

## Causality Relationship Between Transfer Expenditures and Labor Force Participation Rate in Turkey

Yılmaz Onur ARI<sup>1</sup>, Ümit YILDIZ<sup>2</sup>

### Abstract

Transfer expenditures do not make a visible change on national income, but cause transfer of some revenues between some individuals and institutions. Transfer expenditures are public expenditures that generate mobility in production due to the expenditures made by those who earn these revenues. In addition, transfer expenditures can be a factor that decreases unemployment in the economy as well as it can be a factor that increases unemployment.

In this study, the relationship between transfer expenditure and labor force participation rate is analyzed for the period 1988-2017 using annual data. In this context, the Johansen Cointegration Analysis is firstly used to determine whether there is a long-term relationship between the two variables, followed by the Granger Causality Analysis is used for the investigate the causality relationship between the variables. In the study, it is concluded that there is a one-way causality relation from the transfer expenditures to the labor participation rate.

**KeyWords:** Transfer Expenditures, Labor Force Participation Rate, Turkish Economy, Public Expenditures, Employment

**Jel Codes:** H50, J21, H00, H20

### 1. Introduction

The concept of transfer expenditure was introduced by the economist Pigou towards the middle of the 20th century. Pigou (1947: 19) defined transfer expenditures as “expenditures on the recovery of state security”.

Transfer expenditures can be a factor that decreases unemployment in the economy as well as it can be a factor that increases unemployment. Unemployment benefits made by the public under the name of transfer expenditures cause individuals to be inclined to work

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<sup>1</sup>Yılmaz Onur ARI (Corresponding Author) is a research assistant at Bayburt University, Bayburt, Turkey E-Mail: onurari@bayburt.edu.tr

<sup>2</sup> Ümit YILDIZ is a assistant professor at Bayburt University, Bayburt, Turkey E-Mail: umityildiz@bayburt.edu.tr

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and transfer expenditures under the name of subsidy for production can increase employment.

Although unemployment has been an important social problem for all countries throughout history, it has been the main problem of developing countries until the 1980s. With the introduction of neo-liberal policies in the 1980s, it became a problem for developed countries (Özdemir et al., 2006: 67-68). On the basis of the unemployment problem in Turkey lies the failure to provide the rapidly growing young population and employment opportunities, reasons such as lack of continuity in the amount of investment especially in the industrial sector and by sectors other than the agricultural labor surplus in the agricultural sector cannot adequately be employed (Bozdağlıoğlu, 2008: 46).

Not only the unemployed, but the population of the workforce; the ratio of the total of the employed and unemployed to the working age population is called the labor force participation rate. It is formulated as  $\text{Labor Force Participation Rate} = \frac{\text{Labor Force (Employment + Unemployed)}}{\text{Population in Working Age}}$  ([http://www.tuik.gov.tr/basinOdasi/Tekzipler/Tekzip\\_04012013.pdf](http://www.tuik.gov.tr/basinOdasi/Tekzipler/Tekzip_04012013.pdf)) (visited on 15.02.2018).

The labor force participation rate in Turkey is significantly below the OECD average. While the labor force participation rate in the OECD countries was at the level of 68-70%, the labor force participation rate in Turkey was 52.8% in November 2017 (<http://www.tuik.gov.tr/HbGetirHTML.do?id=27687>) (visited on 15. 02.2018). The reason of reducing the labor force participation rate in Turkey and thereby causes that led to the low level of unemployment, is the definition of unemployment. The definition of unemployment does not cover the people who are not willing to look for a job, even if there is a job to do in the market. Since there is no hope of finding a job, the rate of those who are not looking for a job and are ready to start work is quite high compared to the unemployment rate (Aydemir, 2013: 119).

In this study, starting from the low level of labor force participation rate in Turkey, aims to demonstrate that the labor force participation rate of transfer of public expenditure to what extent. In the study, the economic impact of transfer expenditures and transfer expenditures primarily were mentioned. Then in practice, relations between transfer expenditures and the labor force participation rate were analyzed.

