Abdulkadir Kaya[1]

THE EFFECT OF AGRICULTURAL INVESTMENTS BY GOVERNMENTS ON ECONOMIC GROWTH AND FINANCIAL MARKETS: AN APPLICATION ON DEVELOPED AND DEVELOPING COUNTRIES

ABSTRACT

In this study, Bound Test Analysis (ARDL) was applied for the 2001-2016 period in order to examine the effects of the Agricultural Orientation Indices (AOI) representing the agricultural investments of countries on the Stock Exchange Index (SE) and Gross Domestic Product (GDP) of developed and developing countries. The independent variables of the two ARDL models created are AOI and the dependent variables are SE and GDP.

To estimate the relations between the variables, yearly panel date series belonging to the period of 2001 – 2016 are taken into account. According to the results of the analysis of border tests, Agriculture Orientation Index (AOI) and the Stock Exchange Index (SE) and Gross Domestic Products (GDP) variables are cointegrated in both developed and developing countries. AOI variable has no statistically significant effect on SE variable, GDP variable is negatively affected by the AOI variable in the long term both developed countries and developing countries. In developed countries, the AOI variable has a negative relationship with the SE variable. In addition, it was determined that the AOI variable has a negative effect on the GDP variable in the short term. AOI variable does not affect on both SE and GDP variables in the short term.

Keywords: *Developing and Developed Countries, Agricultural Investment, Economic Growth, Financial Markets, Agricultural Orientation Indices (AOI)*

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1 Assoc. Prof., Erzurum Technical University, Faculty of Economics and Administrative Science, Department of Business, e-mail: akadirkaya@erzurum.edu.tr

1. INTRODUCTION

A significant part of the nutritional needs that the society will need to survive is provided by the agricultural sector. The agricultural sector is a sector that produces many nutrients, diversifies the nutrients by processing these substances, and supplies the need of individuals for these substances, thus having a significant impact on the health and development of societies. For individuals to eat enough and balanced nutrition, they first find the desired amount and type of nutrients, and then they must have an income to purchase these items. Therefore, the agricultural sector will always be an important factor for both economic and social development.

Agriculture is an indispensable industry all over the world because of the healthy life of a society, its contribution to the national income and employment of the country, the supply of raw materials and capital to many agricultural and non-agricultural sectors, its direct and indirect impact on exports, and its contribution to biological diversity and ecological balance. The agricultural sector, which is vital for society, contributes to the increase in the national income of a country, and is an important factor in the financial sector in terms of supplying the financing resources it needs.

Private sector enterprises operating in the agriculture sector are required to carry out important research and development activities and provide the necessary financing in order to develop their activities, research new production methods, make product diversity, have sufficient production areas.

The fact that the research and development activities to be carried out in the agriculture sector are in the public interest and require significant investments, and that the required financing is not sufficiently provided due to the asymmetric information between the enterprises and financial institutions, necessitates government support to the sector. In addition, governments should provide agricultural support for situations such as drought, flood, and excessive rainfall in the important risk group for the sector.

Government expenditures on agricultural land and activities will also contribute significantly to increasing physical and human capital in the sector and increasing the efficiency, productivity and profitability of the sector.

Government expenditures are the sector's policy and program expenditures, land improvement expenditures, irrigation and reservoir expenditures, animal health expenditures, animal husbandry expenditures, aquaculture research expenditures, afforestation and forestry expenditures, etc. Government expenditures on the agricultural sector will contribute to economic growth and financial markets by leading to new investments to be made by the sector.

The Agriculture Orientation Index (AOI) is calculated by the Food and Agriculture Organization of the United Nations (FAO) in order to measure the agricultural investments of the governments. AOI is calculated by the formula below:

AOI = (Agriculture Share of Government Expenditures) / (Agriculture Share of GDP),

In formula;

Agriculture Share of Government Expenditures: (Central Government Expenditures on Agriculture) / (Total Central Government Outlays), Agriculture Share of GDP : (Agriculture Value-Added) / GDP.

