable influence of the external exchange rate volatility on the countries' trade. Investigating the volatility role of exchange rate on the exports of (5) East Asian nations, Chit, Rizov, and Willenbockel, (2010) stated that there is a presence of a considerable trade-promoting impact of the external volatility of exchange rate. Implementing French firm-level information, Hericourt and Nedoncelle (2015) confirmed the considerable trade-promoting impact of the external volatility of the exchange rate at the firm-level system.

3.5 Conclusion

The economic relation essentially constitutes international trade. For many centuries, international trade, exchange rates, and trade policies have been the main foundation of economic development around the world. Since the initiation of trade between countries, international trade has provided economic benefits for the developed and undeveloped countries. However, the volatility of exchange rate, the uncertainty resulted from the exchange rate volatility, capital movements, investments, imports and exports, production negatively impacts the economic process. It is essential to understand and realize the factors that cause the volatility of the exchange rate in order to establish the required and suitable economic policies that will decrease the volatility of exchange rates. Even during the times of economic growth, the general threat of volatility of exchange rates. That is the reason for the policy makers, politicians, traders, etc. can promote, endorse, and develop the appropriate monetary and macroeconomic policies, taking into consideration the essential variables affecting the volatility of exchange rates. In future studies, it is important to

analyze the effect of exchange rates volatility on all economic aspects and understand the general indicators of volatility in Turke





4. RESEARCH METHODOLOGY

4.1 Introduction

The volatility of exchange rates became a global phenomenon soon after the collapse of the Bretton Woods system in 1973, with significant impacts on international trade flows becoming a norm. This area has become a major field of interest in international economics and finance trying to identify and understand the underlying relationship between exchange rate volatility and trade flows. This chapter provides details on the research methodology that was applied to achieve the research objective. It shows the research tools, which are Stationarity and Unit Root tests and volatility Estimation. The last section of the current discusses in detail both the ARDL-bound testing approach (Pesaran et al., 2001).

4.2 Research Design And Setting

The research design is the glue, which keeps all the research components together (Kombo and Tromp). According to Kothari, the research design is the conceptual structure by which the entire research is implemented. It provides the blueprint upon which the data collection, measurement, and analysis are conducted. The current research was conducted based on the analytical case study using data time series of the financial years between 2001-2018. The purpose of the analysis is to investigate the presence of the long-term relationship between the change in cars export in Turkey and the change in the foreign exchange rate. Besides, it is intended to explore the relationship between the volume of care trade and the forging exchange rate changes in Turkey, which contributes to planes and policies set to improve the business of manufacturing and trading cars.

4.3 Data collecting

Depending on data from:

- Automotive manufacturers association Turkey (OTC) reports and Industrial Development Bank of Turkey (TSKB) research automotive for cars export numbers and export by value .

Table4.1: Turkey Export of cars by unit and value

years	export by unit	export value
2001	145457	\$965,481,340
2002	169,920	\$1,299,715,880
2003	213,587	\$2,070,548,508
2004	305,072	\$3,943,365,661
2005	319,825	\$4,368,744,306
2006	430,420	\$5,683,246,431
2007	504,353	\$6,941,721,286
2008	525,301	\$7,505,740,617
2009	388,994	\$6,092,424,656
2010	439,999	\$6,200,089,720
2011	442,674	\$6,534,083,060
2012	412,991	\$6,068,045,119
2013	459250	\$6,855,475,589
2014	584652	\$7,258,361,005
2015	604839	\$6,881,867,274
2016	745781	\$8,336,928,418
2017	921480	\$11,790,577,760
2018	1016260	\$12,420,951,066

- Turkish central bank electronic data system delivery (EVDS) for Turkish lira price to US dollar.

Table 4.2: Turkish lira price to US dollar.

Years	Turkish lira price to US dollar.(USD/TRY)
2001	1.49
2002	1.63
2003	1.39
2004	1.34
2005	1.34
2006	1.41
2007	1.16
2008	1.51
2009	1.51
2010	1.55
2011	1.91
2012	1.78
2013	2.13
2014	2.32
2015	2.91
2016	3.53
2017	3.81
2018	5.26

4.4 Stationarity And Unit Root Tests

Classical econometric literature assumes and requires that all the variables should be stable over time and stationary. The desired properties of a stationary series are described as; i) constant mean, ii) constant variance and iii) constant autocovariances for each of its given lags. Stationarity is considered a major test for considering the stability and degree of reliability of results presented under various econometric methods (Brooks, 2008). The literature on the subject shows that the use of non-stationary series leads to spurious regressions, implying unreliable and inconsistent results. Furthermore, the standard distributions, such as **t** and **F** statistics, are not valid for non-stationary series (Granger and Newbold, 1974).

4.4.1 Types of stationary series

A strictly stationary process is one where, for any time period, $t_1, t_2 \dots t_T \in Z$, any $k \in Z$ and $T = 1, 2, \dots$

$$F_{y_{t_1}, y_{t_2} \dots y_{t_T}}(y_1, y_2 \dots y_T) = F_{y_{t_1+k}, y_{t_2+k} \dots y_{t_T+k}}(y_1, y_2 \dots y_T)(1)$$

Where F denotes the joint distribution function of the set of random variables (Tong, 2005). In other words, a strictly stationary series' distribution is invariant to time or remains unchanged as time progresses. This has a very important implication with regards to the stability of inference, that is the probability of y falling within a particular interval is the same irrespective of the time of the occurrence of the event, whether in the past or the future.

4.4.2 Weakly Stationary

A weakly stationary process is traditionally defined as the one satisfying the following conditions:

$$E(y_t) = \mu \quad (2)$$

$$E(y_t - \mu)^2 = \sigma^2 < \infty \quad (3)$$

$$E(y_t - \mu)(y_{t+k} - \mu) = \gamma_k \quad (4)$$

Equations 2-4 above define the characteristics of a weakly stationary series i.e. i) constant mean, ii) constant variance and iii) constant autocovariance γ_k of each of the lags.

4.4.3 Stationarity/Unit Root Tests

4.4.3.1 Dickey-Fuller Test

The tests are common for examining the stationarity merits of the data regarding the time series. These are mainly established on the recession, where the series factor (Y_{t-1}) is regressed against its initial lag (Y_t) with the main assumption that the lagging (u_t) is considered noise. If the initial lag's coefficient is as 1, it indicates the root's existence:

$$Y_t = \rho Y_{t-1} + u_t \quad (5)$$

However, the above equation is evaluated as :

$$\Delta Y_t = \delta Y_{t-1} + u_t \quad (6)$$

ΔY is the main distinction between Y_{t-1} and Y_t ; while the $\delta=0$ hypothesis is examined. If the hypothesis is agreed up, Y , then, has a root and is non considered stationary or Y_t being a random aspect. $\delta < 0$ indicates that the timing chain is constant. For Dickey and Fuller (1979), the main t-test standards cannot be

implemented as the values of t calculated for this examination do not come behind the distribution of the asymptotic normal. They calculated the essential values; thus, this examination is known as the Dickey-Fuller

Test/examination. if $\delta=0$ is considered a stationary variable; then the main t -test standards can be implemented (Gujarati, 2003). The Test has been applied in the literature as well with somewhat contrasting settings than in (6):

$$\Delta Y_t = \alpha_0 + \delta Y_{t-1} + u_t \quad (7)$$

Y_t is a random aspect with drift around random tendency:

$$\Delta Y_t = \alpha_0 + \alpha_1 t + \delta Y_{t-1} + u_t \quad (8)$$

Where α is the mean concept and α is the Y elasticity to trend factor t . If the hypothesis of the null is inadmissible, i.e. δ become more than 0; thus, the other hypothesis in (7) will make Y_t a stationary aspect around a non-zero drift ($\alpha_0 / 1 - \rho$) and Y is considered stationary with a deterministic tendency (8). The procedure of hypothesis examination include the initial evaluation of (6- 8) through implementing “OLS”; then splitting up Y_{t-1} coefficient (δ). If the calculated values are more than the other essential values, the hypothesis $\delta = 0$ null is inadmissible.

4.4.3.2 Measurement of exchange rate effect

The GJR-GARCH as a method of analysis developed by Glosten et al. (1993). It is a method applied to analyze the anomalies and their effect on stock returns.

The empirical observations show that when compared to positive shocks more powerfully, the variance in the t times is affected by the negative shocks in $t-1$ times. Those can be found out by the GJR-GARCH method better than GARCH model. Leverage effect labels this asymmetry and it depends on that the negative shocks cause the increase in the risk leading to the increase in the leverage. $(\alpha + \gamma)$ is the efficient coefficient associated with a negative shock. However, γ , which is statistically significant, reflects the negative shocks in the financial times series. (Glosten et.al., 1993; Rapach & Wohar, 2008, p. 387).

According to the GJR-GARCH model, there is a return series ($rt = \mu t + \epsilon t$) that consists of expected return series (μt) and zero-mean white noise term (ϵt). $\mu =$

$E(r_t|F_{t-1})$ is conditional mean of the time series r_t given the information set F_{t-1} and $\sigma_t^2 = \text{Var}(r_t|F_{t-1})$ is the conditional variance.