## **2. Transfer Expenditures**

### **2.1 Definition and Implementation of Transfer Expenditures in Turkey**

The concept of transfer expenditures which was argued first towards the middle of the XX. Century by Pigou, is the expenditure that causes the purchasing power to change hands between private individuals and social strata. Debt rates, social benefits, subsidies, social security expenditures, tax returns and payments to local administrations, transfers to Government Business Enterprises (GBEs), transfer expenditures (Kalaycı, 2016: 2).

Especially developed countries aimed to raise social life standards through social transfers such as unemployment benefit, education aid and old age benefit. However, this

situation leads to an increase in the ratio of transfer expenditures to total public expenditures in developed countries. Although transfer expenditures in the US were not so important until 1930s, transfer expenditures increased rapidly due to old age insurance. Therefore, the change of the demographic structure may cause an increase in social transfer expenditures. As a decrease in population growth rate will increase the average age of the population, it raises the increase of services for the elderly (Kalaycı, 2016: 3-4).

In developing countries, transfer expenditures are generally implemented as subsidies for development purposes. In these countries, due to the intense borrowing policy in order to realize growth and development, this situation increased the borrowing rates and increased the transfer expenditures. Therefore, the importance of transfer expenditures in developed countries is related to the size of social transfers and to debt interest and subsidies in developing countries (Meriç, 2003: 172).

Transfer expenditures are a real expenditure, since the transferred segment creates a new purchasing power in the national economy and thus makes a real contribution to the national economy. The main point in the distinction between real expenditure and transfer expenditures is the purpose of spending at the first time. While the expenditure is first made by the state, in case of purchase of goods and services in return, this real expenditure; if there is no such provision, this refers to the transfer expenditure (Devrim, 1999: 166).

Transfer expenditures by their nature are expenditures that are unrequited and have indirect effects on GNP. Such expenditures are a method implemented by the state in the redistribution of income in the country. transfers are recorded in the consolidated budget expenditures in Turkey. transfer allowances classified with code number 900 in the Program Budget System implemented in Turkey, are included in this group based on two principles. The first principle is the transfer of expenditures that are paid from the budget in accordance with the law, but which are not received directly in return for goods and services. The second principle is that the investment projects expropriation and building purchases, which cause the real estate to change hands, are coded as transfer expenditures so as not to affect the national wealth. Such expenditures generally have the character of capital formation (Özen, 2003: 205-206).

Turkey in the economic classification of public expenditure in the period between the years 1950-1963, including the current expenditure and investment expenditure binary classification used that, in accordance with the First Five-Year Development Program, 1964 public spending in Fiscal Year Budget, current expenditures, capital investment spending and transfer expenditures. In this way, triple separation of transfer expenditures has ensured that the budget is compatible with the plan for investments. In addition, it has also allowed the inclusion of state debts, current pension salaries, retired widows and orphans' salaries, added-budget administrations, municipalities and associations to capital expenditures and transfer expenditures (Özen, 2003: 206).

## **2.2 Classification of Transfer Expenditures**

It is possible to classify the transfer expenditures based on the figures they receive and the corresponding criterion. Transfer expenditures are classified according to the figures in which they received the first three items. The last two items were classified according to the criterion.

### **2.2.1 Direct and Indirect Transfers**

Public debt rates that directly increase cash revenues, transfer expenditures such as aid expenditures and social services, direct transfer expenditures, and subsidies that lower the prices of goods and services for consumers are indirect transfer expenditures (Akbulut, 2013: 35).

### **2.2.2 Income Transfers-Capital Transfers**

Revenue transfers occur when the income changes hands between different needs. Since the transfer of revenue is for social purposes, the main task of such transfer expenditures is to restore income distribution. For example, pensions can be given. Capital transfers are the result of the change of the existing capital. The most well-known example of this is the war reparations that the defeated states had to pay to winners at the end of the wars. There are transfers to encourage permanent economic investments in capital transfers (Kalaycı, 2016: 5).