Government expenditures used in AOI calculation are obtained through a survey prepared by FAO. Since countries often compile government spending data according to their financial systems, there is no possibility of sampling and sampling errors.

The purpose of this study is to determine the effect of the agricultural expenditure levels of governments on the development of the country's economies and financial markets. In other words, in the study, it will be determined whether the agricultural expenditures of the countries have an effect on the country's economy and financial markets, and if there is, the degree of the effect will be determined.

This paper contains the following structure. Chapter 2 will briefly focus on the literature review on the subject. Section 3 will describe the ARDL methodology applied for this research. In Chapter 4, information will be given about the findings, and in the last chapter, the findings will be evaluated in general and recommendations will be presented.

2. Literature review

The findings of some of the literature studies on the subject are as follows: Iftekhar et al. (2009) investigated the role of legal institutions, financial deepening and political pluralism on growth rates in Chinese provinces. They found that stronger growth is associated with financial market development, legal environment, property rights awareness of and political pluralism.

Alam et al. (2014) investigated the relationship between financial development and environmental quality in Malaysia. As environmental quality variables, they have used population density per kilometer, agricultural production, air pollution, fossil fuel consumption and energy resources. As a result of their analysis, while there was no relationship between financial development and carbon dioxide emission rate, they found a negative relationship with population density. There is a positive relationship between grain production and domestic loans, while a negative relationship is with inflation.

Khan et al. (2014) examined the relationships between financial development and economic development, agricultural production and commercial openness in Pakistan. As a result of the research, they concluded that there is a long-term relationship between financial development and agricultural product exports, and that agricultural raw material exports and trade openness positively affect economic growth.

Usman (2016) examines the contribution of the agricultural sector to economic growth in Pakistan. The study used major crops, live stocks and other crops. As a result of the study, it is determined that there is a significant strong relationship between economic growth and the agricultural sector in Pakistan. In addition, it has been concluded that major crops have a significant effect on the agricultural sector and contribute to growth, and livestock has a significant effect on the agricultural sector.

Zortuk and Karacan (2016) investigate the causality between the agricultural sector and economic development for the 1995-2015 period in transition countries. The result of the study shows that there is a homogeneous causality from economic growth to agricultural development and a heterogeneous causality from agricultural development to economic growth.

Shahbaz et al. (2016) examined the relationship between agriculture, the modern sector, economic growth, financial development and energy consumption in the case of Pakistan. As a result of the study, they determined a bidirectional causality between energy consumption and financial development and modern sector growth.

Shahbaz et al. (2013), who aimed at determining the relationship between agricultural growth and financial development, determined that there is a long-term relationship between financial development and agricultural growth as a result of the study. They also found that the improvement in financial development, capital and labour force factors in the economy had a positive effect on agricultural growth. Finally, they revealed that there is a bidirectional causality relationship between financial development and agricultural growth.

Examining the relationship between agricultural product exports and economic growth in the case of Pakistan, Khalid and Shehla (2017) found that there is a positive but weak relationship between agricultural exports and economic growth, in other words, agricultural exports in Pakistan have little contribution to economic growth.

The study done by Oliynyk-Dunn (2017) aims to demonstrate the importance of financial development for agricultural growth in Ukraine. The findings of the study show that based on integral indicators, financial development does not affect agricultural growth, however, based on non-integrated indicators, it is found that there is a significant positive relationship between agricultural growth and financial development.

Also, the regression models in the study indicate that bank deposits to GDP (%) increase the value-added per worker in agriculture increases exponentially. The study findings show that agriculture is more sensitive to lending changes than the majority of the other sectors of the economy.

3. Methodology: Research method and data sources

Ariel Bounds Test Analysis (ARDL) was used to determine the relationships between the Agricultural Orientation Index (AOI) variable and the GDP and Stock Exchange Index (SE) variables of developed and developing countries. Panel data of the variables for the period 2001 - 2016 were obtained from the official websites of the Food and Agriculture Organization of Nations (FAO).

