IMPACT OF GLOBALIZATION ON AGRICULTURAL FOREIGN TRADE OF SELECTED DEVELOPING COUNTRIES (1995-2017)

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ABSTRACT

Since the 1990s, the world has undergone dramatic and rapid changes towards the globalization of economic life. The research aims to examine theoretical frameworks and empirical studies that analyses and interpret the mechanism and channels of the impact of globalization policies on agricultural foreign trade by adopting an objective pilot model capable of diagnosing the nature value and direction of this impact based on the latest techniques used in the analysis of time series and the most important tests thereof, namely, both the unit roots test and (E-views 10) program for three developing countries Malaysia, Thailand, and Turkey, during the period 1995-2017. The results of the estimate have shown that there is appositive and statistically significant impact on agricultural foreign trade in the long and short term of the two countries of Malaysia and Thailand, while the relationship was only moral in the short term for Turkey.

Keywords: Agricultural commercial openness, Restrictions, competition.

اثر العولمة في التجارة الخارجية الزراعية في بلدان نامية مختارة للمدة 1995–2017

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المستخلص

شهد العالم منذ تسعينيات القرن الماضي تغيرات كبيرة وسريعة تجاه عولمة الحياة الاقتصادية، لذا يسعى البحث الى دراسة الاطر النظرية والدراسات التجريبية التي تناولت تحليل وتفسير آلية ومسارات تأثير سياسات العولمة في التجارة الزراعية الخارجية من خلال اعتماد أنموذج تجريبي موضوعي يتسم بالقدرة على تشخيص أثر العولمة واتجاهها في التجارة الخارجية الزراعية اعتماداً على أحدث الطرق المستخدمة في تحليل السلاسل الزمنية فضلاً عن أهم الاختبارات ضمن ذلك المجال، مثل اختبار جذر الوحدة وبرنامج E–views 10 لثلاث دول نامية هي ماليزيا وتايلاند وتركيا للمدة 1995 – 2017. وقد أظهرت نتائج التقدير وجود تأثير ايجابي ذو دلالة إحصائية ومعنوية للعولمة في التجارة الزراعية الخارجية على المدى البعيد والقريب بالنسبة لماليزيا وتايلاند، في حين كانت العلاقة معنوية على المدى القصير بالنسبة لتركيا فقط.

الكلمات المفتاحية: انفتاح تجاري زراعي، قيود، منافسة.

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INTRODUCTION

Agricultural foreign trade has received an exceptional attention and the interest of economists increased in it after the prevalence of economic globalization concept since the globalization of agricultural production activity takes place through the globalization of agricultural foreign trade and foreign investment in the agricultural sector. This interest rose after the changes on the international scene represented by the dominance of the United States of America on the top of the international system and the change in the shape of global conflict after the end of the cold war between the East and the West, where economy has become the main driver for this system and economic problems became global in their wide concept since the crises that befallen advanced economies soon moved on to developing countries by means of financial, monetary, agricultural foreign trade, and multi- nationality companies channels. The political change and the new international system has led to the dominance of western economic philosophy and the call to free foreign trade through the establishment of the World Trade Organization (WTO) in 1995 to replace the General Agreement on Tariffs and Trade (Gatt), thus, the new world economic system became founded on three main pillars; International Monetary Fund (IMF), World Bank, and World Trade Organization (WTO), so the globalization of agricultural foreign trade started to realize through the world trade organization; the political change and the new world system led to the dominance of western economic philosophy through the expansion of multi- national companies and the redistribution of companies of foreign direct investment and international commercial communications, and the exploitation of the revolutionary information technology which included listing international competition and setting new economic bases to systemize and motivate agricultural exports and making new bases for international investments so the world became in front of a global market characterized by the establishment of international foundations that supervise over the financial affairs and the principles of financial and commercial exchange, prices and freedom of agricultural trade among developing countries and their developed counterparts. The research problem is the historical facts explained that the agricultural sector in the developing countries has largely contributed to securing the bases and the required resource to achieve high levels of their economic growth after their adoption of different strategies in this regard, and these factors led to the emergence of nonconventional agricultural sector in these countries which was characterised by high productivity in addition to the large agricultural surplus of strategic products, so they managed to build a marketing pattern of their agricultural exports which was marked by oligopoly which is one form of globalization, the thing that reflected its impact on the performance of the agricultural sector in the developing countries and in many field, one of which is the rate of development of this sector as well as their foreign trade and then their agricultural economic development. The Importance of the research is the opinions of many economists have unanimously agreed that there is a close relationship between globalization and agricultural foreign trade, since this trade reflects the productive structure of the country through what its exports contribute to forming the constituents of its gross domestic product. It has been found that agricultural trade exchange is increasing in light of economic openness to the outside world. In this regard, the traders stressed the necessity to create a surplus of agricultural products that finds its way to foreign markets, and this will lead to stimulating the investment and production potentials of the exporting country, while agricultural imports are one of the means on which most countries rely to bridge the deficit in agricultural products and inputs which they are unable to provide to their people in the short term. The Aim of the research is the agricultural foreign trade globalization started since the nineties of the last century through the world trade organization and the multi-national companies and the redistribution of investment on the international level; so this research aims to study the impact of globalization on the agricultural foreign trade in a number of developing countries for the period 1995- 2017. The Hypothesis of the