### **2.2.3 Efficient Transfers and Inefficient Transfers**

The main point in distinguishing transfer expenditures according to the efficiency criterion is whether such payments are effective on production or not, whether such expenditures constitute a new value in production. In general, there is no general opinion about which transfer expenditures are efficient, but it can be said that the transfer expenditures are inefficient due to the indirect effect of efficient and social transfer expenditures due to the direct effect of economic growth on transfer expenditures (Meriç, 2003:173-174). Directing public expenditures from inefficient spending to efficient expenditures creates positive effects on economic growth without causing any deterioration that may negatively affect economic growth (Zagler and Durnecker, 2003: 405).

### **2.2.4 Current Transfers and Capital Transfers**

Expenses incurred in the benefit of internal and external debt interest payments, repayments, duty losses of GBEs, retirees, widows and orphans and student scholarships are considered as current transfers. Expenditures that are not extinguished in future periods and that are not in their period of use are called capital transfers. Examples of these include expropriation, participation to institutions and capital incentives (Kalaycı, 2016: 6).

### 2.2.5 Transfers for Economic and Financial Purposes

Economic transfers are also called subsidies. These expenditures are negative taxes that are widely used in practice as an instrument of economic and social policy. In other words, it is a variety of aids supported by public funds (Nadaroğlu, 1998: 127-128).

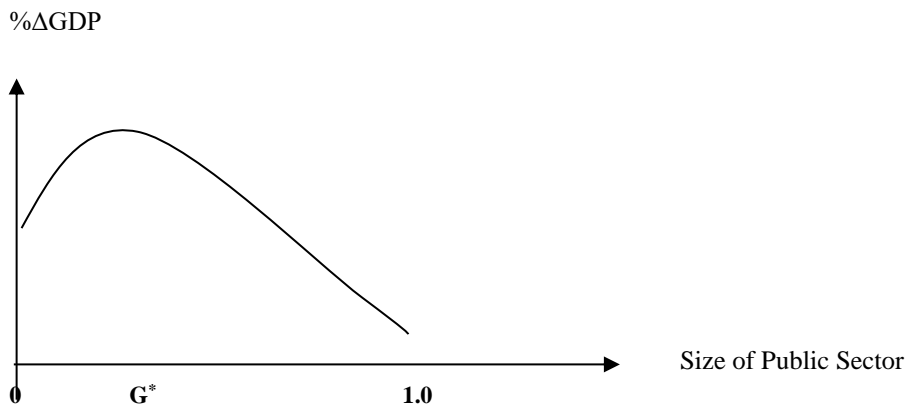
Economic and transfer expenditures, which are also referred to as financial and economic transfers, are the expenditures of the government to various sectors in line with economic and financial objectives without waiting for a specific response. The government aims at achieving economic growth and development by making these expenditures, and implements a transfer policy under the name of subsidy or incentive in line with these targets (Kalaycı, 2016: 7).

### 2.3. Economic Effects of Transfer Expenditures

The economic effects of transfer expenditures are found in the theoretical studies on the optimal state search. Public expenditures are widely accepted among the indicators showing the size of the public sector. Therefore, studies that measure the economic effects of public expenditures on the search for what should be the optimal state size are important (Akbulut, 2013: 41).

One of the most important of these studies was done by Armeş (1995). Armeş argues that there is a quadratic relationship between public spending and GNP similar to the inverse U shape as seen in Figure-1. According to this, there is a positive relationship between public expenditures and GNP, but there are negative effects after public expenditures exceed a certain size. Initial positive effects are the result of anarchy, chaos and insecurity, which can occur in the absence of the state. However, as the public expenditures are increased, the decreasing public expenditures, as well as the taxes used in their financing, will have negative impacts on the behavior of the economic units. (Akbulut, 2013: 41-42).

**Figure-1: Armeş Curve**



**Source:**Facchini ve Melki, 2011, p. 8

Since transfer expenditures are also public expenditures, similar effects are also related to transfer expenditures. Transfer expenditures, which are frequently used to overcome problems such as poverty and income inequality, will initially increase the welfare level of individuals and will provide more access to certain services such as education, health and transportation, thus supporting productivity and contributing to the growth of national income. However, the transfer expenditures realized after a certain level will have detrimental effects on the behaviors of individuals and will affect the output negatively (Akbulut, 2013: 42-43).