In order to determine the relationship between AOI and SE and GDP, the following equation is used:

$$SE = C + \beta_1 AOI + \varepsilon_t SE = C + \beta_1 AOI + \varepsilon_t \quad (1)$$

$$GDP = C + \beta_1 AOI + \varepsilon_t \, GDP = C + \beta_1 AOI + \varepsilon_t \quad (2)$$

In the equations show;

SE : Stock Exchange Index,

GDP : Gross Domestic Product

AOI: The Agriculture Orientation Index,

ε : Error term.

It is an important assumption that stationary of variables in time series analysis. The fact that the variables are not stationary can cause the spurious regression problem (Granger and Newbold; 1974). Therefore, first of all, it should be tested whether the variables are stationary or not. MacKinnon (1991) states that the pseudo-regression problem of variables can be eliminated and reliable results can be obtained by using unit root tests on variables.

The ARDL boundary test developed by Pesaran, Shin, and Smith (2001) can determine the cointegration relationship of the series, regardless of the stationary level of the series, using Wald or F statistics. The ARDL boundary test method is able to determine the relationships between variables without the need to look at the stationary level and with less sample size. Therefore, ARDL analysis differs significantly from the cointegration tests developed by Johansen (1988), Johansen and Juselius (1990) and Engle and Granger (1987), which are frequently preferred in the literatüre (Akıncı & Yılmaz, 2012).

The ARDL boundary test is an approach based on the prediction to be performed with the unlimited error correction model and OLS estimator. This approach is determined based on the unlimited error correction model for the cointegration relationship in the regression models (3) and (4) below. Models (3) and (4) are formed as follows:

$$\Delta SE_t = \beta_0 + \sum_{i=1}^{p} \beta_1 \Delta SE_{t-k} + \sum_{i=0}^{p} \beta_2 \Delta AOI_{t-k} + \theta_1 SE_{t-1} + \theta_2 AOI_{t-1} + \varepsilon_t \quad (3)$$

$$\Delta GDP_t = \beta_0 + \sum_{i=1}^{p} \beta_1 \Delta GDP_{t-k} + \sum_{i=0}^{p} \beta_2 \Delta AOI_{t-k} + \theta_1 GDP + \theta_2 AOI_{t-1} + \varepsilon_t \quad (4)$$

In the ARDL test approach, first of all, the models (2) and (3) are estimated by OLS analysis and by using these estimates, the lag length expressed as "m" is determined. AIC, SBC, FPE and HQ information criteria will be used to determine lag lengths. When determining the appropriate lag length, the lag length for which the values of the information criteria are minimum is selected for the models. In order for the results obtained from the F test to be correct, there should be no autocorrelation between the error terms. Due to the use of delayed values of ΔSE, which are used as dependent variables in models, Breusch - Godfrey test will be used to determine the autocorrelation between lagged values.

After analyzing lag length and autocorrelation, the null hypothesis that accepts the existence of a long-term relationship will be tested by applying zero constraints to the coefficients of AOI_{t-1}, and SE_{t-1} and GDP_{t-1} variables with lagged values in models (3) and (4). For this, the level values of the coefficients of the variables are analyzed using the F test, taking into account the hypothesis (Ho = α2 = α3 = 0). The determined F statistic value is compared with the lower and upper critical values determined by Pesaran Pesaran, Shin and Smith (2001). If the F statistic value found is greater than the upper limit of the compared value, it is concluded that the variables are cointegrated. If the F statistic value found is less than the lower critical value, it cannot be stated that the variables are not cointegrated, and if it is between the lower and upper critical values, there is a clear cointegration relationship between the variables (Akıncı & Yılmaz, 2012).

The long-term and short-term coefficients of the variables can be estimated with the ARDL Bound test approach. In the estimation of long-term coefficients: The value found by adding the negative values of the lagged values of the coefficients of the independent variables is divided by the result obtained by subtracting 1 from the value obtained from the sum of the coefficients of the dependent variables. The calculation is shown in equation number (7) (Akıncı & Yılmaz, 2012). The ARDL models shown below are used to determine the long-term relationship between variables.

