The Impact of Political Instability on International Trade in Some Arab Countries

Professor: Hoda Abdel Hamid Ali[1] Lecturer: Asmaa Mohamed Hussein[2]

Walaa Badr El Deen El Sayed Mohamed[3]

Abstract

International trade is one of the main channels through which countries can boost their economic growth, as it constitutes a significant share of the Arab Countries' GDP, and among the determinants affecting international trade that recently has swept across the Arab World is the political instability, which resulted from the Arab uprising that famously known as "Arab Spring Revolutions". Thus, this research is devoted to determine and measure the extent of the impact of political instability on International Trade in these countries through using data for a sample of five Arab Countries during the period 1990-2015.

ملخص

التجارة الدولية هي أحد أهم القنوات التي يمكن من خلالها تعزيز النمو الاقتصادي، حيث أنها تمثل نسبة كبيرة من الناتج المحلى الإجمالي في البلدان العربية، ومن بين العوامل الهامة التي ظهرت في العالم العربي في الآونة الأخيرة وتؤثر على التجارة الدولية هو عامل عدم الاستقرار السياسي، والذي نتج عن الثورة العربية والتي تشتهر ب "ثورات الربيع العربي". ومن ثم فإن هذا البحث يهتم بتحديد وقياس مدى تأثير عدم الاستقرار السياسي على التجارة الدولية في هذه البلدان من خلال استخدام بيانات لعينة من خمس دول عربية خلال الفترة من 1990 إلى2015.

Key Words: International trade, Political instability, Arab Countries, Arab uprising.

[1] Professor of Economics and Foreign Trade Department, Faculty of Commerce &.
 Business Administration, Helwan University.
[2] Lecturer of Economics and Foreign Trade Department, Faculty of Commerce &
Business Administration, Helwan University.
[3] Researcher at the Economics and Foreign Trade Department, Faculty of Commerce &
Business Administration, Helwan University.

1. Introduction:

International trade constitutes a considerable share in Arab Countries' GDP.

Based on the data of the World Bank for the year 2014, the total Arab trade amounts $ 2600708464859.62 and represents 90 % of GDP, where the exports of goods and services amounts $ 1444625359903.4 and represents 50.8 % of GDP, while the imports of goods and services amounts $ 1156083104956.2 and represents 39.8 % of GDP.

Thus, International trade is an important channel through which countries can boost their economic growth.

Moreover, the importance of international trade stems also from the fact that with more openness and liberalization of trade restrictions the developing countries can grow. In addition, it acts as the main channel for satisfying the consumers' needs through providing a wider variety of goods and services. It helps also to extend the market of a country's output with an opportunity to open new global markets through exporting to other countries, thus it can act as a source of foreign currency. In addition, international trade plays a role in controlling the BOP through the country's current account.

Being such a critical variable, studying the determinants of international trade is of a critical concern. In this regard, among the factors determining the level of such variable that has recently captured the spot is political instability, where it may strongly harm the conduct of international trade as political instability may restrict the ability of transportation, ability to produce to export and the ability to have foreign currencies to import.

Accordingly, as political instability has recently swept across many countries in the last few years concerning the instability

in the Arab region especially, and as international trade represent an important channel for economic growth in these countries, from here comes the idea of the research to test the impact and the extent of political instability on international trade in some Arab countries.

2. Research Question:

International trade contributes a considerable share of Arab nations' GDP, thus it is an important channel through which countries can boost their economic growth. Among the factors that can affect this important variable is political instability, where in recent years the Arab World faced political instability due to the Arab uprising.

Moreover, when tracing the impact of political instability in many studies, the conclusion was that it has a negative impact on international trade, and it has been noticed that the extent of the negative consequences on international trade for politically unstable countries may differ from one country to another or may even have a very small impact.

Accordingly, the research question is: "Does political instability negatively impact international trade in some Arab countries, in addition to what is the extent of it on international trade in these countries"

3. Hypothesis of the Research:

This research hypothesizes that there is a negative relationship between political instability and international trade in some Arab Countries.

4. Objective of the Research:

The main objective of this research is to test empirically the relationship between political instability and international trade in some Arab countries during the period 1990-2015.

