



# Ekonomi ve İlişkili Çalışmalar Dergisi

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### Research Articles

#### *Examination of The Impact of Exchange Rate and Petroleum Prices On Inflation with The VECM Model: The Case of Turkey*

*Döviz Kuru ve Petrol Fiyatlarının Enflasyon Üzerine Etkisinin VECM Modeli İle Analizi: Türkiye Örneği*  
Duygu Çelik

#### *The Process of Change in the Understanding of Planning in Türkiye by Periods*

*Türkiye’de Dönemler İtibariyle Planlama Anlayışındaki Değişim Süreci*  
Ezgi Babayigit Sunay

#### *Contemporary Issues of Waqf in Indonesia*

*Lucky Nugroh, Caturida M.Doktoralin & Anees J. Ali*

#### *The Impact of Public Investment Expenditures on Economic Growth in Türkiye*

*Türkiye’de Kamu Yatırım Harcamalarının Ekonomik Büyüme Üzerindeki Etkisi*  
Fazlı Yıldız, Zekiye Nur Kavak & Merve Nur Aktanc

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**Contents**  
**Research Articles**

- Examination of The Impact of Exchange Rate and Petroleum Prices On Inflation with The VECM Model: The Case of Türkiye*  
Döviz Kuru ve Petrol Fiyatlarının Enflasyon Üzerine Etkisinin VECM Modeli İle Analizi: Türkiye Örneği  
*Duygu Çelik* **154-166**
- The Process of Change in the Understanding of Planning in Türkiye by Periods*  
Türkiye’de Dönemler İtibariyle Planlama Anlayışındaki Değişim Süreci  
*Ezgi Babayiğit Sunay* **167-186**
- Contemporary Issues of Waqf in Indonesia*  
*Lucky Nugroh, Caturida M. Doktoralin & Anees J. Ali* **187-198**
- The Impact of Public Investment Expenditures on Economic Growth in Türkiye*  
Türkiye’de Kamu Yatırım Harcamalarının Ekonomik Büyüme Üzerindeki Etkisi  
*Fazlı Yıldız , Zekiye Nur Kavak & Merve Nur Aktanc* **199-213**

# Abstracting & Indexing

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# Examination of The Impact of Exchange Rate and Petroleum Prices On Inflation with The VECM Model: The Case of Türkiye

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## Examination of The Impact of Exchange Rate and Petroleum Prices On Inflation with The VECM Model: The Case of Türkiye

### Abstract

In the study, the influence of EXC and OIL on INF was investigated by using the annual data of Türkiye between 1995 and 2020. VECM model was preferred in the examination. In accordance with the findings obtained at the end of the examination, there is a strong positive affair amongst the variables and there is a long-period affair amongst the variants. The rate of adjustment towards long-term equilibrium is as fast as 56%. Exchange rate and petroleum prices affect inflation rates in the long run. In addition, while enhancements in the exchange rate alone affect inflation in the short period, enhancements in petroleum prices alone do not affect inflation in the short period. However, when the exchange rate and petroleum price increase together, it also affects inflation in the short period.

## Döviz Kuru Ve Petrol Fiyatlarının Enflasyon Üzerine Etkisinin VECM Modeli İle Analizi: Türkiye Örneği

### Öz

Çalışmada Türkiye'nin 1995 ile 2020 yılları arasındaki verileri kullanılarak döviz kuru ve petrol fiyatlarının enflasyon üzerindeki etkisi araştırılmıştır. Çalışmada VECM modeli kullanılmıştır. Araştırmanın sonunda elde edilen bulgulara göre değişkenler arasında pozitif yönlü güçlü bir ilişki bulunmaktadır ve değişkenler arasında uzun dönemli bir ilişki bulunmaktadır. Uzun dönem dengesine doğru ayarlama hızı %56 gibi hızlı bir orandır. Döviz kuru ve petrol fiyatları uzun dönemde enflasyon oranlarını etkilemektedir. Ayrıca kısa dönemde döviz kurunda yaşanan artışlar tek başına enflasyonu etkilerken, petrol fiyatındaki tek başına artışlar enflasyonu kısa dönemde etkilememektedir. Fakat bununla birlikte döviz kuru ve petrol fiyatı birlikte arttığında, kısa dönemde de enflasyonu etkilemektedir.

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## 1. Introduction

Inflation problem is one of the main macroeconomic problems of countries. In a country where there is inflation, that is, there is an increase in the general level of prices, many important economic problems can be seen along with it. For this reason, it is very important to understand the points that cause inflation in order to facilitate the solution of the inflation problem. When we look at the basis of inflation, it can be seen that the inflation caused by intense demand can be seen, and increasing costs can also cause inflation. In times when demand increases and supply cannot keep up with the increasing demand, demand-driven inflation can be seen, and increases in production costs can also cause cost-driven inflation.