The coefficients expressing the level of a long-term relationship between variables will be calculated with the models (5) and (6) shown below.

$$\Delta SE_t = \beta_0 + \sum_{i=1}^{p} \beta_1 \Delta SE_{t-i} + \sum_{i=0}^{p} \beta_2 \Delta AOI_{t-i} + \varepsilon_t \quad (5)$$

$$\Delta GDP_t = \beta_0 + \sum_{i=1}^{p} \beta_1 \Delta GDP_{t-i} + \sum_{i=0}^{p} \beta_2 \Delta AOI_{t-i} + \varepsilon_t \quad (6)$$

$$\emptyset \frac{\sum_{i=0}^{k} \beta_2}{1 - \sum_{i=1}^{j} \beta_1} \quad (7)$$

Current period lag coefficients of independent variables represent short term coefficients (Yapraklı, 2010). Therefore, the short-term relationship between variables will be determined by an error correction model based on ARDL bounds test approach. The model to be used in determining the short-term relationship between variables is shown below:

$$\Delta SE_t = \beta_0 + \beta_1 ECM_{t-i} \sum_{i=1}^{p} \beta_2 \Delta SE_{t-i} + \sum_{i=0}^{p} \beta_3 \Delta AOI_{t-i} + \varepsilon_t \quad (8)$$

$$\Delta GDP_t = \beta_0 + \beta_1 ECM_{t-i} \sum_{i=1}^{p} \beta_2 \Delta GDP_{t-i} + \sum_{i=0}^{p} \beta_3 \Delta AOI_{t-i} + \varepsilon_t \quad (9)$$

The ECMt-1 variable in models (8) and (9) expresses the one-period lag value of the error terms series of the models used to determine the long-term relationship.

4. Results and discussions

This article aims to examine the impact of AOI on economic growth and the development of financial markets on developed and developing countries. 18 developing and 14 developed countries were included in the study. In the selection of developed and developing countries of the countries included in the analysis, countries with high agricultural expenditures were tried to be selected. The developed and developing countries included in the study are presented in Table 1.

Table 1: The Countries included in the analysis

Developing Countries	Developed Countries
Argentina	Denmark
Bangladesh	Finland
Brazil	France
Chile	Germany
China, P.R.: Mainland	Greece
Colombia	Ireland
Egypt	Japan
India	Netherlands
Israel	Norway
Korea, Republic of	Portugal
Malaysia	Sweden
Mexico	Switzerland
Philippines	United Kingdom
Russian Federation	United States
Singapore	
South Africa	
Turkey	
United Arab Emirates	

Source: *Author's calculation*

The correlation relationship between the variables to be used in the analysis is presented in Table 2.

Table 2: Matrix of the correlation between the variables

Variables	Developed Countries			Developing Countries		
	AOI	GDP	SE	AOI	GDP	SE
AOI	1			1		
GDP	-0,3120 (0,0000)	1		-0,1918 (0,0007)	1	
SE	0,0734 (0,2591)	-0,0471 (0,4700)	1	-0,0122 (0,8316)	0,0266 (0,6425)	1

Source: *Author's calculation*

When the correlation table is examined, it is seen that there is no significant relationship between the AOI variable and the SE variable while there is a negative and significant relationship between the AOI variable and the GDP variable, in both developed and developing country groups.

In the first stage of ARDL analysis, it is necessary to determine the appropriate lag length for the models. Schwarz Info Criterion (SIC) is generally used to determine the appropriate lag length for it tends to define more parsimonious specifications.

For the regression models (2) and (3), the F-statistic value was estimated and the results are presented in Table 3.