This section will focus on the effects of transfer expenditures on growth and development, income distribution, budget deficits, inflation and unemployment.

### **2.3.1 Impacts on Economic Growth and Development**

According to the Neo-Classic growth models, which were argued by Solow in the 1970s and 1980s, an answer was sought for economic growth, it was criticised because the model's population and technological development were external. The new growth models that emerged after the 80s were separated from the Solow model. A group of models abandoned the assumption of reduced capital accumulation and provided continuous growth. In order to achieve this, Romer (1986) suggested positive externalities in capital accumulation, so that a single company invested in economics, which is learning by investing. Romer's 1986 model describes technological progress as an inevitable by-product of capital accumulation by individual companies. Later, Romer (1990) was unsatisfied with his first approach and introduced the internal growth model by internalizing technological change. According to this idea, it is necessary to shrink the state, to respect property rights and the rule of law, to be open to international trade and to invest in human capital (Snowdon and Vane, 2012, p. 552-558; Romer, 1986; Romer, 1990). According to this theory, it is possible to say that transfer expenditures have positive effects on capital accumulation and investment in human capital (Kalaycı, 2016: 45).

Considering the effects on growth in the economy in Turkey until the early 1990s, economic transfers more effective, by gradually increasing debt interest payments of interest on the debt has become the most important transfers in kind. Nevertheless, the effects of debt interest payments on economic development and growth were negative. This is due to increased budget deficits along with debt interest payments. Increasing budget deficits revealed the need for borrowing, and domestic borrowing was applied when external borrowing could not be obtained. This situation increased domestic interest rates and created a crowding-out on the private sector. Due to the increase in interest payments, the resources to be transferred to the investment were transferred to the state and negatively affected the growth (Özen, 2013: 213-218).

### **2.3.2 Impact on Income Distribution**

The effect of transfer expenditures on income distribution is direct. In other words, these expenditures are very effective in equalizing income distribution or increasing inequalities. For example, interest paid to government bonds often has an increasing effect on inequalities in income distribution. On the other hand, the increase of social transfer expenditures of the state increases the income of low-income groups and decreases income inequalities. In addition, the prices of basic goods and services are kept under the costs of the state and the distribution of income is tried to be affected. In particular, if the prices of the goods used by low-income citizens are cheaper, transfer expenditures will have a balancing effect on income distribution (Kalaycı, 2016: 40).

Providing income distribution is one of the main objectives of economic policy. The state reorganizes its output using the factors of production in the direction of the social state. Countries with high income disparities are insufficient to deal with shocks (Rodrik, 2000: 76-77). For example, per capita income in Turkey in the 1970s was about 1000 dollars, in 2015 this figure increased to over \$ 10,000, and the economy has grown steadily. However, it is important to note that the increase in income during the growth process as well as the distribution of income (Kalaycı, 2016: 37).

### **2.3.3 Impact on Budget Deficits**

Overall, the policies implemented in Turkey after the 1980 taxation substituting debt, make interest payments were excessive. This situation led to the transformation of the budget into revenue transfer tool. Moreover, the rapid increase in the interest burden in the budget expenditures led to an increase in the public sector borrowing requirement. Thus it can be stated that the effect of increasing the budget deficit of transfer expenditures in Turkey. Interest payments are made as a result of the borrowing to close the budget deficits. These interest payments should be re-borrowed. This situation increases the amount of borrowing and interest payments, and consequently, budget expenditures are increasing (Özen, 2003: 224-225).

### **2.3.4 Impact on Inflation**

It is important to reduce public spending in eliminating the excess of demand that is considered to be the cause of inflation. Within the scope of public expenditures, it is possible to benefit from the increase in the demand for inflation and the elimination of the reasons resulting from the insufficiency of the production (Bedir, 2001: 26).