ε_t is the iid innovations with mean zero and variance. ε_t does not have to be successively independent even though it is serially uncorrelated. For instance, if we assume that the conditional heteroscedasticity is present, GJR-GARCH model will suggest that there is a specific form for it. When given the assumed standard Gaussian- the $\varepsilon_t = \sigma_t z_t$ with z_t variance-, it gives ε_t – GJR-GARCH. Consequently, it leads to the following:

$$\sigma_t^2 = \omega + (\alpha + \gamma I_{t-1}) \varepsilon_{t-1}^2 + \beta \sigma_{t-1}^2$$

$$I_{t-1} = \begin{cases} 0 & \text{if } r_{t-1} \geq \mu \\ 1 & \text{if } r_{t-1} < \mu \end{cases}$$

In GJR-GARCH model, all the parameters (μ , ω , σ , γ , β) can be valued with (ML) maximum likelihood estimator at the same time excluding the leptokurtic returns which is similar to the GARCH model. The GJR-GARCH Model shows stylized facts, which reflect the financial time series like volatility clustering. If volatility is high in time $t-1$, it will likely be higher in time t . accordingly, the variance in t . is affected by a shock in time $t-1$. But volatility itself returns average (mean reverting) if $\alpha + (\gamma/2) + \beta < 1$ and it will vacillate around the square root of the unconditional variance (σ). An unconditional variance will be as the following:

$$\sigma^2 := \text{Var}(r_t) = \frac{\omega}{1 - \alpha - \frac{\gamma}{2} - \beta}$$

Following the normality assumption of z_t , γ' is multiplied by $1/2$. It is assumed that the Conditional distribution of returns is symmetrical around μ . The effect of exchange rate volatility on the volatility of stock returns is shown by the following GJR-GARCH model.

$$\mu_t = E(r_t | F_{t-1}) = \lambda_0 + \lambda_1 D_t + \sum_{i=1}^k \phi_i (r_{t-i} - \mu_{t-i}) + \sum_{j=1}^l \theta_j \varepsilon_{t-j} + \varepsilon_t$$

$$\sigma_t^2 = \omega + \delta D_t + \sum_{i=1}^p (\alpha_i + \gamma I_{t-i}) \varepsilon_{t-i}^2 + \sum_{j=p+1}^q \beta_j \sigma_{t-j}^2$$

The equation above shows that autoregressive moving average process of k and l order is consecutively formed. D_t , 1 in the research period, is a dummy variable. Return series (r_t) is generally defined as the first difference of natural log of stock prices (P_t): $r_t = \ln(P_t) - \ln(P_{t-1})$, in which P_t shows that the stock price is adapted to the capital change in time t (e.g. dividend, rights issues, etc.). In conditional variance equation (4), which is similar to the later, there is a linear function of squared errors and variances of p and q order. In this equation, exchange rate volatility effects are reflected by the D_t . In both equations, all the parameters of the GJR-GARCH model estimate at the same time with ML estimator. However, Quasi-Maximum Likelihood (QML) estimator is more accurate even if the true distribution is different. It does not affect its accuracy.

4.5 ARDL – bounds testing approach

The study applies the ARDL examination method developed by Pesaran *et al.* (2001) in order to evaluate the long-run model of trade in (33-34). The essential advantage of this method over the other approaches is that it is firm enough to overcome the stochastic factors' behavior and has no assumptions regarding the factors' integration. This method evades the pre-examination issues linked with the factors' integration that the norms techniques of cointegration generally encounter. It permits the author to differentiate between the short and long-run impact of the factors, which is essential in the analysis (Bahmani-Oskooee and Hegerty, 2007; Pesaran *et al.*, 2001). The model of ARDL includes the variables LAGs. LAGs are shown in the models for various aspect. The LAG includes the decision lag, recognition lag, and the impact lag. The patterns with these LAGs are quite interesting for the standard analysis of the economy (Brooks, 2008). The Error Correction Model (ECM) is a short-term functional pattern including the first-factor variation and a correction term of a certain error. It is an adjusted

ARDL state; where the reliant factor (y) with a known purpose and a LAG among other factors:

$$y_t = \alpha_0 + \alpha_1 y_{t-1} + \alpha_2 x_t + \alpha_3 x_{t-1} + u_t$$

$$\Delta y_t = \alpha_0 + (\alpha_1 - 1)y_{t-1} + \alpha_2 \Delta x_t + (\alpha_2 + \alpha_3)x_{t-1} + v_t$$

Moreover, to apply the ECM aspect, the next assumption is needed:

$$(\alpha_1 - 1) = -(\alpha_2 + \alpha_3)$$

or

$$(\alpha_1 + \alpha_2 + \alpha_3) = 1$$

Characterizing the mentioned assumption needs the total coefficients in the mentioned equation to be as (1), which is y and x short-term correlation. In order to locate the long-term correlation, it is presumed that the factors are at their constant states and the initial distinguish concept is (0). The above mathematical factors are the long-run correlation between the factors of the model.

To apply the approach of ARDL in order to cointegration the approach into the current model, the short-run functions require to be combined with the long-term aspect:

$$\begin{aligned} \Delta m_t = & \beta_0 + \beta_1 \sum_{j=1}^{n1} \Delta m_{t-j} + \beta_2 \sum_{j=0}^{n2} \Delta y_{H,t-j} + \beta_3 \sum_{j=0}^{n3} \Delta p_{t-j} + \beta_4 \sum_{j=0}^{n4} \Delta V_{t-j} \\ & + (\lambda_1 m_{t-1} + \lambda_2 y_{H,t-1} + \lambda_3 p_{t-1} + \lambda_4 V_{t-1}) + v_t \end{aligned}$$

$$\begin{aligned} \Delta m_t = & \beta_0 + \beta_1 \sum_{j=1}^{n1} \Delta m_{t-j} + \beta_2 \sum_{j=0}^{n2} \Delta y_{H,t-j} + \beta_3 \sum_{j=0}^{n3} \Delta p_{t-j} + \beta_4 \sum_{j=0}^{n4} \Delta V_{t-j} + \beta_5 \sum_{j=0}^{n5} \Delta TCV_{t-j} \\ & + (\lambda_1 m_{t-1} + \lambda_2 y_{H,t-1} + \lambda_3 p_{t-1} + \lambda_4 V_{t-1} + \lambda_5 TCV_{t-1}) + v_t \end{aligned}$$

Several diagnostic examinations have been done to examine the model's stability. Since several lagged reliant factors are shown in the current model, it is important to examine the autocorrelation existence. The Durbin-Watson stat(DW) test and Q-statistics examinations for the autocorrelation are done for all the mathematical issues and the outcomes are stated in the tables.

5. STATISTICAL ANALYSIS

We have two simple regression models as follows:

$$\text{Model (I) : Export(unit) } t = \beta_0t + \beta_1t (\text{USD/TRY}) + \varepsilon t$$

$$\text{Model (II) : Export(Dollar) } t = \beta_0t + \beta_1t (\text{USD/TRY}) + \varepsilon t$$

where USD/TRY is independent variable

export by dollar and export by unit are dependent variables

εt : Random Error

β_0t : Constants (y - Intercepts)

5.1 Test Of Normality Of Residuals

Table (5 1) show the normality test (Jarque Bera test), the results illustrated that the residuals for all two models are the normal distribution, since the P-Value for each model equal 0.841, and 0.942 > 0.05.

Table5.1: Test of Normality Of Residuals

Test of Normality For Residuals(Jarque Bera)	Model (I)	Model (II)
Jarque Bera	0.344	0.120
p-value	0.841	0.942
Decision	Distribution is Normal	Distribution is Normal

5.2 Test of Heteroskedasticity(Breush-Pagan-Godfrey Test)

The Breusch–Pagan test, developed in 1979 by Trevor Breusch and Adrian Pagan, is used to test for heteroskedasticity in a linear regression model. It was independently suggested with some extension by R. Dennis Cook and Sanford Weisberg in 1983. It tests whether the variance of the errors (errors and residuals are two closely related and easily

confused measures of the deviation of an observed value of an element of a statistical sample from its "theoretical value". The error (or disturbance) of an observed value is the

deviation of the observed value from the (unobservable) true value of a quantity of interest)from regression is dependent on the values of the independent variables. In that case, heteroskedasticity is present. Table (5-2) shows that the P-value for each model equals 0.224, and 0.219 respectively which is greater than 0.05, this confirms that the Breusch-Pagan-Godfrey heteroscedasticity test accepts the null hypothesis of homoscedasticity (means that the null hypothesis of no autocorrelation was accepted)at the 0.05 level of significance.

Table5.2: Test of Heteroskedasticity(Breush-Pagan-Godfrey Test)

Test of Heteroskedasticity	Model (I)	Model (II)
Obs*R-squared	1.477	1.154
p-value	0.224	0.219
Decision	Homogeneous	Homogeneous

5.3 Test Of Autocorrelation

Autocorrelation is a characteristic of data which shows the degree of similarity between the values of the same variables over successive time intervals. When you have a series of numbers, and there is a pattern such that values in the series can be predicted based on preceding values in the series, the series of numbers is said to exhibit *autocorrelation*. This is also known as *serial correlation* and *serial dependence*. The existence of autocorrelation in the residuals of a model is a sign that the model may be unsound. Autocorrelation is diagnosed using a *correlogram* (*ACF plot*) and can be tested using the *Durbin-Watson test*. Table (5-3) shows that the value of Durbin-Watson stat(DW) for the two models at first difference equal 1.827, and 1.668 respectively which is greater than the upper Durbin-Watson table $D_u=1.391$. that means there the Autocorrelation does not exist.