Table 3: The Results of the bounds testing analysis

Countries	Variable Pairs	k*	F-Statistic	5% Critical Values		1% Critical Values	
				Lower Bound	Upper Bound	Lower Bound	Upper Bound
Developed Countries	SE - AOI	1	20.284	4.94	5.73	6.84	7.84
	GDP-AOI	1	31.467				
Developing Countries	SE - AOI	1	52.675	4.94	5.73	6.84	7.84
	GDP-AOI	1	40.565				
All Countries	SE - AOI	1	73.307	4.94	5.73	6.84	7.84
	GDP-AOI	1	74.977				

** k represents the critical value suitable for the number of independent variables.*

Source: *Author's calculation*

According to Table 3, it has been determined that the Agriculture Orientation Index (AOI) and the Stock Exchange Index (SE) and Gross Domestic Products (GDP) variables are cointegrated in both developed and developing countries. In other words, it has been determined that there is a long-term relationship between the Agricultural Orientation Index and the Stock Exchange Index (SE) and the Agriculture Orientation Index and the Gross Domestic Products (GDP). After finding this relationship, ARDL model will be used to analyze long and short term dynamics between variable pairs.

For the developed, developing and all countries, ARDL models were established to estimate the long-term relationship between the AOI variable and the SE and GDP variables, and model estimates are presented in Table 4-5-6.

Table 4: The Results of the long-term dynamics of ARDL for developed countries

Dependent Variables	Independent Variables	Coefficient	t-Statistic	p-Value	Descriptive Statistics
SE	C	0.067	3.149a	0.000	R2 = 0.821
	SE(-1)	0.900	31.818a	0.000	F= 509.5 p=0.000
	AOI	0.000	0.042	0.966	DW = 2.001
GDP	C	2.277	4.474 a	0.000	R2 = 0.237
	GDP(-1)	0.393	6.584 a	0.000	F= 34.443 p=0.000 DW = 2.016
	AOI	-0.839	-2.941 a	0.003	

a represents 1% significant levels.

Source: *Authot's calculation*

When the results of developed countries in Table 4 are examined, the AOI variable has no statistically significant effect on SE variable. It can be stated that SE variable is positively affected by its previous values at 1% significance level in the long term. The GDP variable is positively affected by its previous values and negatively by the AOI variable at 1% significance level in the long term.

In other words, the increase in the GDP variable will increase the GDP in the next period, but the increase in the AOI variable will decrease the GDP variable.

Table 5: The Results of the long-term dynamics of ARDL for developing countries

Dependent Variables	Independent Variables	Coefficient	t-Statistic	p-Value	Descriptive Statistics
SE	C	0.021	2.453[b]	0.014	R^2 = 0.926 F= 1809.4 p=0.000 DW = 2.056
	SE(-1)	0.958	6.015[a]	0.000	
	AOI	-0.001	-0.101	0.919	
GDP	C	2.833	6.786[a]	0.000	R^2 = 0.126 F= 20.703 p=0.000 DW = 1.937
	GDP(-1)	0.297	5.334[a]	0.000	
	AOI	-0.895	-2.463[b]	0.014	

Source: *Author's calculation*

When long term ARDL results of developing countries are analyzed, it is determined that SE variable is affected only by its own previous values at 1% significance level, but the AOI variable has no effect on SE variable. The GDP variable is positively affected by its previous values at 1% significance level and it is negatively affected by the AOI variable at 5% significance level.

In the long term, agricultural investments of developed and developing countries do not have any impact on financial prices, but they have a negative effect on economic growth.

Table 6: The Results of the long-term dynamics of ARDL for all countries

Dependent Variables	Independent Variables	Coefficient	t-Statistic	p-Value	Descriptive Statistics
SE	C	0.030	4.267	0.000	R2 = 0.930 F= 21.33 p=0.000 DW = 2.091
	SE(-1)	0.937	2.124	0.000	
	SE(-2)	0.010	0.232	0.815	
	AOI	0.001	0.131	0.895	
GDP	C	2.694	8.742	0.000	R2 = 0.195 F= 61.967 p=0.000 DW = 1.977
	GDP(-1)	0.334	8.187	0.000	
	AOI	-0.973	-4.789	0.000	

Source: *Author's calculation*

Table 6 shows the long-term ARDL results in which developed and developing countries are evaluated together. When Table 6 is examined, it is seen that SE variable affected positively only by its 1 lagged value. GDP variable is affected both by its previous value and AOI variable at 1% significance level.