5. Importance of the Research:

As international trade is one of the important variables in any economy and as it constitutes a considerable share of the Arab nations' GDP, moreover, as political instability is one of the factors that can harm the conduct of international trade and because it has recently swept across many countries in the Arab World due to the recent Arab uprising which famously known as "Arab Spring Revolutions", accordingly, the research shed light on the impact of political instability on international trade in these countries as well as showing to what is the extent of such impact on international trade.

6. The Concept of International Trade and its Importance:

The concept of international trade:

International trade simply means the exchange of capital, goods, and services across international borders. It is a trade transaction that takes place between one country and other countries.

According to Cizen Cota Etal international trade can be defined as *"it consists of transactions that are devised and carried out across national borders to satisfy the objectives of individuals and operations"* (Adegbola, 2012, pp. 27-28).

The concept of international trade depends on countries' demand for goods and services and their ability to produce them. On the demand side, a country may have the ability to produce a particular good but not in the quantity it requires. On the supply side, one country may have an abundance of factors of production; however, these factors can't be transferred from one country to another easily. Accordingly, because these factors are difficult to shift, the alternative is moving goods that

are made by these factors. So, what happens is that each country specializes in the production of those goods in which they have the greatest comparative advantage and exchange them for the goods of other countries (Harvey, 1994, p: 279).

Smaller economies are not able to produce the many types of products needed to be consumed by consumers. Therefore, there is a need for exports in order to be sold to other countries in exchange for goods that cannot be produced domestically. Larger countries have the ability to diversify their production, especially countries that have a wide variety of resources and various Factors of production (Husted & Melvin, 2007, p: 9).

So international trade can be viewed as the extension of the market process across international boundaries. It is the process of buying and selling goods and services in international markets rather than in the domestic markets (Mulhearn & Vane 1999, p: 270).

The Importance of International Trade:

International trade enables countries to obtain benefits of specialization. It also helps to boost economic growth. As if every country produces only for its own needs, the production and consumption of goods will be limited and such situation hampers economic growth. Moreover, International trade provides a wider range of goods and services for both consumers and countries. For consumers; they will have a wider range of goods and services to acquire and this will in return gives the consumers more satisfaction. For countries, they will have more variety of goods and services that can be obtained at a cheaper price than if they are produced domestically. Therefore, international trade improves both consumers and countries welfare (Vijayasri, 2013, pp. 112-113).

In addition, international trade allows for technology transmission, providing more skills and knowledge. These technological transmissions are important for developing countries as they give them a chance to catch up with developed countries more quickly. By expanding the market, it enables to obtain the benefits of large-scale production. Many products are produced under the conditions of decreasing cost. International trade also increases the competition and this helps to promote efficiency in production, where the domestic producers produce more efficiently due to their national specialization and the pressure that comes from foreign competition (Harvey, 1994, pp. 279-282; Visayasri, 2013, pp. 112-113).

So International trade is concerned with the allocation of economic resources among countries and this is done under the concept of free trade, where the benefits of efficient production as better quality and price are available worldwide.

7. The Definition of Political Instability and its Measures:

Political Instability Definition:

Political Instability has no single definition and in literature variety of definitions were introduced. These definitions can be divided into two general categories. The first category focuses on the frequency of government changes and the second category focuses on the degree of social unrest.

Researchers supporting the first category starts with the work of Lipset (1960) in political science who considered political instability exists when a country has a persistent regime that lasts for more than 25 years whether this regime is democratic or dictatorial (Lipset, 1960).

Then Sanders (1981) introduced political instability as "*A political system can be characterized with an accuracy as being more or less stable either in comparison with other systems or with itself during a different time period*". In summary, political instability according to Sanders can be defined comparatively in time or in comparison with other countries. So, this definition is similar to that of Lipset, but he argues that it is a relative term (Sanders, 1981).

In recent literature, some authors considered political instability as just the change of government whether these changes are regular or not. Alesina & others (1996) introduced political instability as "The propensity of change in the executive either by constitutional or unconstitutional means".

Researchers supporting the second category in which political instability definitions focus on the degree of social unrest and political violence include Alesina & Perotti (1996), De Haan, & Siermann, (1996) and Blanco & Gerier (2009). According to them, any degree of social unrest including civil wars, revolutions, assassinations, terrorism, coups, strikes...etc. is considered as political instability.