Table5.3: Test of Autocorrelation

Test of Autocorrelation	Model (I)		Model (II)	
	Zero Difference	First Difference	Zero Difference	First Difference
Durbin-Watson stat(DW)	0.618	1.827	0.466	1.668
Decision	Exist Autocorrelation	No Autocorrelation	Exist Autocorrelation	No Autocorrelation
D _L =1.158 D _u =1.391 (Durbin-Watson table)				

5.4 Descriptive Statistics For Dependent And Independent Variables

Table (5-4) shows the Normality and descriptive statistics for dependent and independent variables, the results mean, median, maximum, minimum, Std. Dev. Skewness and Kurtosis for each variable, also the results indicates that the distribution of the data for each variable is normal since from the p-value for Jarque-Bera test illustrated that the P-value for each variable greater than 0.05.

Table5.4: Normality and Descriptive statistics for dependent and independent variables

statistics	Export unit	Export (dollar)	USD/TRY
Mean	479491.9	6.18E+09	2.110000
Median	441336.5	6.37E+09	1.590000
Maximum	1016260.	1.24E+10	5.260000
Minimum	145457.0	9.65E+08	1.160000
Std. Dev.	234677.6	3.03E+09	1.095644
Skewness	0.780857	0.196573	1.659801
Kurtosis	3.180494	3.0751	4.922197
Normality for dependent and independent variables			
Jarque-Bera	1.853646	0.120153	2.03595
Probability	0.395809	0.941693	0.4014
Observations	18	18	18

5.5 Est The Stationary Of The Variables

A regression analysis of the time series is stationary if these two conditions are satisfied:

- It's mean and variance are constant over time

- Covariance depends only on the distance between the periods and not on time.

A time series with these characteristics are known as weakly or covariance stationary.

Regressing a nonstationary time series on one or more nonstationary time series may often lead to spurious (meaningless) regression. In nonstationary time series the coefficient of determination R^2 is high and statistically significant regression coefficients, but not reliable.

To test the stationary of time series we have three methods:

5.5.1 First method: graphical analysis

We graph the first difference of the dependent and independent variables and Figure (5-1) shows that the curve oscillates randomly around the arithmetic mean, that indicates that the data for each variable is stationary.

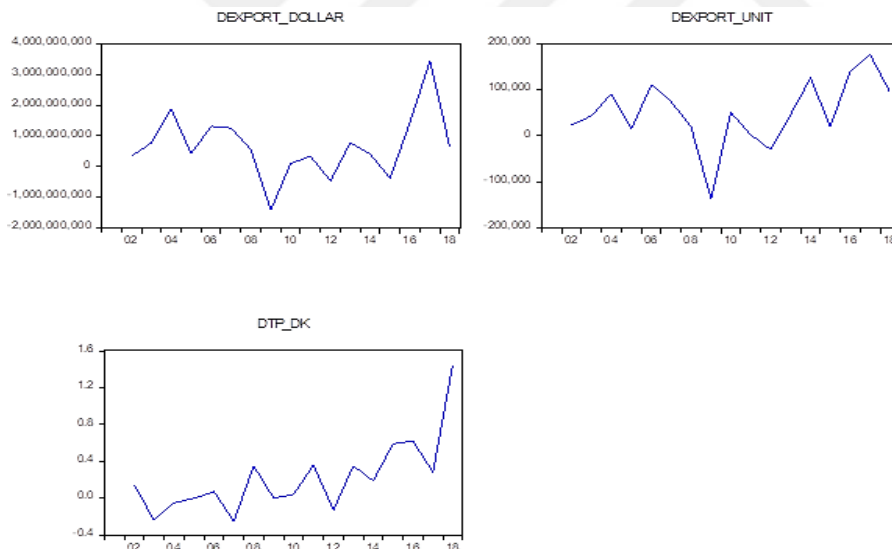


Figure5.1: Graphs of the first difference between the dependent and independent variables

5.5.2 Second method : using correlogram(autocorrelation function ACF)

We want to test if the correlation of time series over several lags decays quickly or slowly, if it does decay very slowly, perhaps the time series is nonstationary. The ACF function at lag k is defined as covariance at lag k divided by variance

$$\rho_k = \frac{\gamma_k}{\gamma_0}$$

We determine the lag length by using Schwarz information criterion (SC) and Akaike information criterion (AIC) and the two text in the Table (5-5) says that the lag length for export by dollar and by unit variables are equal “1”. And for USD/TRY variable equal “2”.

Table 05.5: VAR Lag Order Selection Criteria for variables

Lag	EXPORT by unit		EXPORT by dollar		USD/TRY	
	AIC	SC	AIC	SC	AIC	SC
0	27.38832	27.43552	46.02448	46.07169	3.210404	3.257608
1	25.50512*	25.59953*	44.71202*	44.80643*	0.508541	0.602948
2	25.62237	25.76398	44.77686	44.91847	0.161494*	0.303104*
3	25.75570	25.94452	44.83204	45.02086	0.169749	0.358563

* indicates lag order selected by the criterion

AIC: Akaike information criterion

SC: Schwarz information criterion

We plot $\hat{\rho}_k$ against k, the lag length, and we compute Q statistic as follows:

$$Q = n \sum_{k=1}^{k=m} \hat{\rho}_k^2$$

Where n is the sample size and m is the number of lags (= df)

Figure (5-2) shows that the p-value of the first difference for each series variable is greater than 0.05, means that the variables are stationary at first difference.

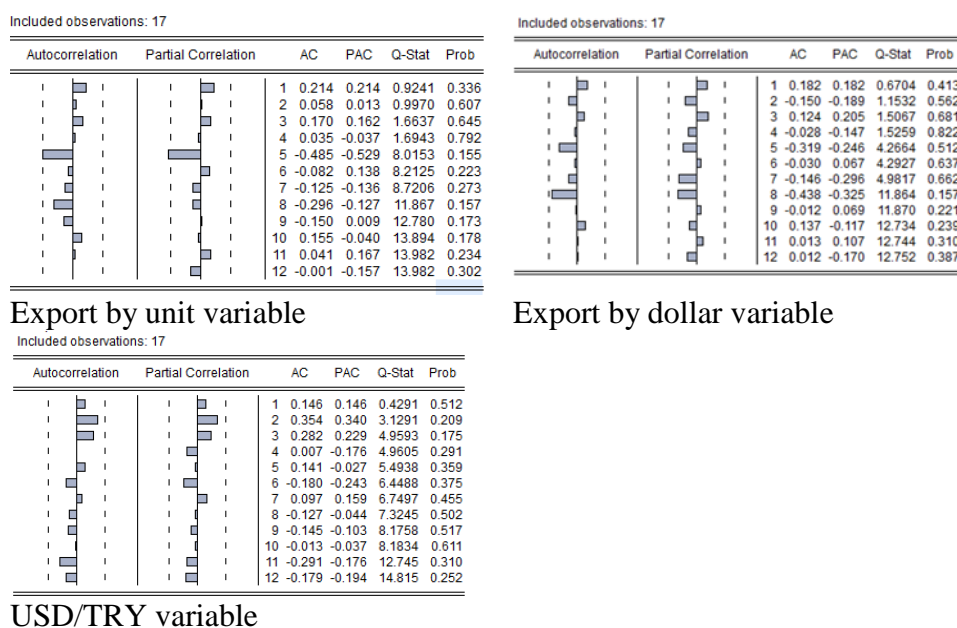


Figure 05.2: Correlogram (Autocorrelation function ACF)

5.6 Unit Root Test

A unit root test tests whether a time series variable is non-stationary and possesses a unit root. The null hypothesis is generally defined as the presence of a unit root and the alternative hypothesis is either stationarity, trend stationarity or explosive root depending on the test used. We test the stationarity of the series variables by using augmented Dickey-Fuller and Phillips-Perron Tests at the level or first difference or second difference. Table (5-6) shows that the time series variables are stationary when we take the first difference of that series at 0.05 or 0.01 significant level.

Table 5.6: Unit root test

Variable	Level		First difference	
	ADF statistics(t-test)	results	ADF statistics(t-test)	results
Export by unit	0.878	Non Stationary	-2.161**	Stationary
Export by dollar	0.235	Non Stationary	-2.438**	Stationary
USD/TRY	1.580	Non Stationary	-4.843*	Stationary

** Significant At 0.05 Level

* Significant At 0.01 Level

Engle and Granger (1987) suggest a cointegration test, which consists of estimating the cointegration regression by OLS, obtaining the residual \hat{u}_t and applying unit root test for \hat{u}_t . To test an equilibrium assertion, they propose testing the null that \hat{u}_t has a unit root against the alternative that it has a rootless than unity. We find by using unit root test that the two variable dependent and independent variables in the two models are stationary at first difference I(5). Table (5-7) shows that the residuals of first and second models are stationary at 0.05 significant level, the two model is stationary at 0.10 significant level means that there is cointegration between the dependent and independent variables for three models.

Table 5.7: Stationary of the residuals of the models

	ADF statistics (t-test)	results	ADF statistics(t- test)	results
Model (I)(DV= Export by unit; IV=TP-DK)	-1.886	Non- Stationary	-4.286**	Stationary
Model (II)(DV= Export by dollar; IV=TP-DK)	-2.852	Non-Stationary	-4.243**	Stationary

*** Significant At 0.10 Level

** Significant At 0.05 Level

* Significant At 0.01 Level

5.6.1 Johansen cointegration test

Johansen's test is an improvement cointegration test. It set aside the issue of pick out a dependent variable as well as issues created when errors are carried from one step to the next. And the test can detect various cointegrating vectors(Hjalmarsson, E., & Österholm, P., 2010).