When transfer expenditures are used to reduce aggregate demand in order to eliminate the inflationary deficit, the reduction in these expenditures should be higher than the reduction in public expenditures. The reason for this is that the state has to make these expenditures without taking a response from the private sector and this causes an additional purchasing power in the market. This situation supports the upward trend in inflation. For this reason, more discount should be made compared to other types of expenditures if transfer expenditures will be used to prevent inflation (Görgün, 1973: 65).

There are some points that should be considered if transfer expenditures are selected as a tool in the fight against inflation. Different results may occur depending on the types of transfer expenditures. For example, transfer expenditures for social purposes are dangerous in the inflationary period, as they accelerate total demand and price increases. However, the fact that the transfer payments for social purposes do not have a flexible character make it difficult to reduce such expenditures and reduce the probability of success in terms of short-term policies. Economic transfers are another item of expenditure that can be used in inflationary environment. Especially for the purpose of increasing the total supply, the capital transfers (subsidies) can be used for this purpose (Kalaycı, 2016: 64-65).

### **2.3.5 Effects on Employment Rate**

Transfer expenditures can affect both demand and supply directly or indirectly in labor markets. The ability to influence labor demand is to trigger a demand for a specific workforce. For example, the increase in transfer payments to retired and elderly people will increase the demand for all goods and services, provided that services are provided to the elderly more. In addition, transfer expenditures may affect labor supply through income and substitution effects (Kalaycı, 2016: 71).

Transfer expenditures can be used to reduce unemployment, as well as a factor affecting unemployment, and in addition to this, people may be inclined to work as a result of unemployment benefits (Easew and Garratt, 2000: 389). In the context of transfer expenditures, unemployment payments can increase unemployment and encourage unemployed people to increase their job withdrawal requests. In this context, while transfer expenditures are aimed to provide protection with income supports, they cannot provide a measure to enable the unemployed to find a job in the labor market and settle in a job. Nevertheless, the state can sometimes contribute to the development of some production areas in the economy through subsidy policy. This practice helps increase employment by increasing production. In summary, in the context of lowering the unemployment rate in an economy, the acceleration of public investment and current expenditures and the increase of transfer payments in general can play an active role. However, the use of taxation in the financing of public expenditures leads to negativities on the market economy. The heavy burden of tax burdens the economic decisions, investment and working decisions and causes unemployment (Hook and Flag, 2015: 59-60).

## **3. Methodology and Findings**

### **3.1 Data and Methodology**

In this study, the relationship between transfer expenditures and labor force participation rate is analyzed by using the annual data of the variables for the period of 1988-2017. The table below contains the explanations of the variables used in the analyzes and the data sources.



**Table-1: Explanatory Variables**

<i>Variable</i>	<i>Explanation</i>	<i>Source</i>
<i>Tr/Gdp</i>	Ratio of Total Transfer Expenditures to GDP (%)	The Ministry of Finance
<i>Lfpr</i>	Labor Force Participation Rate (over 15 years) (%)	Turkish Statistical Institute (TÜİK)

The variables used in the study represent the ratio of total transfer expenditures to GDP and the labor force participation rate of the population above the age of 15 years, respectively. While the data of transfer expenditures are obtained from Ministry of Finance database, the data belonging to the labor force participation rate was obtained from the Turkey Statistical Institute data base. For the econometric analysis of the data, Eviews 9 econometric package program was used.

In the study, the causality relationship between the variables is analyzed. In this context, in order to determine whether there is a long-term relationship between the two variables of this part of the study, Johansen Cointegration Analysis, and then the Granger Causality Analysis in which the causality relation between the variables are investigated.