research include the globalization is one of the historical stages that the capitalist economic system is witnessing, and this stage proved the existence of a relationship between globalization and agricultural foreign trade, so this research is based upon a hypothesis that globalization policies have variable impacts on agricultural foreign trade in a number of developing countries for the period 1995-2017. The methodology of the research is adopted the method of combining between the descriptive approach which depends on theoretical studies of this subject, and the quantitative approach which depends on standard economy methods and procedures, then to interpret the finding of the quantitative approach to assess the empirical side of the study. Three developing countries were selected as a sample for our study which included Malaysia, Thailand and Turkey and the reasons behind this selection were:

1- Being agricultural countries.

2- High contribution of their agricultural foreign trade to their gross domestic product.

3- They achieved a lot in their joining the world trade organization.

MATERIALS AND METHODS

Economic globalization is defined as policies that are constituent parts of the development of capitalism and one of its chains of evolution; these policies widely spread during the last decades of the twentieth century due to the technical revolution in the fields of information and communications, it also means the facilitation of movement of manpower, information, goods and capitals among different countries of the world crossing regional boundaries, as well as the merging of markets in fields of direct trade and investment. Globalization aims to achieve the following (2):

1- Providing the necessary opportunities to achieve economic growth at the local and global levels.

2- Increase the volume of foreign trade and revive the global economy.

3- Bringing global trends towards liberalizing trade and capital markets and seeking to transform the global economy to capitalism.

Globalization is characterised by the following:

1- Economic advancement: The great spread of globalization policies as a result of the economic openness to the world has contributed to increasing competition opportunities among global companies as well as expanding the level of collaboration between governments and private institutions to participate in the implementation of policies and strategies of general and private companies and to address economic risks through collaboration with multinational and local companies, which reflects its impact in raising the rate of economic growth (18).

2- Liberalization of international markets: Globalization is the main factor in liberalizing international trade and markets, and this is necessary to achieve economic prosperity at the global level, and to provide the economy with advantages that help it in its progress, such as competition that reflects its impact on increasing production (17).

3- Increasing investments: Globalization policies increases and encourages global economic investments through the following:

a- Increasing the ratio of employment: Globalization increases the investment of companies, which leads to the provision of the largest possible number of job opportunities with low wages, and this contributes to increasing work productivity, and the increase in foreign investment increases the employment of individuals in foreign countries because the costs of executing real properties and of labour are less than their costs in their countries, and this is how investments are transferred among different countries.

b- Reducing the tax rates: Globalization provides opportunities for companies that suffer from high tax rates to search for other countries in which they invest their money, i.e. it allows companies and individuals to transfer their money outside their countries in pursuit of lower tax rates, which leads to an increase in the flow of investments between countries.

c- Facilitating the access to global markets: Globalization has contributed to paving the way for investment companies and individuals to reach global markets through international communication networks, and it has enabled business owners to obtain products of global companies in short times and this led to the expansion of the base of international trade

exchange and the possibility of accessing foreign markets easily (13).

Characteristic of economic globalization: Economic globalization is characterised by many features, the most important of which are (3):

1- The prevalence of market mechanisms and the pursuit of competitive capabilities by taking advantage of the revolution in technology, communication and transportation, deepening the capabilities represented by the production at the lowest costs and the highest possible quality, and selling at a competitive price as soon as possible, as time has become one of the competitive capabilities that must be acquired in light of globalization.

2- The tendency towards mutual dependency which led to:

a- Increased cases of external economic shocks.

b- Prompt transfer of economic shocks.

c- Increased importance of foreign trade as a factor determining economic growth.

d- Increased rate of competition in the international economy.

3- Creating new patterns of specialization means, and international work distribution; one country may specialize in the production of part of a certain commodity then the parts are assembled to make the complete commodity.

4- Increased role of multinational companies: the total revenues of the largest five hundred multinational companies in the world reached 45% of the global gross domestic product in 1996, and multinational companies as a whole took hold of 40% of the global trade volume, thus, these companies contribute significantly to the international finance (1).

5- Increased role of global economic institutes in administrating globalization especially after the establishment of the world trade organization and the accession of the majority of the world countries to it; the international economic system integrated and three institutes are now orchestrating globalization through commercial, financial and monetary policies that influence the economic policies of most of the countries of the world; these institutions are International Monetary Fund which is responsible of managing the monetary system of globalization and World Bank which is in charge of managing the financial system of globalization, and finally World Trade Organization which is responsible of managing the trade system of globalization

6- Rapid and increased movement of capital which led to maximization of indirect investments by way of global financial markets (4).