Measures of Political Instability:

As the political instability has no single definition and because of its multidimensional nature, there are a various number of indices constructed to measure in each country the level of political instability.

The indices established for measuring the political instability, some of them are designed for academic and political purposes; others are developed to report the international investors about the political risk that exists when investing in different countries, moreover, there are more specialized indices that are related to political instability (Gale, T., 2008).

Political Instability indices for academic and political purposes:

From the indices designed for using them in political and academic purposes and which are the commonly used indices are POLITY indices, and the World Bank Governance indices. Both of these indices include objective data about political violence such as assassinations and demonstrations.

The Polity data includes indices of regime transition and durability, and thus this is matching with the definition of political instability as the propensity for regime or government change (Marshell, M. G., & Jaggers, K. 2007).

The World Governance Indicator, which includes six dimensions, in which one of them is the political stability and absence of Violence and thus it is matching with the definition of political instability, which focuses on the incidence of political upheaval or violence in a society in the form of assassinations, demonstrations, and so forth (IPI global observatory).

Political Instability indices designed for reporting political risk in investing countries:

Some institutions and companies develop this type of indices in order inform the investors about the political risk available in the investing country. These indices include the Political Risk Services (PRS), International Country Risk Guide (ICRG), and Business Environment Risk Intelligence (BERI).

The most commonly used is the ICRG, which includes three subcategories of risk: political, financial, and economic. The ICRG indices data are available on monthly basis for 140 countries since starting in 1984 (Garret Glasser, B., 2016).

Special Indices related to the phenomena of political instability:

This type of indices includes for example the Corruption Perceptions Index of Transparency International, and also the political risk and civil liberties indices of Freedom House.

Therefore, it is important to determine the nature of the study and how political instability means in your study, in order to choose the correct indices that help to choose the suitable index (Gale, T., 2008).

8. The Impact of Political Instability on International Trade:

The rise in the level of political risk decreases international trade flows. Oh & Reuveny (2009) claims that as political risk rises due to uncertainty, bilateral trade may decline because of the fear of the traders from the government changes to policies. As the government may issue some decisions for prohibiting trade in some goods and limiting trade in other goods.

Moreover, violent conflicts that stemmed from political risk may harm trade, as it may cause damage of goods, delay in the distribution, and destroy also transportation infrastructure. These damages in return mean higher costs to traders, due to higher insurance premiums, in addition to costs beard as a result of longer trade routes or may be as a result of the need of increasing personnel to guard shipments. Because of rising costs, some traders may exit the market and others may raise the prices to cover the higher costs, thus they may face lower demand.

Also, the political risk increased due to decline in the quality of the institutions including factors like corruption, socio - economic policies that may result in public discontent, military conflicts, and incapable bureaucracy.

In addition, government accountability and autocracy matters, as autocracy prevent expressing public concerns and political competition, whereas, for an unaccountable government, it is less responsive to the public resulting in increasing tensions and public discontent (Oh & Reuveny, 2009).

So all of these reasons may result in a decline in bilateral trade, which consequently affects economic growth negatively.

9. Empirical Estimation of the Impact of Political Instability in some Arab Countries:

Model Specifications:

A Regression Model is employed using the panel data of five selected Arab countries (Egypt, Libya, Tunisia, Syria, and Yemen) during the period 1990 to 2015 in order to estimate the impact of political instability on international trade in these countries.

Two models will be used in the estimation, one of them is to measure the impact of political instability on the trade of these countries with the Arab world and the second model is to measure the impact of instability on their trade with the rest of the world.

The basic model equation form that could be used in the estimation is as follows:

$Y_{it} = B_o + B_1 X_{it} + \varepsilon_{it}$, where i=1, 2…, N, t= 1, 2…, T

Y_{it}: is the dependent variable.

B_o: is the intercept.

X_{it}: is the explanatory variable.

B_1: is the panel data estimator.

ε_{it}: the error term.

The same methodology was applied in various studies testing the impact of political instability on trade such as the study of Goerzen et al. (2016), Awokuse & Gempesaw (2003) and Bashir et al. (2013).