Countries with high inflation levels may experience economic instability. In a country with an unstable economy, the trust in the economy is shaken, but different economic problems can be seen along with it. Especially when inflation reaches high levels, it can become staggering and distrustful for the economy, and disruptive to other economic indicators. For this reason, determining which factors are effective on inflation in the solution of the inflation problem is important in adapting the policies of the national economies to solve this problem.

One of the factors causing inflation is the type of inflation based on cost. Especially in countries like Türkiye that imports important elements in production such as raw materials, intermediate goods and energy, the exchange rate has a large share in determining the production costs (Köse and Ünal, 2021: 1-3). In addition, petroleum is among the indispensable basic inputs of the industry. Since Türkiye cannot produce enough petroleum for itself, this item is also among the products most of which are imported.

One of the most fundamental macroeconomic difficulties of many countries in the world is the problem of inflation. Although various studies have been carried out on inflation for many years, many countries in the world are still trying to solve the problem of high inflation. Türkiye, which has struggled with inflation for many years, is still a country experiencing high inflation today. For this reason, it still maintains its importance to conduct a study on cost inflation, which is one of the most important sub-headings of inflation in Türkiye.

Therefore, in this study, an examination was made on the exchange rate and oil prices, which are thought to cause cost inflation in Türkiye, and solutions and policy suggestions were presented. In this respect, the study is expected to contribute to the high inflation problem, which is still unsolved today. For this reason, in this study, using the annual data of Türkiye between 1995 and 2020, the effect of European Brent crude petroleum barrel price and exchange rate on inflation has been tried to be examined in Türkiye. The VAR model was used in the study.

The research problem of the study can be expressed as that with this study, it will be tried to determine the influence of exchange rate and petroleum prices, which are one of the main elements of cost inflation, on inflation. In this way, it is aimed to contribute to the studies on the influence of exchange rate and petroleum prices

on inflation. The main research question of the study can be expressed as: What is the influence of alterations in exchange rates and petroleum prices on the country's inflation? Do these variables have an influence in the short and long term? The methodology to be used in the empirical analysis part of the study is as follows: Vector Autoregression (VAR) and Vector Error Correction Model (VECM) model, which is used to determine the influences of variables on each other, was used in the study. For this purpose, the influence of alterations in exchange rate and petroleum prices in Türkiye on Turkey's inflation has been determined.

## 2. Theoretical Background

In the classical approach, quantity theory is used to explain the relationship between the amount of money and the general level of prices. Although the quantity theory was subjected to many criticisms until the First World War, it continued to be accepted. According to the quantity theory, if the amount of money in the economy is increased without a change in the amount of production, it will cause prices to rise and money to depreciate. The reason for this is based on the most basic rule of economics. In general, the value of abundant goods in the economy decreases, while the value of scarce goods increases. When we think of money as a commodity, the abundance of money will only cause the currency to lose value unless the amount of production changes. In this way, it will lead to inflationary tendencies (Dinler, 2014:458).

Classical economists accept the full employment situation in the economy and state that increases in money supply will cause inflation. But Keynes opposed the classics that the economy would always be at full employment. According to Keynes, aggregate demand in the economy can be equal to aggregate supply and equilibrium can be achieved. However, he states that this balance can also be realized under underemployment conditions. Keynes states that the economy can reach equilibrium both in underemployment conditions, in full employment conditions and above the full employment equilibrium level. Keynes expressed the main cause of inflation as demand-driven factors rather than money supply. At the full employment level, inflation processes may occur if consumer demands exceed the supply while producing with maximum production capacity (Keynes, 1936:146-150).

Monetarists, on the other hand, followed the same line as the classical. They stated that the velocity of circulation of money would not change in the short run, but could change in the long run. In this approach, the relationship between the amount of money and inflation rates was examined and it was stated that the main reason for inflation was the uncontrolled increase in the money supply. Friedman states that increases in money supply should be increased in a controlled manner so that they do not cause inflation. He saw inflation as a monetary phenomenon (Friedman, 1989:3-20).

### 3. Literature Review

Mukhtarov et al. (2019) examined the affair between general level of prices, petroleum prices and exchange rates in Azerbaijan. In his study, the data of Azerbaijan between 1995 and 2017 were used. He preferred the vector error correction model (VECM) as the model. In accordance with the consequence of the study, there is a long-dated affair between the variants. In the long period, petroleum prices and exchange rates affect inflation positively and significantly. A 1% increment in petroleum price and exchange rate enhances general level of prices by 0.58% and 1.81%, serially.