The nature of agricultural foreign trade in the developing countries

There is a close relation between agricultural foreign trade and the structure of national economy in every country, the nature of this trade and its traits are reflections to the reality and the nature of the prevailing economic conditions in the country, the more developed was the economic structure in its basic constituents in a consistent way, the more this reflects positively on the agricultural foreign trade i.e. the nature of this trade determines the general characteristics, the nature of the economic structure and the extent of the country economy's growth, and since developing countries usually have poor economic structures, this has made their agricultural foreign trade marked by a number of common features which express the reality and nature of the developing economies according to the prevailing political and economic conditions in them (9). Hence, the basic features of agricultural foreign trade in the developing countries are marked by the following:

1- Deficit in the agricultural trade balance: The main reason for this deficit is the dependency of most of the developing countries on industrial capitalist countries, and to their positions of specialization and international distribution of work and capital as well as the backwardness of their agricultural production capabilities and the prevailing nature of their system and relations of production which resulted in the deterioration of agricultural production in quantity and quality and this made the amounts and volumes of imports exceed those of the agricultural exports.

2- Geopolitical centralization for agricultural foreign trade: This feature is a basic result of the developing countries' dependency on the advanced capitalist economies, although so

many developing countries have freed themselves, their geographic and political dependency on the capitalist system still present in one way or another in most of these countries, and despite the progress achieved by many developing countries in the field of political independency and social changes, most of them are still incapable of rectifying their dependency once and for all; their agricultural exports to the advanced countries reached 70% of their gross exports value, whereas their imports from the same countries are 70% of their gross imports value in the year 2016.

3- The proportions of agricultural trade exchange go against the interests of the developing countries unlike their advanced counterparts, i.e. the first imports expensive commodities like capitalist goods and production inputs and they export inexpensive commodities like foodstuff and raw materials and this means loss in the economic prosperity to the developing countries and it also means the change of income from the developing countries to the developed ones; this increases the poverty of the poor countries and increases the wealth of the wealthy ones.

1- Developing countries have one common feature which is the lack of flexibility in presenting their exports of raw materials and agricultural and food products as a result of being subjected to environment and weather conditions, or it might be that much of their production of crops is owned by small-time farmers that lack the means, knowledge, and sufficient motivations to use modern methods in production and export.

2- The disorganization of the commodity structure of agricultural foreign trade: Developing economies are described as being exporters of raw and agricultural materials, as one commodity or a limited number of commodities in many of these countries represent 90% of their total exports in 2017, i.e. the export sector in them is inflexible which makes them unable to directly respond to changes that may take place in the international demand, whereas their imports from the advanced countries are characterized by diversity and relative stability in their prices, and their high rates of commercial exchange, and this lessens the relative advantages that the developing countries attain from there agricultural exports.

The importance of agricultural foreign trade in the developing countries

Agricultural foreign trade is considered a direct means of consolidating international relations as it connects countries of the world with each other and contributes to providing many agricultural products and services with low prices by depending on the principle of specialization, and it supports the marketing ability through establishing many new markets for agricultural products, and this leads to increasing the level of prosperity of the society. This trade is one of the important indicators in measuring the abilities of countries in competing and marketing of products to international markets. Countries participate in building interrelated economic systems and they consolidate continuous development in them by way of providing the main information and technological means that contribute to the advancement of economic and agricultural development. Agricultural foreign trade structure is usually influenced by a number of trends which are:

The first trend: It is the trend founded by the economist Adam Smith in which he pointed out that dividing the work internationally leads to the specialization of countries in producing certain agricultural crops, and this depends on their natural conditions which constitute an absolute merit to them for production, therefore, the exports of any country are the goods that it can produce with the least absolute costs, whereas there imports are of the goods that it produce with the highest absolute costs. The second trend: The trend established by D. Ricardo in which he pointed out that the principle of absolute costs cannot be used in interpreting the structure of foreign trade, so he put a rule known as (the relative expenses) in which he pointed out that agricultural foreign trade depends on the principle of difference of relative costs of products, hence, exports constitute all kinds of goods and products that the state is able to produce with relatively low costs (compared to other countries), and it import the goods which it is unable to produce with low costs compared to other countries. The third trend: It is the trend founded by Michael Porter when

he formed the principle of relative advantage which was concerned in developing the theory of relative advantage by Ricardo to be used for expressing the distinction of one country in producing a certain product depending on the modern elements of production such as human resources, capitals and modern technology, and accordingly the foreign trade of goods is determined based on the nature of the country's specialization in producing certain products and exporting them by relying on acquired advantages, while imports of goods which the country cannot produce are classified within the elements of competitive advantage in it. (12) The Fourth trend: It is the trend that depends on the country's competitive ability which indicates the country' capability of providing items to the international market and at the same time maintaining the development of its citizens' way of living.