Data Sources:

Trade flows (intra-trade, or with rest of the world) are calculated by the researcher measured in U.S dollars at constant prices (2005) in millions based on the data of exports and imports obtained from the United Nations Conference on Trade and Development Statistics (UNCTAD Statistics). The data of Gross Domestic Product Per Capita (GDPC) measured in U.S dollars at constant prices (2005) is obtained from the UNCTAD Statistics. Real Exchange Rate (RER) data is obtained from the World Bank Statistics and it is calculated as an annual average based on monthly averages (local currency units relative to the U.S. dollar). Political Stability Index (PS) data is obtained from the Worldwide Governance Indicators from the World Bank Statistics.

Model Estimation:

According to the basic panel equation form mentioned in Model Specifications, and the economic variables employed for the analysis, the basic equations of the two models would be as follows:

$\text{Tintra}_{it} = B_0 + B_1\text{GDPC}_{it} + B_2\text{RER}_{it} + B_3\text{PS}_{it} + \varepsilon_{it}$ (Model 1).

$\text{Trest}_{it} = B_0 + B_1\text{GDPC}_{it} + B_2\text{RER}_{it} + B_3\text{PS}_{it} + \varepsilon_{it}$ (Model2).

Before the estimation of the models, the data should be used in performing some tests.

Heteroskedasticity Test:

One of these tests is the heteroskedasticity test, as one of the important assumptions of a linear regression is that there should be homoscedasticity of residuals, which means that the variance

of the error terms is constant. If there is heteroskedasticity of residuals, then this assumption is violated and consequently, the standard error of the estimates are biased. Moreover, the estimators become not best linear unbiased estimators (BLUE) because they are now inefficient and therefore the regression prediction will be inefficient too, in addition, we cannot use the usual t & F statistics as they become no longer valid (Gujarati, 2011, pp.82-83; Greene, 2002, pp.215-219).

Accordingly, by using Eviews program, a Breusch-Pagan-Godfery Heteroskedasticity test was performed and the results are shown in Table 1 as follows:

Table1 Heteroskedasticity Test: Breusch-Pagan-Godfrey

F-statistic	9.864933	Prob. F(3,78)	0.0000
Obs*R-squared	22.55475	Prob. Chi-Square(3)	0.0001
Scaled explained SS	16.90067	Prob. Chi-Square(3)	0.0007

Source: Prepared by the researcher based on the results obtained from Eviews software.

H_o: There is no Heteroskedasticity of residuals.
H_1: There is Heteroskedasticity of residuals.

Based on the results obtained the probabilities show significance at 5% level, therefore the H_1 hypothesis is accepted and H_o hypothesis is rejected, which means that there is a heteroskedasticity.

One of the solutions of heteroskedasticity is to make a log transformation for all the data, and once this is done the problem of heteroskedasticity is removed.

So, the equations of the 2 models will be as follows after log transformation:

$LogTintra_{it} = B_o + B_1 LogGDPC_{it} + B_2 LogRER_{it} + B3PS_{it} {}^4+ \varepsilon_{it}$
(Model 1).

$LogTrest_{it} = B_o + B_1 LogGDPC_{it} + B_2 LogRER_{it} + B_3 PS_{it} + \varepsilon_{it}$
(Model2).

Unit Root Tests:

In order to detect whether the variables are stationary or not, a unit root test at level is performed by using Eviews software, and the results of the test are mentioned in Table 2 as follows:

Table 2 The Results of the Unit Root Tests for the Variables of the Models at Level:

Variable	Test Type		
	Levin,Lin&Chu	IM Pesaran&Chin	ADF-Fisher
	Prob.		
LogTintrait	0.22993	0.6284	0.6926
LogTrestit	0.8810	0.8928	0.8621
LogGDPCit	0.0679	0.0855	0.1311
LogRERit	1.0000	1.0000	0.9641
PSit	0.6553	0.9682	0.9941

Source: Prepared by the researcher based on the results obtained from Eviews software.

H_o: There is a unit root.

H_1: There is no unit root.

The results of the unit root tests show that the probabilities of all the variables are greater than 5% and thus they are not significant, so the null hypothesis H_o is accepted, which means that there is a unit root and thus all the model variables are not stationary at level I (0).

Accordingly, another unit root test should be performed to check whether the variables are stationary at first difference I (1) or not.

The results of the unit root test at first difference are mentioned in table 3 as follows:

---

[4] Because the political stability index contains negative values, it is not possible to get the log transformation for this variable.

The Impact of Political Instability on International Trade in Some Arab Countries.