Table (5-8) shows that trace statistics = 33.929 > critical value = 25.872, and the P-value = 0.004 < 0.01, so we reject the null hypothesis (there is no cointegration between variables) and accept the alternative hypothesis means that there is cointegration between Export by unit and USD/TRY variables.

Table 5.8: Unrestricted Cointegration Rank Test (Trace)

Model (I)(DV= Export by the unit; IV= USD/TRY)

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob.**
None *	0.814531	33.92977	25.87211	0.0040
At most 1	0.353217	6.971914	12.51798	0.3475

Trace test indicates 1 cointegrating eqn(s) at the 0.05 level

* denotes rejection of the hypothesis at the 0.05 level

**MacKinnon-Haug-Michelis (1999) p-values

Table (5-9) shows that trace statistics = 36.913 > critical value = 25.872, and the P-value = 0.0014 < 0.01, so we reject the null hypothesis (there is no cointegration between variables) and accept the alternative hypothesis means that there is cointegration between Export by dollar and USD/TRY variables.

Table5.9: Unrestricted Cointegration Rank Test (Trace)

Model (II)(DV= Export by dollar; IV= USD/TRY)				
Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob.**
None *	0.837957	36.91376	25.87211	0.0014
At most 1	0.385666	7.795472	12.51798	0.2688

Trace test indicates 1 cointegrating eqn(s) at the 0.05 level

* denotes rejection of the hypothesis at the 0.05 level

**MacKinnon-Haug-Michelis (1999) p-values

5.7 Autoregressive Distributed Lag (ARDL) Models, And Bounds Tests

The existence of the long-run relation between the variables under investigation is tested by computing the Bound F-statistic (bound test for cointegration) in order to establish a long run relationship among the variables. This bound F-statistic is carried out on each of the variables as they stand as an endogenous variable while others are assumed as exogenous variables.

Table (5- 10) shows the following results:

- In model (I) the value of F-statistics = 4.0302 > 3.51 in I(1), means that there is cointegration between the variable Export by unit and USD/TRY at 0.10 significant level.
- In model (II) the value of F-statistics = 4.9380 > 4.79 in I(1), means that there is cointegration between the variable Export by dollar and USD/TRY at 0.025 significant level.

Table 5.10: Autoregressive Distributed Lag (ARDL) models, and Bounds Tests

MODEL	Test Statistic	Value	Signif.	I(0)	I(1)
Model (I)(DV= Export by unit; IV= USD/TRY)	F-statistic	4.0302	10%	3.02	3.51
	k	1	5%	3.62	4.16
			2.5%	4.18	4.79
			1%	4.94	5.58
Model (II)(DV= Export by dollar; IV= USD/TRY)	F-statistic	4.9380	10%	3.02	3.51
	k	1	5%	3.62	4.16
			2.50%	4.18	4.79
			1%	4.94	5.58

5.8 The Distinguishes The Current Study From Previous Studies

In general, and as far as researcher is aware, there is a paucity of the studies that address the existence of a long-run relationship between change in the foreign exchange rate and the change in export and import of cars in Turkey.

Our study results have two simple regression models as follows:

- Model (I): $\text{Export}(\text{unit})_t = \beta_0t + \beta_1t (\text{USD/TRY}) + \epsilon_t$
- Model (II): $\text{Export} (\text{Dollar})_t = \beta_0t + \beta_1t (\text{USD/TRY}) + \epsilon_t$
- Where USD/TRY is independent variable
- product(unit), product (dollar) and export are dependent variables
- ϵ_t : Random Error
- β_0t : Constants (y - Intercepts)



6. RESULTS

- In model (I) the value of F-statistics = 4.0302 > 3.51 in I(1) , means that there is cointegration between the variable Export by unit and USD/TRY at 0.10 significant level .
- In model (II) the value of F-statistics = 4.9380 > 4.79 in I(1), means that there is cointegration between the variable Export by dollar and USD/TRY at 0.025 significant level.

In addition to that, this study concludes the following results:

- A strong correlation is found between exports/imports and foreign rate's changes.
- The development of the country does depend on the economic development which relies on the exchange rate changes.
- There are many factors that affect the vitality of the imports and exports of each country.

The literature presents many results concerning the link between the rate of exchange volatility and exportation. Soleymani, Chua, and Hamat (2017) investigated the part of the external rate of exchange volatility for the ASEAN-4 countries (Malaysia, Indonesia, Thailand, and Singapore) and their (5) main partners of trades. The results showed a substantial influence on the external rate of exchange volatility on the countries' trade. investigation the volatility role of rate of exchange on the exports of (5) East Asian nations, Chit, Rizov, and Willenbockel, (2010) expressed that there's a presence of a substantial trade-promoting impact of the external volatility of the rate of exchange. Implementing French firm-level info, Hericourt and Nedoncelle (2015) confirmed the hefty trade-promoting impact of the external volatility of the rate of exchange at the firm-level system. On the other hand, Ozmen and Furtun (1998). They found out that there was no cointegration with the real export as well as real income. Bilgili (2000) and Sendilmen

(2017) found that the Turkish data have not confirmed any of positive or even negative impacts of the RERMIS on the growth and the balance of trade which was not such sensitive to the changes in RER.

The study found that there is a strong relationship between foreign exchange rate changes and exports of cars in the country. This result was also found in Bahmani-Oskooee et al. (2013) there is an insignificant correlation between exchange rate volatility and volumes of imports/exports in the long run; increased risk significantly affects volumes of imports/exports; there are statistically significant differences among companies, based on the size variable, in responsiveness to exchange rate volatility-related risks, for the favor of small companies; and the effect of exchange rate volatility differs significantly among economic sectors. While Bakhromov (2011), Erdal et al. (2012) and Nazlioglu (2013) found that there is a significant positive correlation between the level of both real domestic and foreign income and the level of import/export flows; there is a significant negative correlation between the level of the real exchange rate and volumes of imports; there is a significant positive correlation between the level of real exchange rate and volumes of exports; and there is a significant negative correlation between exchange rate volatility on one hand and import demand and export demand on the other. In Kamin and Rogers (2000) discovered that the interest rates, as well as the income, were negative relationship, other variables, such as the inflation and the rate of depreciation of exchange rate, were not significant as well as Dincer and Kandil (2011) found that the anticipated exchange rate, has such important adverse effects on the disaggregated data comprising 21 exporting sectors (BEC classification) in Turkey.

Alam and Ahmed (2010), Brun-Aguerre et al. (2012) and Nicita (2013) found that there are significant correlations among real effective exchange rate volatility, real effective exchange rates, relative prices of imports, levels of demand on imports, and rates of real economic growth; there is a significant positive correlation between aggregate import demand and real GDP. While Bleaney and Greenaway (2001) and Berument and Pasaogullari (2003) found the opposite result, they found that the volatility of the RER has such a negative impact on the growth and on the investment.

In addition, the study found that the development of the country does depend on the economic development which relies on the exchange rate changes as well as there are many factors that affect the vitality of the imports and exports of each country.

This result was also found in Ardic (2006) and Hall et al. (2010) who found that there is a significant negative correlation between exchange rate volatility and volumes of exports, and EMEs patterns of adaptation to exchange rate volatility are more similar to that of developed countries than developing countries.

Turkey as an emerging economy, it must take care of the forward market, which reduces of uncertainty level and riskiness of foreign exchange rate fluctuations and encourage business investment and exports.

Increase interest in monetary policies and tools that influence the supply of local currency, which contributes balance with foreign exchange rate fluctuations.

Promoting investment in the industrial sector as a contributor to the promotion of foreign trade, increase the volume of exports and balance with imports, which in turn helps in economic growth.

Underline effective role of macroeconomic policies for achieving a long-run equilibrium for exports and imports, which indicates the importance of managing them.

Taking quick and effective responses by central banks to deal with the foreign exchange rate' volatility, which needs an understanding of the factors' nature influencing the foreign exchange rate.

Encourage the diversification of investments and trade with both developing and developed countries, which lower the volatility risk of the foreign exchange rate. Conducting studies that measure the possible tolerated foreign exchange fluctuations.

The study did not explore the type of relationship between exchange rate volatility and cars exports. The study did not explore the relationship between exchange rate volatility and imports of cars. The study did not include other possible variables that may have the effect of the relationship between exchange

rate volatility and cars trade, these such as inflation rate, GDP, Foreign investment. The study did not take into consideration the effect of legalization and internal policies on exports and imports. The study did not take into consideration the effect of foreign investment in Turkey on exports and imports.

Exploring the effect of foreign exchange rates volatility on all economic industrial sectors in Turkey ; Evaluate liberalization and economic reform policies implemented in Turkey on imports and exports; investigate of domestic currency depreciation reasons and deliver tools for hedging.