RESULTS AND DISCUSSION

First: Formulation and description of the model used

To study the impact of globalization on agricultural foreign trade in countries of the study sample, latest methodologies where adopted in analysing time series and the most important tests related to them, which are the unit root test (Augmented Dickey- Fuller Test or ADF)to discover the degree of integrity for each time series, and the test of co-integration according to Johansen methodology to determine the number of co-integration victors for each country (19), then to use the vector error correction model (VECM) which enables us to testing and analysing the behaviour of vectors in the short term to reach balance in the long term, and finally samples were diagnosed through a number of econometric tests provided by Eviews 10 program to reach the goodness of fit which expresses the functional relation, therefore, the econometric model used will take the following form:

ACE= βo+ β1 FDI+ β2 FE + β3 INF + β4 BD + β5 AVA +ui

As:

ACE= Agricultural foreign trade expressed by (agricultural trade- exposure level)

To support the econometric model used in estimation, a number of independent control variables were used that works along with the variable of foreign direct investment; affecting it and is affected by it, and they are:

FDI= Ratio of foreign direct investment to gross investment (Expressing globalization)

FE= Foreign exchange rate

INF= Inflation rate

BD=Ratio of deficit in the state's general budget to gross domestic product

AVA= Ratio of agricultural added value to agricultural product

Double logarithmic formula was adopted for the samples of Malaysia and Thailand as it gives values of long term flexibilities for independent economic variables when they affect the dependent variable, in addition to that it mitigates the data confusion, hence, the final formula of the model to be estimated would be as follows:

Lin ACE =□o+□1lin FDI +□2lin FE +□3lin INF □□4lin BD +□5lin AVA +ui

βo = the constant term in econometric model

β1… β5= estimated regression coefficient (flexibilities) assuming they were >zero, whereas the linear formula was adopted for Turkey as it gave the best results as follows:

ACE = □o+□$_1$ FDI +□$_2$ FE +□$_3$ INF +□$_4$ BD +□$_5$ AVA +u$_i$

1. Result of Estimating and Analysing the Impact of Globalization on Agricultural Foreign Trade in the Countries of the Study Sample for the period 1995- 2017

Steps of economic analysis were adopted depending on Eviews program, and in the following is an explanation of the steps of quantitative analysis for the impact of globalization on agricultural foreign trade in countries of the study sample.

A. Unit root test The main goal of the unit root test is to check the stationary of time series before analyzing them and this was done by the augmented Dickey-Fuller test (ADF) as shown in table 1. The table 1 illustrates that time series of all variables in each of Malaysia and Thailand are integrated of the first degree (I) (that it becomes stationary when we take the first difference), except for Turkey which we may note that all its variables are stationary at the level, and this can be justified that Turkey adopted reform policies since 1996 that reversed the direction of movement for many of its variables and consequently its arithmetic means and its variation became

stationary at the level, in addition to that all the variables of Turkey are stationary at the level, therefore, its model will be estimated and analyzed using the ordinary least squares method since we have no long-term trend in its variables.

B. Co-integration

After degree of integration was determined for all time series of the three state using Augmented Dickey-Fuller test (ADF), it became evident that all the variables of Malaysia and Thailand are non- stationary at the level, and they become stationary only when taking the first difference, consequently the use of Johansen method for co-integration is the most suitable in this case since it can determine the relations of integration for more than two variables. Test will be performed in 3 Steps as follows:

- Determining the number of the proper lags in the sample by using (VAR) model

Before performing the co- integration test for Malaysia and Thailand, lengths of lags were determined for each sample through depending on five standards which are: (HQ, SC, AIC, FPE, LR), and they all indicated that one lag period is the most proper for Malaysia, whereas regarding Thailand, four tests out of 5 found that the length of the proper lag period is the two periods lag, except for the test of LR which found that one period of lag is more proper, and depending on the principle of parsimony the result of LR test will be relied on being the least, table 2-3.