There are many methods in the literature testing the long-term relationship between two or more variables. Johansen cointegration method is also one of the most frequently used methods in the long term, showing whether there is a cointegration relationship between the two variables. The relationship between non-stationary variables in the Johansen cointegration test is tested using the following VAR model:

$$\Delta y_t = \sum_{i=1}^{k-1} \pi_i \Delta y_{t-i} + \pi y_{t-k} + \varepsilon_t$$

In equality,  $y$  shows the observation vector for non-stationary variables (transfer expenditures and labor force participation rate), while  $\pi_i$  and  $\pi$  show coefficient matrices. Here, the rank of the  $\pi$  matrix determines the long-term relationship between the variables. If the rank is equal to zero ( $r = 0$  zero hypothesis) it means that there is no cointegration relationship between these variables. The alternative hypothesis refers to the cointegration between the variables (Johansen, 1991).

In the Johansen test, a long-term relationship between non-stationary variables is provided, provided that it is integrated into the same degree. Combined combinations may be stationary even if the two series are not individually stationary. The fact that the variables have such a linear composition means that there is a cointegration relationship between the variables (Engle and Granger, 1987). For this reason, Johansen method is a frequently used method in order not to ignore long-term relationship between variables.

In the study, the causality relationship between the variables was examined with Granger causality test. Granger equations are modeled as follows:

$$\Delta Tr/Gdp_t = \alpha_0 + \sum_{n=i}^k \alpha_{1n} \Delta Tr/Gdp_{t-n} + \sum_{n=1}^k \alpha_{2n} \Delta Lfpr_{t-n} + \varepsilon_{1t}$$

$$\Delta Lfpr_t = \beta_0 + \sum_{n=i}^k \beta_{1n} \Delta Lfpr_{t-n} + \sum_{n=1}^k \beta_{2n} \Delta Tr/Gdp_{t-n} + \varepsilon_{2t}$$

In the above equations,  $Tr/Gdp$  shows the ratio of total transfer expenditures to GDP, while  $Lfpr$  represents labor force participation rate (over 15 years). Two different hypotheses will be tested within the two-variable VAR model. Hypotheses are as follows:

$H_0$ : Transfer expenditures are not the Granger cause of the labor force participation rate.

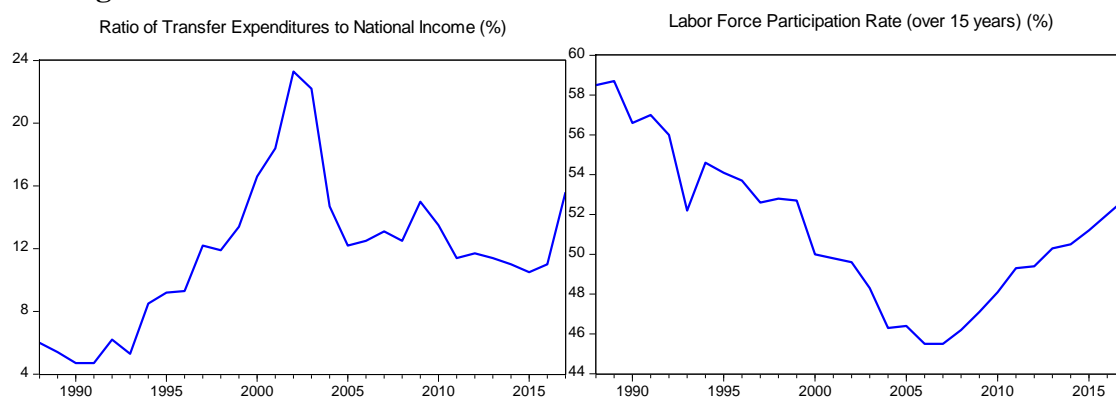
$H_0$ : The labor force participation rate is not the Granger cause of transfer expenditures.

On the other hand, Granger causality analysis is a lag sensitive method and may give different results for different lag lengths. Therefore, determining the appropriate lag length in Granger method is also important.

### 3.2 Findings

In this part of the study, results of Johansen cointegration test and Granger causality analysis are given respectively. The precondition for the Johansen test was that the variables were integrated in the same degree. Therefore, the stability of the series must be investigated first. Below are graphs of level values of variables and unit root test results.