REFERENCES

- Adeleye, O. J.; Adeteye, S. O., & Adewuyi, O. M.** (2015). Impact of International Trade on Economic Growth in Nigeria, *International Journal of Financial Research*, 6(3): pp 163-172.
- Afaha, J. S., & Oluwatobi, A. O.** (2012). Foreign Trade and Economic Growth: Evidence from Nigeria, *Arabian Journal of Business and Management Review*, 2(1): pp 26-48.
- Akçay, C. and Üçer, M.** (2008). A Narrative on the Turkish Current Account. *The Journal of International Trade and Diplomacy*. Vol, 2. No, 2. Pp, 211-238.
- Alam, S., & Ahmed, Q. M.** (2010). Exchange rate volatility and Pakistan's import demand: an application of autoregressive distributed lag model, *International Research Journal of Finance and Economics*, 48(1): pp 7-23.
- Ali, G.** (2017). Evaluating the Importance of Exports in Economic Growth of Pakistan; Evidence from ARDL Bound Testing Approach, *Asian Journal of Law and Economics*, 8(3): pp 1-14.
- Al-Khulaifi, A. S.** (2013). Exports and Imports in Qatar: Evidence from Cointegration and Error Correction Model, *Asian Economic and Financial Review*, 3(9): pp 1122-1133.
- Amarasena, A.** (2013). Small Firms to Asia: An Innovative Export Model, *Journal of Internet Business*, (11): pp 1-38.
- Ardic O. P.**(2006) Output, the Real Exchange Rate, and the Crises in Turkey, *Topics in Middle Eastern and North African Economies*, MEEA Online Journal, Volume VIII.
- Aristei, D.; Castellani, D., & Franco, C.** (2013). Firms' exporting and importing activities: is there a two-way relationship?, *Review of World Economics*, 149(1): pp 55-84.
- Asari, A-H. F. F.; Baharuddin, S. N.; Jusoh, N.; Mohamad, Z.; Shamsudin, N., & Jusoff, K.** (2011). A Vector Error Correction Model (VECM) Approach in Explaining the Relationship Between Interest Rate and Inflation Towards Exchange Rate Volatility in Malaysia, *World Applied Sciences Journal*, 12(12): pp 49-56.

- Aydin, Mücahit** (2014). Relationship between GDP and Export In Turkey. Information society and sustainable development. Vol, 1. Pp., 282-290.
- Aykol, B.; Palihawadana, D., & Leonidou, L. C.** (2013). Research on the Import Activities of Firms 1960-2010, *Management International Review*, 53(2): pp 215-250.
- Bahmani-Oskooee, M., & Gelan, A.** (2017). Exchange-rate Volatility and International Trade Performance: Evidence from 12 African Countries, *Munich Personal RePEc Archive (MPRA)*, 81177: pp 1-17.
- Bahmani-Oskooee, M., & Hegerty, S. W.** (2007). Exchange rate volatility and trade flows a review article. *Journal of Economic Studies*, 34(3), 211-255.
- Bahmani-Oskooee, M.; Harvey, H., & Hegerty, S. W.** (2013). The effects of exchange-rate volatility on commodity trade between the US and Brazil, *The North American Journal of Economics and Finance*, 25, pp 70-93.
- Bakari, S.** (2017a). The Long Run and Short Run Impacts of Exports on Economic Growth: Evidence from Gabon, *The Economic Research Guardian*, 7(1): pp 40-57.
- Bakari, S.** (2017b). The Relationship between Export, Import, Domestic Investment and Economic Growth in Egypt: Empirical Analysis, *Euro Economica*, 36(2): pp 34-43.
- Bakari, S., & Krit, M.** (2017). The Nexus between exports, imports, and economic growth: Evidence from Mauritania, *International Journal of Economics and Empirical Research*, 5(1): pp 10-17.
- Bakhromov, N.** (2011). The exchange rate volatility and the trade balance: case of Uzbekistan, *Journal of Applied Economics and Business Research*, 1(3): pp 149-161.
- Bañbula, P., Koziński, W., & Rubaszek, M.** (2011). The role of the exchange rate in monetary policy in Poland, *Bank for International Settlements*, 57: pp 285-295.
- Barguelligil, A.; Ben-salha, O.; Zmami, M.** (2018). Exchange Rate Volatility and Economic Growth, *Journal of Economic Integration*, 33(2): pp 1302-1336.
- Bari, B., & Togba, E. D.** (2017). The Effect of Foreign Exchange and Real Exchange Rate on Foreign Trading Liberia: An Application of Autoregressive Distributed Lag (ARDL) Approach. *Econ World 2017 Paris Proceedings*, 1-23.
- Beckworth, D.** (2017). The monetary policy origins of the eurozone crisis, *International Finance*, 20(2): pp 114-134.
- Benazic, M., & Kersan-Skabic, I.** (2016). The determinants of exchange rate in Croatia, *Eastern Journal of European Studies*, 7(1): pp 125-150.
- Berman, N., Martin, P., and Mayer, T.** (2012). How do Different Exporters React to Exchange Rate Changes? *Quarterly Journal of Economics*. Vol, 127(1). Pp., 437-492.

- Berument, H. and Pasaogullari, M.** (2003) Effects of the real exchange rate on output and inflation: evidence from Turkey, *Developing Economies*, 41(4), 401–35.
- Bilgili, E.** (2000) Reel Döviz Kuru ve Ekonomik Büyüme, *İktisat İşletme ve Finans*, 176, 56-73.
- Bleaney, M. and Greenaway, D.** (2001) The Impact Of Trade And Real Exchange Rate Volatility On Investment And Growth In Sub-Saharan Africa, *Journal of Development Economics*, 65, 491–500.
- Bostan, I., Toderaşcu, C., & Firtescu, B-N.** (2018). Exchange Rate Effects on International Commercial Trade Competitiveness, *Journal of Risk and Financial Management*, 11(2): pp 1-11.
- Bowen, H., P, Leamer, E., E. and Sveikauskas, L.** (1987). Multicountry, Multifactor Tests of the Factor Abundance Theory. *The American Economic Review*. Pp., 791-809.
- Breusch, T. S.; Pagan, A. R.** (1979). "A Simple Test for Heteroskedasticity and Random Coefficient Variation". *Econometrica*. 47 (5): 1287–1294
- Brooks, C. (2008). *RATS Handbook to accompany introductory econometrics for finance*. Cambridge Books.
- Brun-Aguerre, R.; Fuertes, A. M., & Phylaktis, K.** (2012). Exchange rate pass-through into import prices revisited: what drives it?, *Journal of international Money and Finance*, 31(4): pp 818-844.
- Campa, J.M. and Goldberg, L.S.** (2005). Exchange Rate Pass-Through into Import Prices. *Review of Economics and Statistics*. Vol, 87. No, (4). Pp., 679-690.
- Carbaugh, Robert** (2012). *International Economics*. Cengage Learning. Pp, 479. ISBN 1133947727.
- Cassiman, B., & Golovko, E.** (2011). Innovation and internationalization through exports, *Journal of International Business Studies*, 42(1): pp 56-75.
- Chen, James.** (2017). Exchange Rate. What is an Exchange Rate? Investopedia.
- Chit, M. M.; Rizov, M., & Willenbockel, D.** (2010). Exchange rate volatility and exports: new empirical evidence from the emerging East Asian Economies, *World Economy*, 33(2): pp 239-263.
- Chornyy, Oleksandr.** (2011). Influence of the bretton woods institutions on economic growth: Literature survey for transitional economic systems. *Economics & Sociology*. Vol, 4. Pp., 32-41.
- Choudhary, T.,& Hassan, S. S.** (2015). Exchange rate volatility and UK imports from developing countries: The effect of the global financial crisis, *Journal of International Financial Markets, Institutions and Money*, 39: pp 1-34.
- Cook, J.A.** (2014). The Effect of Firm-Level Productivity on Exchange Rate Pass-Through. *Economics Letters*. Vol, 122(1). Pp., 27-30.
- Cook, R. D.; Weisberg, S.** (1983). "Diagnostics for Heteroskedasticity in Regression". *Biometrika*. 70

- Cota, J. E. M.** (2017). Exports and Economic Growth in Mexico, 2007-2014: a Panel Cointegration Approach, *Semestre Económico*, 20(44): pp 19-44.
- Coudert, V.; Couharde, C., & Mignon, V.** (2011). Exchange rate volatility across financial crises, *Journal of Banking & Finance*, 35(11): pp 3010-3018.
- Dooley, M. P., Folkerts-Landau, D., & Garber, P.** (2004). The revived Bretton Woods system: the effects of periphery intervention and reserve management on interest rates & exchange rates in center countries (No. w10332). National Bureau of Economic Research.
- Danthine, J. P., & Danthine, S.** (2018). On the rewards to international investing: a safe haven currency perspective, *Swiss Journal of Economics and Statistics*, 154(1): 1-12.
- Daru, U. M.** (2016). Role Foreign Exchange Market in today's Globalized Economy, *International Journal of Research in IT and Management*, 6(8): pp 79-86.
- David-Wayas, O. M.** (2014). Empirical Analysis of Trade Barriers and Economic Growth in Nigeria, *Innovare Journal Of Social sciences*, 2(4): pp 1-6.
- De Silva, N.; Malage, J., & Johnson, J.** (2012). Trade Liberalization, Free Trade Agreements, and Economic Growth: The Case of Sri Lanka, *Journal of Agricultural Trade and Development*, 8(2): pp 241-257.
- Demirhan, A., and Ercan, H.** (2018). Export Behavior of Turkish Manufacturing Firms Under Crises. Central Bank of the Republic of Turkey 2018. Working Paper No: 18/02. Pp., 4-8.
- Dincer, N. & Kandil, M.** (2011) The effects of exchange rate fluctuations on exports: A sectoral analysis for Turkey, *The Journal of International Trade & Economic Development*, 20:6, 809-837, DOI: 10.1080/09638190903137214
- Dorobăț, E. C.** (2015). A brief history of international trade thought: from pre-doctrinal contributions to the 21st century heterodox international economics, *The Journal of Philosophical Economics: Reflections on Economic and Social Issues*, 8(2): pp 106-137.
- Danthine, J. P.** (2011, November 3). The strong franc and the future of Switzerland's financial market infrastructure-two current challenges for the Swiss national bank, *Swiss National Bank: Money Market Event*, Geneva, Switzerland: pp 1-8.
- Eichengreen, B.** (2011). *Exorbitant Privilege: The Rise and Fall of the Dollar*, 1st Ed., New York, Oxford University Press.
- Elsherif, A. M.** (2016). Exchange Rate Volatility and Central Bank Actions in Egypt: Generalized Autoregressive Conditional Heteroscedasticity Analysis, *International Journal of Economics and Financial Issues*, 6(3): pp 1209-1216.
- El-Wassal, K. A.** (2012). The Impact of Trade Liberalization on Trade Balance in Arab Countries, *Journal of Economics and Social Research*, 14(2): pp 1-26.
- Epaphra, M.** (2016). Determinants of Export Performance in Tanzania, *Journal of Economics Library*, 3(3): pp 470-487.