Table 1. Results of stationary tests for the variables of the study

Order of Integration	ADF In First Difference			ADF In Level			the test	Variables
	None	Intercept	Trend and Intercept	None	Intercept	Trend and Intercept		
				Malaysia				
I (1)	-4.5 (0.001)	-4.46 (0.002)	-4.77 (0.005)	-0.69 (0.69)	-2.43 (0.14)	-2.2 (0.46)	t test Prob	ACE
I (1)	-5.78 (0.0000)	-5.89 (0.0001)	-4.7 (0.013)	-0.13 (0.63)	-1.2 (0.66)	-3.1 (0.13)	t test Prob	FDI
I (1)	-4.17 (0.0002)	-4.16 (0.0045)	-4.57 (0.008)	0.42 (0.79)	-2.9 (0.06)	-2.7 (0.25)	t test Prob	FE
I (1)	-2.88 (0.0066)	-2.73 (0.087)	-2.18 (0.46)	-0.29 (0.56)	-2.99 (0.052)	-1.41 (0.81)	t test Prob	INF
I (0)	-3.81 (0.0006)	-4.25 (0.003)	-4.163 (0.0184)	0.968 (0.905)	-1.12 (0.687)	-2.136 (0.4990)	t test Prob	BD
I (1)	-4.99 (0.0000)	-5.07 (0.0007)	-4.98 (0.0039)	-1.15 (0.22)	-2.39 (0.16)	-2.33 (0.3974)	t test Prob	AVA
				Turkey				
I (0)					-5.44 (0.001)	-1.73 (0.67)	t Prob	ACE
I (0)						-7.03 (0.0005)	t Prob	FDI
I (0)						-6.83 (0.0001)	t Prob	FE
I (0)					-5.354 (0.0012)	-8.37 (0.0001)	t Prob	INF
I (0)						-3.98 (0.025)	t Prob	BD
I (0)				-2.68 (0.0098)	-2.038 (0.269)	-1.973 (0.582)	t Prob	AVA
				Thailand				
I (2)	-1.73 (0.0782)	-2.02 (0.27)	-2.06 (0.52)	0.95 (0.90)	-1.29 (0.61)	-2.44 (0.34)	t Prob	ACE
I (1)	-6.34 (0.0000)	-6.26 (0.0000)	-6.13 (0.0003)	-0.60 (0.44)	-1.83 (0.35)	-2.49 (0.32)	t Prob	FDI
I (1)	-3.97 (0.0004)	-4.01 (0.0064)	-2.44 (0.34)	0.70 (0.86)	-1.07 (0.68)	-2.95 (0.17)	t Prob	FE
I (0)	-4.68 (0.0001)	-5.08 (0.0006)	-5.01 (0.003)	- -	- -	-2.84 (0.196)	t Prob	INF
I (0)	-5.21 (0.0000)	-5.27 (0.0004)	-5.15 (0.002)	- -	- -	-2.68 (0.251)	t Prob	BD
I (1)	-3.89 (0.0005)	-3.81 (0.0095)	-3.89 (0.031)	-0.32 (0.555)	-1.41 (0.557)	-1.06 (0.913)	t Prob	AVA

Source: prepared by the researchers using E-views 10

Table 2. Test of proper lag period for Malaysia

HQ	SC	AIC	FPE	LR	LogL	Lag
35.05193	35.30780	35.01101	64645778	NA	-309.0991	0
33.16561*	34.95668*	32.87914*	9930275.*	67.45051*	-253.9123	1

Source: Results of statistical analysis of the program E-views 10.

Table 3. Test of proper lag period for Thailand

HQ	SC	AIC	FPE	LR	LogL	Lag
-1.805967	-1.572300	-1.870735	6.21e-09	NA	25.64272	0
-4.467562	-2.831893	-4.920938	3.44e-10	90.70284*	93.66985	1
-6.177243*	-3.139572*	-7.019227*	1.26e-10*	44.21488	151.7019	2

Source: Results of statistical analysis of the program E-views 10

The Pantula principle was used to determine which of the five models to be selected for the co- integration test, and the third model was selected for Malaysia and Thailand which includes the following: intercept in CE and VAR, no trend is there in CE and VAR i.e. $\delta 1 = 0 = \delta 2$, and in this case no time trend is there at level in the data, and it is assumed that the intercept in CE was eliminated by the intercept in VAR by keeping one intercept only in the short term relation model.

- Determining the rank of the matrix II or the number of co- integration trends

The idea of Johansen's test is represented in knowing the number of co- integration trends between variables depending on Max- Eigen statistics and Trace statistics. Table 4-5.

Table 4. results of co- integration test for Malaysia

Date: 05/23/20 Time: 22:31
Sample (adjusted): 1997 2017
Included observations: 21 after adjustments
Trend assumption: Linear deterministic trend
Series: LX1 LX2 LX3 LX4 LX5 LY
Lags interval (in first differences): 1 to 1

Unrestricted Cointegration Rank Test (Trace)

Prob.**	0.05 Critical Value	Trace Statistic	Eigenvalue	Hypothesized No. of CE(s)
0.0000	95.75366	160.5461	0.973518	None *
0.0023	69.81889	84.28927	0.799351	At most 1 *
0.0273	47.85613	50.55908	0.709190	At most 2 *
0.1754	29.79707	24.62229	0.508691	At most 3
0.3047	15.49471	9.697973	0.322636	At most 4
0.2180	3.841466	1.517499	0.069713	At most 5

Trace test indicates 3 cointegrating eqn(s) at the 0.05 level
* denotes rejection of the hypothesis at the 0.05 level
**MacKinnon-Haug-Michelis (1999) p-values

Unrestricted Cointegration Rank Test (Maximum Eigenvalue)