Malik (2016) investigated the effect of alterations in petroleum prices on inflation in Pakistan. He used quarterly data which from the first quarter of 1979-19802 to the third quarter of 2013-2014. He analyzed his work within the framework of augmented Phillips curve. According to the results of the study, it has been specified that there is a strong affair amongst petroleum prices and inflation.

Sek et al., (2015) used annual data between 1980 and 2010 to measure the effect of petroleum price alterations on general level of prices on two sets of countries with high and low petroleum dependency. ARDL model was used in the study. In accordance with the results of the study, petroleum prices have a direct effect on general level of prices in the country group with low petroleum dependence. However, in countries with high petroleum dependence, it has an indirect effect on inflation as it affects the production costs of exporters. Another main factor affecting domestic inflation has been identified as the exchange rate.

Bawa et al., (2020) analyzed the effect of petroleum prices in Nigeria on inflation using datum which from the first quarter of 1999 to the fourth quarter of 2018. He used the NARDL method in his work. In accordance with the results of the research, petroleum prices increase general level of prices in Nigeria. In addition, when the exchange rate is subtracted from the model, a negative petroleum price shock causes higher inflation in Nigeria.

Mpofu (2011) investigated the influences of EXC and PET on INF in S.Africa using data between 1999 and 2010. Multiple correlation test and multiple regression model were implemented to research the variants. In accordance with the results of the study, exchange rate has a strong enhancer impact on inflation. petroleum prices, conversely, have a prominent detractive effect.

Karacan and Yardim Kilickan (2018) investigated the influence of EXC and OIL on INF in Türkiye using data between 2006 and 2017. The VAR model was used in the investigation. According to the results of the study, exchange rate and petroleum prices in Türkiye have an impact on general level of prices.

Koçak et al. (2017) investigated the affair between petroleum costs and inflation in Türkiye using quarterly data between 2003 and 2017. The VAR model was used in the research. According to the results of the study, there is a long-dated and positive affair amongst petroleum prices and inflation.

Shadab and Gholami (2014) investigated the influence of petroleum costs and exchange rate on general level of prices and other variables in Tehran using monthly data between 1376 AH (1956 Gregorian year) and 1391 AH (1971 Gregorian year). The VAR model was used in the research. In accordance with the results of the research, a long-dated causality affair was established amongst the variants.

Arku et al., (2021) analyzed the relationship amongst petroleum prices, exchange rate and inflation in Ghana using monthly data between 2000 and 2018. He used the ARDL model in his study. In accordance with the results of the research, there is a long-dated affair between crude petroleum prices and general level of prices. In addition, there is a negative affair amongst petroleum prices and exchange rates. Brown et al., (1995) analyzed the influence of petroleum prices on inflation in the USA using the data between 1970 and 1994 in their study. The VAR model was preferred as the method in the study. According to the consequence of the research, the petroleum shocks experienced have a permanent effect on the price level. The increase in petroleum prices causes inflationary tendencies.

Al-Qenaie and Al-Shammari (2016) studied the causes of general level of prices in the group of petroleum exporting countries using the data between 1991 and 2014 in their study. They used panel data analysis in their studies. According to the results of the study, high inflation is associated with high petroleum prices and high exchange rates. Although the main inflation reasons of the countries differ, the main inflation reason of Algeria and Nigeria, which are included in the study group, was determined as exchange rate changes.

#### 4. Methodology and Econometric Analysis

In the study, Turkey's data between 1995 and 2020 was used. Turkey's inflation rate between 1995 and 2020 was determined as the dependent variant, while the exchange rate and petroleum prices were determined as the independent variables. While inflation and exchange rate data were obtained from the World Bank database, petroleum prices were obtained from the economic research section of the Federal Reserve Bank of St. Louis (FRED) website as "Crude Oil Prices: Brent - Europe". Table 1 below shows the variants used in the analysis and their data used in the analysis.

**Table 1. Variables and obtained data**

Years	Inflation (% per annum)	Exchange rate	Petroleum Prices
1995	89,11	0,05	17,02
1996	80,41	0,08	20,64
1997	85,67	0,15	19,11
1998	84,64	0,26	12,76
1999	64,87	0,42	17,90
2000	54,92	0,63	28,66
2001	54,40	1,23	24,46
2002	44,96	1,51	24,99
2003	21,60	1,50	28,85
2004	8,60	1,42	38,26
2005	8,18	1,34	54,57
2006	9,60	1,43	65,16
2007	8,76	1,30	72,44
2008	10,44	1,30	96,94
2009	6,25	1,55	61,74
2010	8,57	1,50	79,61
2011	6,47	1,67	111,26
2012	8,89	1,80	111,63
2013	7,49	1,90	108,56
2014	8,85	2,19	98,97
2015	7,67	2,72	52,32
2016	7,78	3,02	43,64
2017	11,14	3,65	54,13
2018	16,33	4,83	71,34
2019	15,18	5,67	64,30
2020	12,28	7,01	41,96

Table 1 shows inflation, exchange rate and petroleum prices for Türkiye between 1995 and 2020. Table 2 includes the variables and their descriptive explanations.