Table 3: The Results of the Unit Root Tests for the Variables of the Models at First Difference:

Variable	Test Type		
	Levin,Lin&Chu	ADF-Fisher	PP-Fisher
	Prob.		
LogTintrait	0.0000	0.0000	0.0000
LogTrestit	0.0000	0.0000	0.0000
LogGDPCit	0.0000	0.0000	0.0000
LogRERit	0.0000	0.0000	0.0000
PSit	0.0004	0.0004	0.0004

Source: Prepared by the researcher based on the results obtained from Eviews software.

H_o: There is a unit root.

H_1: There is no unit root.

The results of the unit root tests show that all the probabilities of the variables are less than 5% and so they are significant, thus, the null hypothesis H_o is rejected and the alternative hypothesis H_1 is accepted, which implies that there is no unit root, which means that all the variables are stationary at first difference.

Co-integration Test:

Since the variables are stationary at first difference, a co-integration test should be performed in order to determine whether the model equations would be estimated at first difference in case of no co-integration of the explanatory variables, or an error correction model would be implemented in case of co-integration.

Based on the results of the co-integration test, most of the probabilities are greater than 5%, thus we accept the null hypothesis H_o, which means that there is no co-integration between the explanatory variables, therefore the equations of the models would be estimated at first difference.

The Estimation of the Regression Models:

In order to determine which model is more appropriate a Hausman test should be implemented by using Eviews software to detect whether to use the Fixed Effect Model or the Random Effect Model, where according to Hausman test:

H_o: The Random Effect Model is appropriate.

H_1: The Fixed Effect Model is appropriate.

The results of Hausman test showed a probability more than 5%, so the null hypothesis is accepted (H_o), which means that the Random Effect Model is appropriate, where this would be applied for the two Models.

The Results of Estimation of the Regression Model 1 for the Impact of Political Instability in the Selected Arab Countries on Trade with the Arab World in Table 4 as follows:

Table 4: The Results of the estimation of Model 1:

Coefficient (T-statistic)	
Variables	Random Effect Model
Bo	0.11 (2.52)**
LogGDPCit	0.44 (4.88)***
LogRERit	1.55 (3.23)**
PSit	0.10 (2.03)**
R-Squared %	50.24%
Adjusted R-Squared %	47.75%
F-Statistics	20.19***
Durbin Watson Stat.	1.80

Source: These results are obtained by the researcher by using Eviews software.

*** means that the variable is significant at 1%, ** significant at 5% and * is significant at 10%.

The estimation results of the Random effect model showed that 50.24 % of the change in the trade with Arab World is explained by the set of independent variables used in the model.

The Regression analysis illustrates that the Gross Domestic Product Per Capita has a positive and statistically significant impact on trade with the Arab world, where a one percent increase in GDPC, leads consequently to a 0.44 % increase in Tarde with Arab World.

In addition, The Real Exchange Rates has a positive and statistically significant impact on trade, where a one percent increase in real exchange rate results in a 1.55% increase in trade with the Arab World.

Moreover, The political stability showed a positive and statistically significant impact on trade with the Arab World, which in other words means a negative impact of political instability on trade, where a one percent increase in political stability results in a 0.10 % increase in trade with the Arab World, which means that a one percent increase in political instability deteriorates and decreases trade with 0.10%.

The Results of Estimation of the Regression Model 2 for the Impact of Political Instability in the Selected Arab Countries on Trade with the Rest of the World in Table 5 as follows:

Table 5: The Results of the estimation of Model 2:

Coefficient (T-statistic)	
Variables	Random
Bo	0.06 (1.70)*
LogGDPCit	0.99 (12.28)***
LogRERit	1.23 (3.41)**
PSit	0.16 (2.54)**
R-Squared %	66.57 %
Adjusted R-Squared %	64.89 %
F-Statistics	39.81***
Durbin Watson Stat.	2.03

Source: These results are obtained by the researcher by using Eviews software.

*** means that the variable is significant at 1%, ** significant at 5% and * is significant at 10%.

The estimation results of the Random effect model showed that 66.57 % of the change in the trade with the Rest of the World is explained by the set of independent variables used in the model.

The Regression analysis illustrates that the Gross Domestic Product Per Capita has a positive and statistically significant impact on trade with Rest of the World, where a one percent increase in GDPC, leads consequently to a 0.99 % increase in Tarde with the Rest of the World.