Prob.**	0.05 Critical Value	Max-Eigen Statistic	Eigenvalue	Hypothesized No. of CE(s)
0.0000	40.07757	76.25680	0.973518	None *
0.0520	33.87687	33.73019	0.799351	At most 1
0.0800	27.58434	25.93680	0.709190	At most 2
0.2942	21.13162	14.92431	0.508691	At most 3
0.3606	14.26460	8.180474	0.322636	At most 4
0.2180	3.841466	1.517499	0.069713	At most 5

Max-eigenvalue 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

Source: prepared by the researchers based on Johansen's test

Table 5. results of co- integration test for Thailand

Date: 05/22/20 Time: 23:28
Sample (adjusted): 3 23
Included observations: 21 after adjustments
Trend assumption: Linear deterministic trend
Series: LX1 LX2 LX3 LX4 LX5 LY
Lags interval (in first differences): 1 to 1

Unrestricted Cointegration Rank Test (Trace)

Prob.**	0.05 Critical Value	Trace Statistic	Eigenvalue	Hypothesized No. of CE(s)
0.0000	95.75366	233.6842	0.998186	None *
0.0000	69.81889	101.1299	0.912155	At most 1 *
0.0306	47.85613	50.05419	0.682710	At most 2 *
0.1303	29.79707	25.94748	0.553011	At most 3
0.3619	15.49471	9.037820	0.267587	At most 4
0.1140	3.841466	2.498196	0.112158	At most 5

Trace test indicates 3 cointegrating eqn(s) at the 0.05 level
* denotes rejection of the hypothesis at the 0.05 level
**MacKinnon-Haug-Michelis (1999) p-values

Unrestricted Cointegration Rank Test (Maximum Eigenvalue)

Prob.**	0.05 Critical Value	Max-Eigen Statistic	Eigenvalue	Hypothesized No. of CE(s)
0.0000	40.07757	132.5543	0.998186	None *
0.0002	33.87687	51.07573	0.912155	At most 1 *
0.1311	27.58434	24.10671	0.682710	At most 2
0.1763	21.13162	16.90966	0.553011	At most 3
0.5450	14.26460	6.539624	0.267587	At most 4
0.1140	3.841466	2.498196	0.112158	At most 5

Max-eigenvalue test indicates 2 cointegrating eqn(s) at the 0.05 level
* denotes rejection of the hypothesis at the 0.05 level
**MacKinnon-Haug-Michelis (1999) p-values

Source: prepared by the researchers based on Johansen's test

Table 6. Results of Johansen test for co- integration in logarithmic formula of the study variables of Malaysia and Thailand

Integration	H0	λ trace statistics	Critical values at significance level 5%	Probable value
Malaysia				
Trace test indicates the existence of three trends of co- integration at significance level of 5% Rejecting null assumption at significance level 5%				
Thailand				
Integration	**H0**	**λ trace statistics**	**Critical values at significance level 5%**	**Probable value**
Trace test indicates the existence of three trends of co- integration at significance level of 5% Rejecting null assumption at significance level 5%				

Source: Prepared by the researchers depending on E-views 10

The result of Johansen's test for Malaysia and Thailand showed that the value of trace statistic was higher than the critical value at significance level 5% and accordingly the null hypothesis was rejected which state the lack of co-integration between the variables, and accepting the alternative hypothesis which indicates the existence of a co- integration trend between the variables. At performing the null hypothesis test which assumes the existence of more than four trends of co-integration, this hypothesis was rejected at the level of 5%, and the result of Johansen's test indicated the existence of three trends of co-integration between the variables, and this means that there are three error correction models, and this refer to the existence of a long term balanced relation between variables.

2- Estimation of vector error correction model at one lag period: After the variables were subjected to unit root test and co-integration test for both Malaysia and Thailand, vector error correction model (VECM) was estimated for both of them. The result of the test was significance of C(1) coefficient for Malaysia, as it reached -0.30, which indicates that the speed of adjustment in the short term is 30% within one year, which leads to achieving a balance in the relationship between the study variables in the long term, and this means that Ly needs to pass approximately more than three years to accommodate the changes in the adopted independent variables, the result of the test was also significance of C(1) coefficient for Thailand as it reached (- 0.35) and this indicates that the speed of adjustment in the short term is 35% within one year which leads to achieving balance in the relation between variables of the study in the long term, and this means that LY needs about two years to accommodate the changes in the independent variables Table 7.