**Table 2. Descriptive explanations of variables**

Variables	Descriptive Disclosures
INF	Inflation, consumer prices (% per annum).
EXC	Official exchange rate (LCU per US dollar, period average).
OIL	Crude Oil Prices: Brent - Europe, Dollars Per Barrel, Annual, Non-Seasonally Adjusted

**Source:** (World Bank Data Bank, 2022) and (Federal Reserve Bank of St. Louis (FRED), 2022)

Table 2 contains detailed explanations of the variables used in the study on the official websites from which they were obtained. The affair amongst inflation, exchange rate and oil prices can be expressed statistically as follows.

$$INF = \alpha + \beta_1 EXC_t + \beta_2 OIL_t + u_{it}$$

The coefficient  $\alpha$  in the equation symbolizes the constant term. The  $\beta$  coefficients show the affair amongst the dependent variant and the independent variant.  $u$  can be expressed as an error term. Considering the lag lengths, the equation is expressed as follows according to the VECM model (Kutlar, 2019:12);

$$dINF_t = \alpha_{11} + \sum_{i=0}^n \beta_{1i} EXC_{t-i} + \sum_{i=0}^k \beta_{2i} d OIL_{t-i} + \sum_{i=0}^l \beta_{3i} dINF_{t-i} + u_{1t}$$

$$EXC_t = \alpha_{21} + \sum_{i=0}^n \beta_{4i} dOIL_{t-i} + \sum_{i=0}^k \beta_{5i} dINF_{t-i} + \sum_{i=0}^l \beta_{6i} EXC_{t-i} + u_{2t}$$

$$dOIL_t = \alpha_{31} + \sum_{i=0}^n \beta_{7i} dINF_{t-i} + \sum_{i=0}^k \beta_{8i} EXC_{t-i} + \sum_{i=0}^l \beta_{9i} dOIL_{t-i} + u_{3t}$$

In the equations,  $d$  represents the first difference, and  $u_1$ ,  $u_2$  and  $u_3$  represent the error correction terms.  $n$ ,  $k$ , and  $l$  are the number of lag lengths (Kutlar, 2019:12).

## 4.1. Findings

The analyzes and findings obtained on the inflation, exchange rate and oil prices data of Türkiye between 1995 and 2020 are as follows.

### 4.1.1. ADF Unit Root Test Results

Augmented Dickey Fuller (ADF) unit root tests were implemented to determine whether the series are stationary or not.

**Table 3. ADF unit root test for inflation**

Interpolated Dickey Fuller		Number of obs: 24		
Test Statistics		%1	%5	%10
		Critical Value	Critical Value	Critical Value
Z(t)	-3,201	-3,750	-3,000	-2,630
MacKinnon approximate p-value for Z(t) =0,0199				

Table 3 shows the unit root analysis results of the inflation variable. In the analysis, it was desired to examine whether the inflation variable is stationary. Analysis results showed that this variable is not stationary. For this reason, it has been determined that it is necessary to take the first-degree difference in order to make the variable stationary. With the ADF Unit Root Analysis implemented to the inflation variable, it was understood that the series were not stationary. For this reason, the first differences of the series were taken and made stationary.

**Table 4. ADF unit root test for exchange rate**

Interpolated Dickey Fuller		Number of obs: 25		
Test Statistics		%1	%5	%10
		Critical Value	Critical Value	Critical Value
Z(t)	-5,000	-3,750	-3,000	-2,630
MacKinnon approximate p-value for Z(t) =0,0000				

Table 4 shows the unit root analysis results of the exchange rate variable. In the analysis, it was desired to examine whether the inflation variable is stationary. Analysis results showed that this variable is stationary. For this reason, it has been determined that it is not necessary to take the first difference in order to make the variable stationary. ADF Unit Root Analysis was implemented to the exchange rate variable and it was specified that the series were stationary.