**Figure-2: Level Values of Variables**



When the graphs of the level values of the variables are examined, it is understood that the level values of both variables contain trends and breaks in the series. However, in order to determine whether the series are stable, unit root tests should be applied. The table 2 summarizes the results of the unit root tests for the level values of the variables.

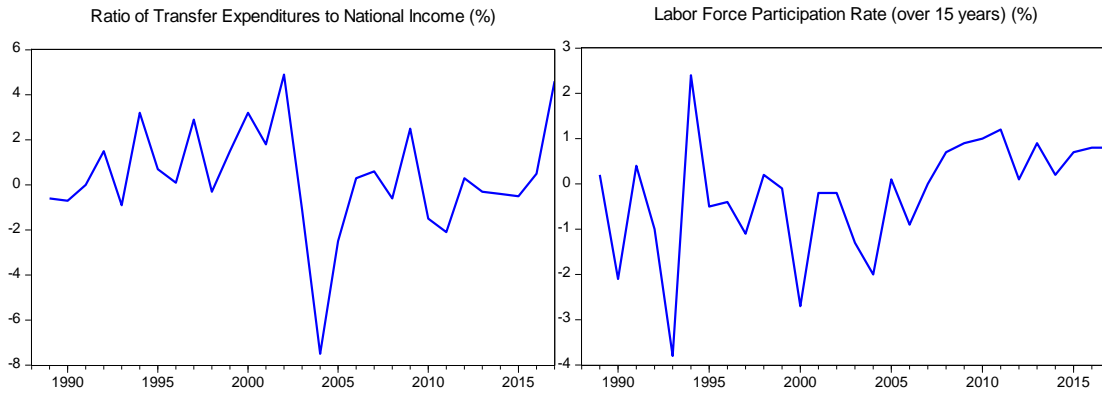
**Table-2:Unit Root Tests (Level)**

			Tr/GDP	Lfpr
<b>ADF unit root test*</b>				
<b>Without constant and trend</b>	<b>I(0)</b>	<b>Stat.</b>	0.1387	-0.9965
		<b>Prob.</b>	0.7187	0.2783
<b>Constant</b>	<b>I(0)</b>	<b>Stat.</b>	-2.0271	-1.8657
		<b>Prob.</b>	0.2742	0.3420
<b>Constant and trend</b>	<b>I(0)</b>	<b>Stat.</b>	-2.1542	-0.3526
		<b>Prob.</b>	0.4951	0.9847

\* The appropriate lag length was determined according to the Schwarz information criterion.

When the table is examined, it is understood that both series have unit roots and the series are not stationary at the level. It will be necessary to examine the first difference of the series and determine whether it fulfills the Johansen requirement. The figure 3 show the first series of transfer expenditures and labor force participation rates.

**Figure-3: First Differences of Variables**



The figure 3 give the idea that the series is the first to be aware. However, in order to determine whether the series are stationary or not, the variables must be subjected to a unit root test. The table below shows the Augmented Dickey Fuller unit root test results of the variables whose first differences are taken.

**Table-3:Unit Root Tests (1st Difference)**

			Tr/GDP	Lfpr
<b>ADF unit root test*</b>				
<b>Without constant and trend</b>	<b>I(1)</b>	<b>Stat.</b>	-3.6894	-5.1524
		<b>Prob.</b>	0.0006	0.0000
<b>Constant</b>	<b>I(1)</b>	<b>Stat.</b>	-3.6990	-5.1939
		<b>Prob.</b>	0.0098	0.0002
<b>Constant and trend</b>	<b>I(1)</b>	<b>Stat.</b>	-3.6054	-4.3586
		<b>Prob.</b>	0.0475	0.0096

\* The appropriate lag length was determined according to the Schwarz information criterion.

When the table is examined, it is understood that the series is stationary first. Therefore, there is no drawback in using the Johansen test when examining the long-term relationship between variables.

For Johansen cointegration analysis, it is useful to determine the appropriate lag length. For this purpose, the VAR model was established for two variables and the length of the lag was determined. The following table shows the appropriate lag lengths according to different information criteria.