When evaluated in general, it can be stated that the increase in the agricultural investments of the governments had a negative effect on the economic growth for the 2001-2016 period.

The short term relationship of the AOI variable on SE and GDP is investigated by considering the error correction model based on models 8 and 9. The result of the short term relationships for developed, developing and all countries are presented in Tables 7, 8 and 9.

Table 7: The Results of the short-term dynamics of ARDL for developed countries

Dependent Variables	Independent Variables	Coefficient	t-Statistic	p-Value	Descriptive Statistics
SE	C	0.001	0.094	0.924	R2 = 0.053 F= 6.198 p=0.002 DW = 2.001
	ΔAOI	-0.099	-3.517	0.000	
	EC(-1)	-0.0001	-0.029	0.976	
GDP	C	0.016	0.087	0.930	R2 = 0.319 F= 51.854 p=0.002 DW = 2.025
	ΔAOI	-1.157	-1.761	0.079	
	EC(-1)	-0.601	10.041	0.000	

Source: *Author's calculation*

When the short-term relationships for developed countries are analyzed, it is determined that the AOI variable has a 1% significance level and a negative relationship with the SE variable. In addition, it was determined that the AOI variable has a 10% significance level and negative effect on the GDP variable in the short term.

Table 8: The Results of the short-term dynamics of ARDL for developing countries

Dependent Variables	Independent Variables	Coefficient	t-Statistic	p-Value	Descriptive Statistics
SE	C	-0.0003	-0.105	0.916	R2 = 0.032 F= 451.43 p=0.000 DW = 2.066
	ΔAOI	-0.04	-1.471	0.142	
	EC(-1)	-0.039	-2.725	0.006	
GDP	C	-0.004	-0.023	0.981	R2 = 0.359 F= 80.093 p=0.000 DW = 1.940
	ΔAOI	-2.30	-1.268	0.205	
	EC(-1)	-0.704	-1.264	0.000	

Source: *Author's calculation*

Table 8 shows the short term relationships between the variables of developing countries and it is seen that the AOI variable affects niether SE nor GDP variable in the short term. In other words, agricultural investments of governments in the short term have no impact on financial markets and economic growth.

Table 9: The Results of the short-term dynamics of ARDL for all countries

Dependent Variables	Independent Variables	Coefficient	t-Statistic	p-Value	Descriptive Statistics
SE	C	5.54	0.021	0.983	R2 = 0.039 F= 6.560 p=0.000 DW = 2.090
	ΔSE(-1)	-0.01	-0.237	0.812	
	ΔAOI	-0.004	-0.0372	0.709	
	EC(-1)	-0.052	-4.359	0.000	
GDP	C	0.002	0.012	0.990	R2 = 0.343 F= 132.8 p=0.000 DW = 1.980
	ΔAOI	-1.382	-2.049	0.040	
	EC(-1)	-0.664	-16.222	0.000	

Source: *Author's calculation*

When the short-term relations for all countries are analyzed, it is concluded that the AOI variable does not have a significant effect on the SE variable, while there is a 5% significance level and negative effect on the GDP variable.

5. CONCLUSIONS

For determining the effects of the Agriculture Orientation Index (AOI) on the Stock Exchange Index (SE) and Gross Domestic Product (GDP) of developed and developing countries the Bounds Test Analysis (ARDL) is applied. To determine the relationship between AOI and SE and GDP, it was used with the panel data set covering the 2001-2016 period, obtained from the official websites of the United Nations Food and Agriculture Organization (FAO).

According to the results of the Bounds Testing Analysis, SE and GDP of the developed, developing and both group countries and the variable pairs AOI and SE and AOI and GDP were statistically significant at the 1% significance level.