Table 7. Results of the common equation (long and short terms)

Malaysia				
Transactions	**Coefficient**	**Std. Error**	**t-Statistic**	**Prob.**
		Long Run Equation		
(C)1	**-0.3090**	**0.0919**	**-3.366**	**0.004**
		Short Run Equation		
FDI	**0.6663**	**0.2203**	**3.024368**	**0.0098**
FE	**0.0900**	**0.0376**	**2.393566**	**0.0325**
INF	**-0.0095**	**0.2920**	**-0.032540**	**0.9745**
BD	**-0.1723**	**0.0489**	**-3.519283**	**0.0038**
AVA	**0.6098**	**0.2025**	**3.011053**	**0.0100**
C 7	**0.0207**	**0.0171**	**1.210349**	**0.2477**
D-W stat =2.264111		**Prob(F-stat) = 0.036190**	**Adj R-squared = 0.60**	**R-squ = 0.73**
Thailand				
Transactions	**Coefficient**	**Std. Error**	**t-Statistic**	**Prob.**
		Long Run Equation		
(C)1	**-0.3539**	**0.0703**	**-5.0314**	**0.0002**
		Short Run Equation		
FDI	**2.3021**	**1.0554**	**2.181222**	**0.0481**
FE	**0.4250**	**0.6009**	**0.707273**	**0.4919**
INF	**0.2162**	**0.0963**	**2.243765**	**0.0429**
BD	**-0.4871**	**0.1692**	**-2.877639**	**0.0130**
AVA	**-0.1372**	**0.7479**	**-0.183456**	**0.8573**
C7	**0.0359**	**0.1504**	**0.23909**	**0.8147**
D-W-stat =2.000197		**Prob(F-stat) =0.003385**	**Adj R-squared =0.62**	**R-squ =0.75**
Turkey				
Transactions	**Coefficient**	**Std. Error**	**t-Statistic**	**Prob.**
C	**202.6363**	**28.2118**	**7.15**	**0.000**
FDI	**1.0770**	**0.47904**	**2.25**	**0.038**
FE	**-51.74528**	**8.80593**	**-5.87**	**0.000**
INF	**-0.9771**	**0.22960**	**-4.23**	**0.001**
BD	**-19.8557**	**17.5426**	**-1.13**	**0.273**
AVA	**-2.6249**	**2.4262**	**-1.08**	**0.297**
D-W stat =2.15478		**Prob(F-stat) =0.000**	**Adj R-squared =0.67**	**R-squared =0.74**

Source: Prepared by the researchers based on the results of VECM and O.L.S models for the countries of the study sample for the period 1995- 2017

Second: The Impact of Globalization on agricultural foreign trade in countries of the study sample for the period 1995-2017

The results of the quantitative analysis indicated the significance of the variable of the foreign direct investment ratio in the agricultural sector, to total investment (FDI), in its positive impact on the variable of agricultural foreign trade (ACE) in Malaysia, Thailand and Turkey with elasticity that reached 0.666, 2.302 and 0.267, respectively, and the positive sign for the parameter of this variable is consistent with the concepts of the economic theory, which indicates that this type of investment improves the performance of agricultural sectors during the period of globalization in the host countries through their openness to global markets due to its ability to finance from internal and external sources in a way that exceeds the ability of their competitors, to the extent that these sectors of agriculture become open to the outside world, which is what the economic globalization policies seek (10). The estimation results showed the significance of foreign exchange rate variable (FE) in positively affecting the variable of agricultural foreign trade in Malaysia with elasticity which reached 0.090, and the positive sign of this variable's parameter means that policies of globalization raised the price of currency's exchange rate in the mentioned country and this gave its agricultural products the advantage of having cheap prices in the foreign markets which led to increased amount of demand, thus, foreign earnings of their agricultural exports increased which contributed to raising the values of investment and agricultural exports in the mentioned country. Non- positive significance for the same variable appeared in Turkey with a elasticity of 0.766, and the negative sign of the

parameter of this variable is explained by that the policies of globalization reduced the exchange rate of Turkey's currency so that it reduced the foreign exchange earnings of its agricultural exports, and in return increased its agricultural imports in light of its exposure to the outside market, which It became cheaper compared to local production, thus, transferring the demand towards imports for some types of agricultural products which left a negative impact on its production and its agricultural exports (8). The significance of this variable did not appear in Thailand, and the results of estimation showed the positive significance of the inflation rate variable (INF) in affecting agricultural foreign trade in Thailand with a flexibility of 0.216, and the positive sign for this variable's parameter contradicted the concepts of the economic theory, and this can be explained by that globalization policies have laid there effects on the structure of the agricultural markets in the aforementioned country to the extent that led to the emergence of a high degree of monopoly of good and raised the prices of some types of local agricultural commodities, which resulted in an increase in inflation rates (6). In this regard, many economic studies have confirmed that inflationary financing always accompanies agricultural growth processes, as was the case in Japan during the period 1933-1935, and the experience of India in its five-year plan for the period 1951-1956 as the somewhat high rates of inflation are reflected on the rates of agricultural investment, which contributes to increasing agricultural productivity rates of crops, whose production is often earmarked for the purpose of export (20)(5). The results of estimation showed a negative significance for the parameter of this variable in affecting the agricultural foreign trade in Turkey, with a elasticity that reached 0.358, and the negative sign of this variable's parameter agreed with our expectations and with concepts of the economic theory. The explanation for this is that globalization policies have contributed to reducing inflation rates, which enabled economic policies to focus on and control the phenomenon of inflation, i.e. these policies were wise in dealing with this phenomenon and this reflected its influence in reducing the costs of agricultural production and the imports of capitalist goods and the rest of the types of inputs through the change of relative prices between local and foreign products, as local products gained a certain price advantage so that they became cheaper in global markets(7). The significance of this variable did not appear in Malaysia. The results of the estimation showed a negative significance for the variable of deficit ratio in state budget to gross domestic product (BD) in affecting agricultural foreign trade in Malaysia and Thailand with elasticties of 0.172 and 0.487 (5), and the negative sign of this variable's parameter means that globalization policies in both countries have reduced the deficit in the general budget, reflecting its effect on the increase in the values of their agricultural foreign trade (14). The significance of this variable did not appear in Turkey, and the results of estimation showed positive significance of the variable of the ratio of added value to the domestic agricultural production (AVA) in affecting agricultural foreign trade in Malaysia with a elasticity of 0.609, and the positive sign of this variable's parameter means that globalization policies have contributed to increasing the agricultural added value in the aforementioned country to the extent that it became of positive effect in its agricultural foreign trade; the significance of this variable did not appear in Thailand and Turkey(16).