**Table-4: Appropriate Lag Length**

Lag	LR	FPE	AIC	SC	HQ
0	NA	131.1904	10.55233	10.64910	10.58020
<b>1</b>	<b>70.09815*</b>	<b>8.487418*</b>	<b>7.812274*</b>	<b>8.102604*</b>	<b>7.895879*</b>
2	2.169655	10.49180	8.016650	8.500533	8.155991
3	5.336019	10.96775	8.043499	8.720935	8.238576
4	3.442088	12.58638	8.148715	9.019705	8.399529

**LR:** Likelihood Ratio Criterion, **FPE:** Final Prediction Error Criterion **AIC:** Akaike Information Criterion, **SC:** Schwarz Information Criterion, **HQ:** Hannan-Quinn Information Criterion

The maximum lag length was taken as 4 when determining the appropriate lag length. As a result of all information criteria, it has been concluded that the appropriate lag length is 1. The table below shows the results of the Johansen cointegration test, where the lag length is taken as 1.

**Table-5: Johansen Cointegration Test**

	Trace Statistics		
	Statistics	0.05 Critical Value	Probability
<b>H<sub>0</sub>: r=0, H<sub>1</sub>: r=1</b>	15.53421	15.49471	0.0493
<b>H<sub>0</sub>: r=1, H<sub>1</sub>: r=2</b>	4.401764	3.841466	0.0359
	Max-Eigen Statistics		
	Statistics	0.05 Critical Value	Probability
<b>H<sub>0</sub>: r=0, H<sub>1</sub>: r=1</b>	11.13245	14.26460	0.1477
<b>H<sub>0</sub>: r=1, H<sub>1</sub>: r=2</b>	4.401764	3.841466	0.0359

When the results of Johansen test are examined, it is seen that the null hypothesis is rejected. This tells us that there is a cointegration relationship between the variables, in other words, the series moves together in the long term.

On the other hand, the fact that the series are moving together does not allow us to provide an inference about the causality and causality between the variables. For this reason, Granger causality analysis was used to determine whether there is a causal relationship between transfer expenditures and labor force participation rate. The table below shows the results of the Granger test.

**Table-6: Granger Causality Test**

Hypothesis	F Stat.	Prob.
Transfer expenditure is not the Granger cause of labor force participation.	6.0871	0.0205
The labor force participation rate is not the Granger cause of transfer expenditures.	0.0189	0.8917

According to Granger causality test results, the hypothesis defined as “Transfer expenditure is not a Granger cause of the labor force participation rate.” is rejected. On the other hand, the hypothesis defined as “The labor force participation rate is not the Granger cause of transfer expenditures.” is not rejected.

Test results show that transfer expenditure is the granger cause of labor force participation for Turkey for the period of 1988-2017. However, the results show that the labor force participation rate is not the Granger cause of transfer expenditures for Turkey for the related period. Therefore, for these variables, which have a long-term cointegration relationship between them, we can say that there is a one-way causality relationship between transfer expenditures and labor force participation rate.

#### 4. Conclusions

In this study, the relationship between transfer expenditures and labor force participation rate was analyzed for the period of 1988-2017 by using the annual data of the variables. Transfer expenditure data was obtained from the Budget and Financial Department of the Ministry of Finance database, and the data belonging to the labor force participation rate was obtained from the Turkey Statistical Institute database. In the econometric analysis of the data, Eviews 9 econometric package program was used.

In the study, in order to determine whether there is a long-term relationship between the two variables the Johansen Cointegration Analysis is used, and then the Granger Causality Analysis is used to determine causality relationship between the variables. According to the results of the Johansen test, it was found that the two variables have a long-term cointegration relationship. According to the Granger causality test, there is a one-way causality relationship from the transfer expenditures to the labor participation rate in Turkey for the years 1988 and 2017. For this period, transfer expenditures have supported the labor force participation rate. As emphasized in theory, the government can sometimes contribute to the development of some production areas in the economy through subsidy policy. In Turkey, especially incentives for the agricultural sector are aimed to increase the labor force in agriculture and migration from the urban to the rural.

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