- Erdal, G.; Erdal, H., & Esengün, K.** (2012). The effects of exchange rate volatility on trade: evidence from Turkish agricultural trade, *Applied Economics Letters*, 19(3): pp 297-303.
- Fındıkçioğlu, G.; Yıldırım, B., & Şenol, G. B.** (2008). Turkish Automotive Industry, TSKB Research, Turkey.
- Flath, D.** (2014). *The Japanese Economy*, 3rd Ed., Oxford, Oxford University Press.
- Frankopan, P.** (2015). *THE SILK ROADS: A New History of the World*, 1st Ed., London, Bloomsbury Publishing .
- Gherman, A.; Ştefan, G., & Filip, A.** (2013). Exchange rate volatility effects on export competitiveness. Romanian Case, *Theoretical and Applied Economics*, 20(9): pp 39-50.
- Giannellis, N. and Papadopoulos, A. P.** (2011). What causes exchange rate volatility? Evidence from selected EMU members and candidates for EMU membership countries, *Journal of International Money and Finance*. Vol, 30. Pp, 39-61.
- Glosten, L. R., Jagannathan, R., & Runkle, D. E.** (1993). On the relation between the expected value and the volatility of the nominal excess return on stocks. *The journal of finance*, 48(5), 1779-1801.
- Goldberg, P., K. and Knetter, M., M.** (1997). Goods prices and exchange rates: What have we learned? *Journal of Economic Literature*. Vol, 35. No, (3). Pp., 1243-1272.
- Golub, S., S., and Hsieh, C., T.** (2000). Classical ricardian theory of comparative advantage revisited. *Review of International Economics*. Vol, 8. No, (2). Pp., 221-234.
- Gopinath, G. and Rigobon, R.** (2008). Sticky Borders. *Quarterly Journal of Economics*. Vol, 123(2). Pp, 531-575.
- Groux, S., & Jesswein, K.** (2011). The Continuing Role of Switzerland and the Swiss Franc in International Finance, *Journal of Economics and Economic Education Research*, 12(3): pp 65-72.
- Gujarati, D. N.** (2003). *Basic Econometrics*, McGraw-Hill. New York.
- Gulyaeva, E.** (2014). *The Influence of the American Dollar on International Trade*, Unpublished PhD, Saimaa University of Applied Science, Finland.
- Hjalmarsson, E., & Österholm, P.** (2010). Testing for cointegration using the Johansen methodology when variables are near-integrated: size distortions and partial remedies. *Empirical Economics*, 39(1), 51-76.
- Hall, S.; Hondroyannis, G.; Swamy, P. A. V. B.; Tavlas, G., & Ulan, M.** (2010). Exchange-rate volatility and export performance: Do emerging market economies resemble industrial countries or other developing countries?, *Economic Modelling*, 27(6): pp 1514-1521.
- Hamdan, B. S. S.** (2016). The Effect of Exports and Imports on Economic Growth in the Arab Countries: A Panel Data Approach, *Journal of Economic Bibliography*, 3(1): pp 100-107.

- Hasan, J.; Muktadir-Al-Mukit, D., & Islam, F.** (2015). Impact of Exchange Rate Volatility on the Export Performance of Developing Country: Evidence from Bilateral Trade Between Bangladesh and the US, *Journal of International Business and Economy*, 16(2): pp 21-39.
- Hassan, N. D.; Aboki, H., & Audu, A. A.** (2014). International Trade: a Mechanism for Emerging Market Economics, *International Journal of Development and Emerging Economics*, 2(4): pp 24-32.
- Heilmann, K.** (2016). Does political conflict hurt trade? Evidence from consumer boycotts, *Journal of International Economics*, 99(c): pp 179-191.
- Hericourt, J. and Nedoncelle, C.** (2015). Relative Real Exchange-Rate Volatility, Multi-Destination Firms and Trade: Micro Evidence and Aggregate Implications. CEPII WP 2015-03.
- Hollweg, H. C., & Cusolito, P. A.** (2015). Trade Policy Barriers: An Obstacle to Export Diversification in Eurasia, *Journal of Banking and Financial Economics*, 2(4): pp 91-129.
- Hossain, A. A.** (2013). Trade Liberalization and Import-Demand Behavior in Bangladesh, 1974-2008, *The Journal of Developing Areas*, 47(2): pp 387-416.
- Ibarra, C. A.** (2011). A note on intermediate imports and the BPCG model in Mexico, *Economic Change and Restructuring*, 44(4): pp 357-368.
- ICCT** (2015). International Council on Clean Transportation. https://www.theicct.org/sites/default/files/publications/ICCT_Turkish-fleet-baseline_20160318.pdf.
- IDRC** (1998). *Opening Doors to the World: A New Trade Agenda for the Middle East*. Authors: IDRC (International Development Research Centre (Canada) and the Economic Research Forum for the Arab Countries, Iran, and Turkey. American University in Cairo Press, 1998. ISBN: 0889368775, 9780889368774.
- Igwe, C. O. I.** (2018). History of the International Economy: The Bretton Woods System and its Impact on the Economic Development of Developing Countries, 4(2): pp 105-126.
- Inoue, T. and Hamori, S.** (2010). What Explains Real and Nominal Exchange Rate Fluctuations? Evidence from SVAR Analysis for India. *Economics Bulletin*. Vol, 29. No, (4). Pp., 2803-2815.
- Ioannatos, E. P.** (2018). Has the Euro Promoted Eurozone's Growth?, *Journal of Economic Integration*, 33(2): pp 1388-1411.
- Irfan, M., Irfan, M., and Awais, M.** (2010). Modeling volatility of short-term interest rates by ARCH family models: Evidence from Pakistan and India. *World Applied Sciences Journal*. Vol, 9(10). Pp., 1089- 2010.
- Islam, U. Z. M., & Raza, H.** (2014). An empirical study on the Factors affecting Foreign exchange markets of Pakistan, *International Affairs and Global Strategy*, 24: pp 11-21.
- Iyke, B. N., & Ho, S. Y.** (2018). Real exchange rate volatility and domestic consumption in Ghana, *The Journal of Risk Finance*, 19(5): pp 513-523.

- Jalil Khan, A., Parvez, A. and Shabib, S.** (2014). The Impact of Exchange Rate Volatility on Trade: A Panel Study on Pakistan's Trading Partners. Vol, 19. Pp., 31-66.
- Johnson, M. L.** (2014). The Consequences of Somali Piracy on International Trade, *Global Tides*, 8(1): pp 1-15.
- Ju, J.; Wu, Y., & Zeng, L.** (2010). The Impact of Trade Liberalization on the Trade Balance in Developing Countries, *IMF Staff Papers*, 57(2): 427-449.
- Kababie, J.** (2010). Export vs. Import – Led Growth in Mexico, Unpublished Master dissertation, University of Texas, USA.
- Kalaitzi, A. S.** (2018). The Causal Effects of Trade and Technology Transfer on Human Capital and Economic Growth in the United Arab Emirates, *Sustainability*, 10(5): pp 1-15.
- Kamal, Y.; Ul-Haq, H.; Ghani, U., & Khan, M. M.** (2012). Modeling the exchange rate volatility, using generalized autoregressive conditionally heteroscedastic (GARCH) type models: Evidence from Pakistan, *African Journal of Business Management*, 6(8): pp 2830-2838.
- Kamin, S., and Rogers J.** (2000) Output and the Real Exchange Rate in Developing Countries: An Application to Mexico, *Journal of Development Economics*, 61, 85-109.
- Kandil, M.** (2000) The Asymmetric Effects of Exchange Rate Fluctuations: Theory and Evidence from Developing Countries, *IMF Working Paper*, WP/00/184.
- Kandil, M., Berument, H., & Dincer, N. N.** (2007). The effects of exchange rate fluctuations on economic activity in Turkey. *Journal of Asian Economics*, 18(3), 466-489.
- Keskin, M.; Deviren, B., & Kocakaplan, Y.** (2011). Topology of the correlation networks among major currencies using hierarchical structure methods, *Physica A: Statistical Mechanics and its Applications*, 390(4): pp 719-730.
- Kilavuz, E., & Topcu, B. A.** (2012). Export and Economic Growth in the Case of the Manufacturing Industry: Panel Data Analysis of Developing Countries, *International Journal of Economics and Financial Issues*, 2(2): pp 201-215.
- Kilicarslan, Z.** (2018). Determinants of Exchange Rate Volatility: Empirical Evidence for Turkey, *Journal of Economics, Finance and Accounting*, 5(2): pp 204-213.
- Kim, S. H.** (2016). Austrian Model of Trade and Growth of a Developing Economy, *Seoul Journal of Economics*, 29(2): pp 235-268.
- King, R. M.; Osler, C., & Rime, D.** (2012). *Foreign Exchange Market Structure, Players, And Evolution*, 1st Ed., Hoboken, New Jersey, John Wiley & Sons.
- Krugman P.** (1991). Increasing Returns and Economic Geography. *Journal of Political Economy*. Vol, 99. No, 3, 483-499.