According to the results of the long-term dynamics of ARDL, the GDP variable is positively affected by its previous values and negatively by the AOI variable at 1% significance level in the long term for developed, developing and both group countries.

According to the results of the short-term dynamics of ARDL, the AOI variable has a 1% significance level and a negative relationship with the SE variable. In addition, it was determined that the AOI variable has a 10% significance level and negative effect on GDP variable in the short term for developed countries. The AOI variable affects niether SE nor GDP variables in the short term for developing countries. The AOI variable does not have a significant effect on the SE variable, while there is and 5% significance level of a negative effect on the GDP variable for both group countries.

When we analyzed overall findings, agricultural spending of developing countries appears to have a negative impact on GDP in the short term. In other words, there was no increase in GDP in the short term in return for government expenditures, but a decrease was observed. The development of the agricultural sector depends on long-term and maintaining investments. Therefore, government spending in the short term will not affect the GDP positively. Problems related to the long-term agricultural structure should also be eliminated in order to obtain the short-term return of the agricultural expenditures of the governments. In addition, considering the contribution of the high value-added technological sector in the economic development of developed and developing countries, it can be seen as a reason for the negative impact of the increase in government expenditures on the agricultural sector with a lower value added to the GDP.

Especially in developing countries, the aim of agricultural policies is to protect both producers and consumers in a sector that has strategic importance and concerns the entire population of millions, both producers and consumers. With the agricultural policies implemented, countries are trying to increase the standard of living of the people dealing with this sector, and on the other hand, they are trying to guarantee the production of foodstuffs that society needs. As the market economy is not fully developed especially in developing countries, agricultural enterprises do not have competitive potential. Therefore, it is of great importance to improve the agricultural infrastructure in the long term. The purpose of countries to intervene in the agricultural sector is to determine product prices, regulate the production and market conditions in the short term, bring the population in the agricultural sector closer to the living standards of those working in non-agricultural sectors and realize economic development by developing industries that process agricultural products in the long term. Therefore, the impact of agricultural supports on the GDP can be considered as expected in the short term.

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Abdulkadir Kaya

UTJECAJ ULAGANJA VLADE U POLJOPRIVREDU NA EKONOMSKI RAST I FINANSIJSKA TRŽIŠTA: PRIMJENA NA RAZVIJENE ZEMLJE I ZEMLJE U RAZVOJU

SAŽETAK

U ovoj studiji je primijenjena Bound Test Analysis (ARDL) za period 2001-2016, kako bi se ispitali efekti poljoprivrednih orijentacijskih indeksa (AOI) koji predstavljaju poljoprivredna ulaganja zemalja na berzanski indeks (SE) i bruto domaći proizvod (BDP) razvijenih zemalja i zemalja u razvoju. Nezavisne varijable dva kreirana ARDL modela su AOI, a zavisne varijable su SE i GDP.

Za procjenu odnosa između varijabli uzete se u obzir godišnje panelne serije datuma koje pripadaju periodu od 2001. do 2016. godine. Prema rezultatima analize graničnih testova, varijable Orijentacioni Poljoprivredni indeks (AOI), Berzanski indeks (SE) i bruto domaći proizvod (BDP) su kointegrisane i u razvijenim i u zemljama u razvoju. AOI varijabla nema statistički značajan uticaj na SE varijablu, na varijablu BDP-a negativno utiče AOI varijabla dugoročno i razvijene zemlje i zemlje u razvoju. U razvijenim zemljama, AOI varijabla ima negativan odnos na SE varijablu. Pored toga, utvrđeno je da AOI varijabla ima negativan uticaj na varijablu BDP-a u kratkom roku. AOI varijabla nema utjecaja ni na SE ni na BDP varijable u kratkom roku.

Ključne riječi: *zemlje u razvoju i razvijene zemlje, poljoprivredne investicije, ekonomski rast, finansijska tržišta, indeksi poljoprivredne orijentacije (AOI)*

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