In addition, The Real Exchange Rates has a positive and statistically significant impact on trade, where a one percent increase in real exchange rate results in a 1.23 % increase in trade with the rest of the World.

Moreover, The political stability showed a positive and statistically significant impact on trade with the Rest of the World, which in other words means a negative impact of political instability on trade, where a one percent increase in political stability results in a 0.16 % increase in trade, which means that a one percent increase in political instability deteriorates and decreases trade with 0.16%.

10. Conclusion:

The main objective of this research is to test the hypothesis that political instability has a negative impact on international trade, thus for this respective a sample of five Arab countries including Egypt, Libya, Syria, Tunisia, and Yemen during the period 1990-2015 are used in order to employ a panel regression model.

Two models were estimated, one measures the impact on trade with the Arab World, while the other measures the impact with the rest of the world.

The results of estimation reveal that there is a positive statistically significant relationship between political stability and trade, which in other words means there is a negative relationship between political instability and trade.

11. References:

Adegbola, E. A. (2012). *Principles and Practices of International Trade*.

Alesina, A., & Perotti, R. (1996). Income distribution, political instability, and investment. *European Economic Review 40*, pp. 1203-1228.

Alesina, A., Ozler, S., Roubini, N., & Swagel, P. (1996). Political Instability and Economic Growth. *Journal of Economic Growth Vol.1* (2), pp.189-211.

Awokuse, T. O., & Gempesaw C. M. (2005). Foreign political instability and U.S. agricultural exports:evidence from panel data. *Economics Bulletin Vol. 6* (15), pp. 1−12.

Bashir, M. F., Xu, C., Zaman, K., Akhmat, G., & Ikram M. (2013). Impact of Foreign Political Instability on Chinese Exports. *Economic Modelling Vol. 33*, pp.802-807.

Blanco, L., & Gerier, R. (2009). Long Live Democracy: The Determinants of Political Instability in Latin America. *Journal of Development Studies Vol. 45* (1), pp. 76-95.

De Haan, J., & Siermann, C. L. J. (1996). Political Instability, Freedom, and Economic Growth: Some Further Evidence. *Economic Development and Cultural Change Vol. 44* (2), pp. 339-350.

Gale, T. (2008). Indicies of Political Stability. *In International Enclopyedia of the Social Sciences.*

Garret-Glasser, B. (2016). *Indicators of Political Instability*. **The Chiper Brief.**

Goerzen, A., Schussler, B., & Suriano, N. (2016). *Econometric Analysis: Effect of Barriers on Trade.* **Econometric Analysis Undergraduate Research Papers**, pp. 1-17. United States: Ivan Allen College of Liberal Arts.

Greene, W.H. (2002). *Econometric Analysis* **(5th ed.)**. New Jersey: Prentice–Hall.

Gujarati, D. (2011). *Econometrics by Example*. USA: Palgrave Macmillan.

Harvey, J. (1994). *Mastering Economics*. U.K: Macmillan Publishers Limited.

Hsiao, C. (2003). *Analysis of Panel Data* **(2nd ed.)**. UK: Cambridge University Press.

Husted, S., & Melvin., M. (2007). *International Economics* **(7th edition)**. US: Pearson Education Inc.

Lipset, S. M. (1960). *Political Man: The Social Basis of Politics*. U.S: Doubleday & Company, Inc.

Marshell, M. G., & Jaggers, K. (2007). *Polity IV Project: **Political Regime Characteristics and Transitions, 1800-2006***. U.S: Center for Systematic Peace.

Mulhearn, C., & Vane, A. R. (1999). *Economics*. U.K: Palgrave Foundations.

Oh, C. H., & Reuveny, R. (2010). *Global Environmental Change 20*, pp.243-254.

Sanders, D. (1981). *Patterns of Political Instability*. London: Macmillan.

Verbeek, M. (2004). *A Guide to Modern Econometrics* **(2nd ed.)**. Chichester: John Wiley & Sons.

Vijayasri, G. V. (2013). The Importance of International Trade in the World [Electronic Version]. *International Journal of Marketing, Financial Services and Management Research*, *2* (9), pp.111-119.

Electronic Sources:

http://unctad.org
http://www.worldbank.org