- Krugman, P.** (1983). New Theories of Trade among Industrial Countries Author(s): The American Economic Review. Vol, 73. No, 2. Pp., 343-347.
- Krugman, P., R., Obstfeld, M. and Melitz, M., J.** (2018). International Economics - Theory and Policy. Pearson Education Limited. Eds (11). Pp., 243-250.
- Lamaj, J.** (2015, May 27-29). The Impact of International Trade and Competition Market on Developing Countries, Joint International Conference MakeLearn (Management, Knowledge, and Learning) and TIIM (Technology, Innovation and Industrial Management) 2015, Bari, Italy: pp 1533-1540.
- Lamotte, O.** (2012). Disentangling the Impact of Wars and Sanctions on International Trade: Evidence from Former Yugoslavia, Comparative Economic Studies, 54(3): pp 553-579.
- Leitao, Nuno, C.** (2010). The gravity model and the United States' Trade. European Journal of Economics. Finance and Administrative Services. No, 21. Pp, 92-100.
- Leontief, W.** (1956). Factor Proportions and the Structure of American Trade: Further Theoretical and Empirical Analysis. The Review of Economics and Statistics. Pp., 386-407.
- Li, K. W.** (2017). Redefining Capitalism in Global Economic Development, 1st Ed., Cambridge, Massachusetts, Academic Press.
- Linder, S., B.** (1961). An Essay on Trade and Transformation. Stockholm, Almqvist, and Wiksell; New York, J. Wiley. New York: John Wiley & Sons.
- Lotfalipour, R. M.; Ashena, M., & Zabihi, M.** (2013). Exchange Rate Impacts on Investment of Manufacturing Sectors in Iran, Business and Economic Research, 3(2): pp 12-22.
- Markevych, K., & Yurchyshyn, V.** (2014). Investment Prospects Priority in the Policy of Stable Economic Growth in Great Britain, The International Economic Policy, 11(21): pp 49-73.
- Martins, J. F. S.** (2015). Impact of Real Exchange Rate Volatility on Foreign Direct Investment Inflows in Brazil. Lisboa. ISCTE-IUL. Vol, 3. No, 2. Pp., 203-255.
- Min, H. G., & McDonald, J.** (1993). The portfolio-balance model of exchange rates: short-run behavior and forecasting (The Korean Won/US Dollar Case). International Economic Journal, 7(4), 75-87.
- Mogoe, S., & Mongale, P. I.** (2014). The Impact of International Trade on Economic Growth in South Africa: An Econometrics Analysis, Mediterranean Journal of Social Sciences, 5(14): pp 60-66.
- Muhammad, S. D.; Hussain, A., & Ali, S.** (2012). The Causal Relationship between Openness and Economic Growth: Empirical Evidence in Case Of Pakistan, Pakistan Journal of Commerce and Social Sciences, 6(2): pp 382-391.
- Nazlioglu, S.** (2013). Exchange rate volatility and Turkish industry-level export: Panel cointegration analysis, The Journal of International Trade & Economic Development, 22(7): pp 1088-1107.

- Neddy, S., Irene, K. Kibet, B. and Kibet, J.** (2013). Effect of International Trade on Economic Growth in Kenya. *European Journal of Business and Management*. Vol, 5 No, (10). Pp., 131- 137.
- Ngerebo, T., A. and Ibe, R., C.,** (2013). Exchange Rate and Macroeconomic Performance in Nigeria: A Causal Post Structural Adjustment Programme Investigation. *Global Journal of Management and Business Research Finance*. Vol, 13. No, (7), 43-48.
- Nicita, A.** (2013). Exchange rates, international trade and trade policies, *International Economics*, 135: pp 47-61.
- Nusair, S. A.** (2008). Testing for the Fisher hypothesis under regime shifts: an application to Asian countries. *International Economic Journal*, 22(2), 273-284.
- Nyambariga, D. M.** (2017). Effects of Exchange Rates Volatility on Imports and Exports in Kenya, Unpublished doctoral dissertation, University of Nairobi, Nairobi.
- Oaikhenan, H. E. and Aigheyisi, O. S.** (2015). Factors Explaining Exchange Rate Volatility in Nigeria: Theory and Empirical Evidence, *Economic and Financial Review*. Vol, 53. No, 2. Pp, 47-77.
- Obi, O. K.; Oniore, O. J., & Nnadi, U. K.** (2016). The Impact of Exchange Rate Regimes on Economic Growth in Nigeria, *Journal of Economics and Sustainable Development*, 7(12): pp 115-127.
- Ogawa, E., & Muto, M.** (2017). Declining Japanese Yen in the Changing International Monetary System, *East Asian Economic Review*, 21(4): pp 317-342.
- Ohlin, B.** (1933). *Interregional and International Trade*, Harvard University Press. Cambridge.
- Omojimite, B. U., & Akpokodje, G.** (2010). A comparative analysis of the effect of exchange rate volatility on exports in the CFA and non-CFA countries of Africa, *Journal of Social Sciences*, 24(1): pp 23-31.
- O'Sullivan, A. and Sheffrin, S., M.** (2003). *Economics: Principles in Action*. Upper Saddle River, New Jersey 07458: Pearson Prentice Hall. Pp, 462. ISBN 0-13-063085-3.
- Ozmen, E and Furtun G.** (1998) Export-led Growth Hypothesis and the Turkish Data: An Empirical Investigation, *METU Studies in Development* 25(3), 491-503.
- Panda, H.** (2016). Book Review: Eswar S. Prasad. 2014. *The Dollar Trap: How the US Dollar Tightened Its Grip on Global Finance*, *Metamorphosis: A Journal of Management Research*, 15(1): pp 66-67.
- Panda, R. Sethi, M. and Chaudhuri, S.** (2016). Changing Paradigm in Trade Theories: A Review and Future Research Agenda *Indian Journal of Science and Technology*. Vol, 9. No, 46 Pp., 1-6.
- Panda, R. Sethi, M. and Kumaran, M.** (2016). A study of bilateral trade flows of China and India. *Indian Journal of Science and Technology*. Vol, 9. No, 15. Pp., 1-7.

- Panda, S., & Mohanty, K. R.** (2015). Effects of Exchange Rate Volatility on Exports: Evidence from India, *Economic Bulletin*, 35(1): pp 305-312.
- Parveen, S.; Khan, Q. A., & Ismail, M.** (2012). Analysis of the Factors Affecting Exchange Rate Variability in Pakistan, *Academic Research International*, 2(3): pp 670-674.
- Patel, J. P.; Patel, J. N., & Patel, R. A.** (2014). Factors affecting Currency Exchange Rate Economical Formulas and Prediction Models, *International Journal of Application or Innovative in Engineering & Management*, 3(3): pp 53-56.
- Pesaran, M. H., Shin, Y., & Smith, R. J.** (2001). Bounds testing approaches to the analysis of level relationships. *Journal of applied econometrics*, 16(3), 289-326.
- Plakandaras, V.; Gupta, R., & Wohar, E. M.** (2017). The depreciation of the pound post-Brexit: Could it have been predicted, *Finance Research Letters*, 21: pp 206-213.
- Policonomics** (2017). Flexible exchange rate. Available Online at <https://policonomics.com/flexible-exchange-rate/>.
- Pontines, V.** (2013). Inflation Targeting and Exchange Rate Volatility: A Treatment Effect Regression Approach, *International Economic Journal*, 27(1): pp 25-39.
- Popov, V.** (2007), Shock Therapy versus Gradualism Reconsidered: Lessons from Transition Reconsidered: Lessons from Transition, *Comparative Economic Studies*. (49). Pp, 1-31.
- Pölder, R.** (2018). Demography and Exchange Rate Movements - Evidence from Sweden. *Urban, Regional and International*. Vol, 1. Pp., 5-25.
- Rapach, D. E., & Wohar, M. E. (Eds.).** (2008). Forecasting in the presence of structural breaks and model uncertainty. Emerald Group Publishing Limited.
- Ricardo, D.** (1817). On The principles of political economy and taxation. Kitchener, Batoche Books.
- Riska, R.** (2017). Developing English Materials for Students of Management Department: Bargaining & Macro-Micro Economic At Site Ypup, Unpublished Sarjana Pendidikan (S.Pd) dissertation, Alauddin State Islamic University, Indonesia.
- Robinson, J.** (1961). Prelude to a critique of economic theory. *Oxford Economic Papers*. Vol, 13(1), Pp.53-58.
- Saaed, A. A. J., & Hussain, M. A.** (2015). Impact of exports and imports on economic growth: Evidence from Tunisia, *Journal of Emerging Trends in Economics and Management Sciences*, 6(1): pp 13-21.
- Safuan, S.** (2017). Exchange Rate Volatility and Export Volume: The Case of Indonesia and its Main Trading Partners, *European Research Studies Journal*, 20(3A): pp 3-13.