Diagnosing the study sample

Null hypothesis states the lack of auto correlation, homogeneity of the variance, and the distribution of residual follows the normal distribution, and the null hypothesis is rejected when the probability value is less than or equal to 5%, which means that there is autocorrelation between the study variables, and the lack of homogeneity between the study variables, and the distribution of the residuals does not follow the normal and vice versa; and upon performing all the aforementioned tests, it was found that the model does not suffer from statistical problems (7)(11) as shown in Table 8.

Table 8. diagnosis of the study samples

Malaysia			
Test	**Chi-Square**	**Probability Value**	**Decision**
Serial Correlation	**0.8881**	**0.2352**	**No autocorrelation**
Heteroskedasticity	**9.42834**	**0.4968**	**There is homogeneity in the variance**
Jarque-Bera	**0.905411**	**0.635905**	**Normal distribution**
Thailand			
Test	**Chi-Square**	**Probability Value**	**Decision**
Serial Correlation	**2.966939**	**0.2268**	**No autocorrelation**
Heteroskedasticity	**14.93834**	**0.2448**	**There is no homogeneity in the variance**
(Jarque-Bera)	**1.57728**	**0.4544**	**Normal distribution**
Turkey			
Test	**Chi-Square**	**Probability value**	**Decision**
Serial Correlation	**3.524737**	**0.1383**	**No autocorrelation**
Hetroskedasticity	**2.605887**	**0.7605**	**There is homogeneity in the variance**
Jarque-Bera	**1.8744492**	**0.391705**	**Normal distribution**

Source: prepared by the researcher based on the results of quantitative analysis

Forgoing illustrates the following conclusions, results of the quantitative analysis proved the existence of a long and short-term relation and causal relationship between the variables of Malaysia and Thailand, and the speed of adjustment in the short term to achieve long-term balance was 47% and 56% for the two countries, respectively. Policies of globalization have contributed to the restructuring of agricultural sectors in globalized countries, that is, they caused a change or a shift in the nature, strength, functions and position of these sectors in the global market, and this requires adopting relations of interaction between policies of globalization and the state in a way that ensures the continuity of its internal and external relations. Globalization policies led to an increase in the values of agricultural foreign trade in the countries of the research sample, as practical facts proved that they led agricultural production and exports towards rapid growth, and this hypothesis was confirmed by the economic measurement of the study. The results of the estimation showed the positive and significant impact of the foreign direct investment variable (FDI) in affecting the agricultural foreign trade in the countries of the research sample, and the positive significant effect of the foreign exchange rate variable (FE) appeared in Malaysia, but was not positive in Turkey. The significant and positive effect of the inflation rate (INF) appeared in its effect on agricultural foreign trade in Thailand, but was not positive in Turkey. The non- positive significance of the impact of the deficit variable (BD) appeared in both Malaysia and Thailand, and its effect did not appear in Turkey. As for the variable of agricultural added value (AVA), it had a significant and positive effect in Malaysia; but was absent in Thailand and Turkey. The study recommended Improving the competitiveness of the agricultural products of the sample countries in the local and global markets in light of globalization policies, and this is done through the application of a strategy that makes among its objectives achieving production efficiency and reducing costs as well as raising the quality level of the mentioned products. Encouraging agricultural investment and developing and improving the marketing infrastructure and agricultural informatics a well as striving to increase the efficiency of agricultural activities that enhance agricultural trade exchange at the global level. Activating the positive role of the macroeconomic variables that work alongside the variable of foreign direct investment in order to adapt to the external developments in the global economic structure that have been produced by companies of this type of investment in the agricultural sector and at the global level. Carrying out structural reforms in the agricultural sector with the aim of improving trade performance in it, especially in the field of developing and encouraging exports, and setting the necessary policies for agricultural trade openness and increasing its ranges.

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