- Sahabandu, V. R., & Asanka, D. G. P. P.** (2018). Analysis of Foreign Exchange Rate Volatility on International Trade, *International Journal of Robotics and Information Technology*, 1 (1): pp 1-3.
- Samad, A.** (2018). Is Trade an Engine of Growth? VEC-Granger Causality Evidence from ASEAN Countries, *Advances in Management & Applied Economics*, 8(6): pp -15.
- Samuelson P., A.** (1948). International trade and the equalization of factor prices. *The Economic Journal*. Pp., 163-184.
- Sen, Sunanda.** (2010). International Trade Theory and Policy: A Review of the Literature. *SSRN Electronic Journal*, 1-23.
- Shahbaz, M., & Rahman, M. M.** (2014). Exports, financial development and economic growth in Pakistan, *International Journal of Development Issues*, 13(2): pp 155-170.
- Sharif, T. A. N.** (2013). Importing Educational Services from Finland to Kurdistan, Unpublished Bachelor's dissertation, Haaga-Helia University of Applied Sciences, Finland.
- Šimáková, J.** (2017). The Impact of Exchange Rate Movements on Firm Value in Visegrad Countries, *Acta Universitatis Agriculturae Et Silviculturae Mendelianae Brunensis*, 65(6): pp 2015-2111.
- Smith, A., and Cannan, E.** (2003). *The wealth of nations*. New York, N.Y: Bantam Classic.
- Soi, N.; Koskei, I.; Buigut, K., & Kibet, J.** (2013). Effect of International Trade on Economic Growth In Kenya, *European Journal of Business and Management*, 5(10): pp 131-137.
- Soleymani, A., Chua, S.Y. and Hamat, A., F.** (2017). Exchange rate volatility and ASEAN-4's trade flows: is there a third country effect? *International Economics and Economic Policy*. Vol, 14. No, (1). Pp., 91-117.
- Steurtewagen, B.** (2013). 10 years of the euro: stability and performance as a global currency, Unpublished Ph.D., Ghent University, Belgium.
- Stoica, O., & Ichnatov, I.** (2016). Exchange Rate Regimes and External Financial Stability, *Economic Annals*, 61(209): pp 27-43.
- Sugeng, S.; Nurgroho, N. M.; Ibrahim, I., & Yanfitri, Y.** (2010). Effects of Foreign Exchange Supply and Demand Dynamics to Rupiah Exchange Rate and Economic Performance, *Bulletin of Monetary, Economics, and Banking*, 12(3): pp 289-328.
- Sunde, T. & Ogboko, C. A.** (2018). The Effects of Exports in SACU Countries: An Empirical Analysis Using Panel Data, *Acta Universitatis Danubius*, 14(4): pp 142-155.
- Süreci, Y.** (2015). New Foreign Trade Theories. *International Journal of Social Science*. No, 40. Pp, 509-521.
- Şendilmen, B.** (2017). The Impact of Real Effective Exchange Rate Volatility on the Trade between the US and Turkey: An ARDL Approach. *Journal of Yaşar University*, 12(46), 103-112.

- Takim, A.** (2010). Türkiye’de GYSIH ile İhracat Arasındaki İlişki: Granger Nedensellik Testi, Atatürk Üniversitesi Sosyal Bilimler Enstitüsü Dergisi. Vol, 14. Np. (2). Pp., 1-16.
- Tari, R., & Gözen, M. Ç.** (2018). Portfolio Balance Approach to Exchange Rate Determination: Testing a Model by Applying Bilateral Data of Turkey and United States 1. Ege Akademik Bakis, 18(3), 423-434.
- Tong, H.** (2005). Nonlinear time series analysis. Encyclopedia of Biostatistics. Armitage P and Colton T (eds). Wiley, New York, NY.
- Tsen, H. W.** (2014). Exchange Rate Volatility and International Trade, Journal of Stock & Forex Trading, 3(2): pp 1-3.
- Twamugize, G.; Xuegong, Z., & Rmadhani, A. A.** (2017). The Effect of Exchange Rate Fluctuation on International Trade in Rwanda, JOSR Journal of Economics and Finance (JOSR-JEF), 8(3): pp 82-91.
- Twarowska, K., & Kaçkol, M.** (2014, June 25-27). Analysis of Factors Affecting Fluctuations in the Exchange Rate of Polish Zloty Against Euro, Proceedings of the Management, Knowledge and Learning International Conference 2014, Portorož, Slovenia: pp 889-898.
- Ulaşan, B.** (2012). Openness to International Trade and Economic Growth: A Cross-Country Empirical Investigation. Discussion Paper. No, 2012. P., 25-30.
- Umutesi, Maria, C.** (2018). An Analysis of the Causative Factors of Trade Flows between Rwanda and its main Trading Partners. East Africa Research Papers in Economics and Finance. EARP-EF No, 22. Pp., 20-25.
- Upadhyaya, K** (1999), Currency devaluation, aggregate output, and long run: an empirical study, Economics letters, 64, 197-202
- Vaišnoraitė, J.** (2018). The Assessment of International Trade Impact on Unemployment Rate in OECD Countries. University of Trento, Department of Economics and Management. Vol, 1. No (3). Pp., 33-35.
- Venkatesan, T., & Ponnamma, S. M.** (2017). An Analysis of Macroeconomic Factors Affecting Foreign Exchange Rate, SDMIMD Journal of Management, 8(1): pp 21-29.
- Vernon, R.** (1966). International Investment and International Trade in the Product Cycle. The Quarterly Journal of Economics. Vol, 80. No, 2. Pp, 190-207.
- Vijayasri, V. G.** (2013). The Importance of International Trade in the World, International Journal of Marketing, Financial Services & Management Research, 2(9): pp 111-119.
- Viner, J.** (1950). The Customs Union Issue, Carnegie Endowment for international peace. Carnegie Endowment for international peace. New York.
- Vogel, A., & Wagner, J.** (2010). Higher productivity in importing German manufacturing firms: self-selection, learning from importing, or both?, Review of World Economics, 145(4): pp 641-665.

- Wagner, J. (2013).** Exports, imports, and firm survival: first evidence for manufacturing enterprises in Germany, *Review of World Economics*, 149(1): p 113-130.
- Werner Kristjanpoller, R., & Olson, J. E. (2014).** Economic growth in Latin American countries: is it based on export-led or import-led growth?, *Emerging Markets Finance and Trade*, 50(1S): pp 6-20.
- Wilson, A., & Bowman, A. (2017).** Trade, Commerce, and the State in the Roman world, 1st Ed., Oxford, UK, Oxford University Press.
- Yasmin, B. (2012).** Impact of Trade Liberalization on Trade Balance in Pakistan: Cointegration and Error Correction Mechanism, *Zagreb International Review of Economics & Business*, 15(1): pp 73-88.
- Yilanci, V. and Ozcan, B., (2010).** Analyzing the Relationship between Defense Expenditures and GNP for Turkey Under Structural Breaks, *C.U. Journal of Economics and Administrative Sciences*. Vol, 11. No, 1. Pp., 24-27.
- Yücel, M., and Yıldırım, Y. (2010).** The Last Three Significant Crises That Faced in Turkey's Economy and Their Effects to Manufacturing Sector. *Turgut Özal International Conference on Economics and Politics-I Global Crises and Economic Governance*. Malatya/ Turkey. Pp., 110-120.
- Yüksel, S. & Zengin, S. (2016).** Causality Relationship between Import, Export and Growth Rate in Developing Countries, *International Journal of Commerce and Finance*, 2(1): pp 147-156.
- Zamir, M.; Amin, A.; Ullah, S., & Khan, U. S. (2017).** Exchange Rate Volatility in Pakistan and Its Impact on Selected Macro-Economic Variables (1980-2014), *iBusiness*, 9 (4): pp 167-187.
- Zidi, A. and Dhifallah, S., M. (2013).** Trade Creation and Trade Diversion between Tunisia and EU: Analysis by Gravity Model. *International Journal of Economics and Finance*. Vol, 5. No (5). Pp., 131-147.



RESUME

Baslan Makhseba

Personal details

Nationality: Syrian / Turk

Date of birth: 1984

E-mail: beslanmk@gmail.com



Education

2019 İstanbul Aydın University, MBA for Managers in English

2010 Bachelor: graduated from Tishreen University, Latakia, Syria. Faculty of Business specialized in Finance and Investment Management.

2005 Diploma: graduated from Commercial Institute, Damascus University specialized in Business Management.

Employment

- Cases worker AAR JAPAN (Association for Aid and Relief), Istanbul Turkey.
- Accountant Confident Dental Center, Istanbul turkey. May 2016- Oct2017.
- Accountant, Yarmouk Private University, Syria. Nov 2010 – Jun 2012.
- Accountant, Start Smart, English book Export & Distribution, Damascus Syria. Dec 2009 – Oct 2010.

Director Assistant, Bader ME, Textile and Clothing Trading and Exporting Company, Damascus Syria. Jan 2008 – Nov 2009