**Table 5. ADF unit root test for oil prices**

Interpolated Dickey Fuller		Number of obs: 23		
Test Statistics		%1	%5	%10
		Critical Value	Critical Value	Critical Value
Z(t)	-3,640	-3,750	-3,000	-2,630
MacKinnon approximate p-value for Z(t) =0,0050				

Table 5 shows the unit root analysis results of the oil prices variable. In the analysis, it was desired to examine whether the oil prices variable is stationary. Analysis results showed that this variable is not stationary. For this reason, it has been determined that it is necessary to take the first-degree difference in order to make the variable stationary. With the ADF Unit Root Analysis implemented to the oil price variable, it has been understood that the series are not stationary. For this reason, the first differences of the series were taken and made stationary.

#### 4.1.2. Appropriate Lag Length for VECM Model

For the predictions to be made, it's necessary to determine the lag length. Accordingly, five lag values were given to find the most appropriate lag length, and the most appropriate lag length was tried to be determined accordingly.

In Table 6, it was tried to determine the appropriate lag length for the variables according to the VECM method. The lag length has been extended to five lags. Except for the FPE information criterion, the AIC and HQIC information criteria represent the most appropriate lag since it is the minimum at the 4th lag. In addition, the P statistic at the 4th lag is less than 5%. The appropriate lag length for the VECM model has been determined as 4.

**Table 6. Appropriate lag length for VECM model**

Selection-order criteria					Number of obs = 20				
Sample: 2001-2020									
lag	LL	LR	df	p	FPE	AIC	HQIC	SBIC	
0	-523,706				1,5e+19	52,6706	52,6998	52,82	
1	-509,86	27,692	9	0,001	9,4e+18*	52,186	52,3027	52,7835	
2	-508,143	3,4351	9	0,945	2,1e+19	52,9143	53,1184	53,9598	
3	-499,464	17,358	9	0,043	2,7e+19	52,9464	53,238	54,44	
4	-476,786	45,356*	9	0,000	1,1e+19	51,5786*	51,9576*	53,5203	
5	-468,34	16,893	9	0,050	3,2e+19	51,634	52,1005	54,0237	

### 4.1.3. Johansen Co-Integration Analysis

The Johansen Co-Integration test was used to specify the co-integration affair amongst the variables (Johansen & Juselius, 1990:165-178).

**Table 7. Johansen co-integration analysis in VECM**

Johansen test for cointegration					
Trend: constant			Number of obs: 21		
Sample: 2000-2020					
Lags: 4					
Maximum rank	parms	LL	eigenvalue	Trace statistic	%5 critical value
0	30	-538,51447	.	63,3520	29,68
1	35	-515,94437	0,88346	18,2118*	15,41
2	38	-507,49907	0,55261	1,3212	3,76
3	39	-506,83845	0,06098		

For rank=1, the null hypothesis is rejected. At the 5% significance level, the value of the trace test exceeds the critical value. In Johansen Co-integration analysis, it can be said that there are at least one co-integration relationships, since the trace statistic is higher than the second-degree critical value. There is a long-dated affair amongst the variants. In other words, the variables move together in the long run.

### 4.1.4. Vector Error Correction Model (VECM)

Parameter forecast was done with vector error correction model (VECM). According to the Vector Error Correction Model (VECM), there is a long-term significant affair amongst the variants. Correct adjustment to the long-term balance takes place at a rapid rate of 56%. In other words, changes in EXC and OIL affect INF in the long period.

**Table 8. Vector error correction model (VECM) estimation**

Vector error-correction model						
Sample: 2000 - 2020			Number of obs = 21			
AIC = 52,47089						
Log likelihood = -515,9444			HQIC = 52,84871			
Det(Sigma_ml) = 4,39e+17			SBIC = 54,21176			
Equation	Parms	RMSE	R-sq	chi2	P>chi2	
D_dINF	11	2,81322	0,9162	109,2689	0,0000	
D_EXC	11	3,4e+07	0,7127	24,80131	0,0097	
D_dOIL	11	28,9048	0,3241	4,794445	0,9407	
	Coef.	Std. Err.	z	P> z	[95% Conf.	Interval]
D_dINF						
_ce1	,5642345	,086576	6,52	0,000	,3945487	,7339202
L1.						
dINF						
LD.	-1,34941	,2085048	-6,47	0,000	-1,758072	-,9407483
L2D.	-1,231528	,1449001	-8,50	0,000	-1,515527	-,9475293
L3D.	-,8697825	,1757853	-4,95	0,000	-1,214315	-,5252496
EXC						
LD.	-3,96e-07	6,36e-08	-6,22	0,000	-5,21e-07	-2,71e-07
L2D.	-2,60e-07	4,93e-08	-5,27	0,000	-3,56e-07	-1,63e-07
L3D.	-9,28e-08	2,47e-08	-3,77	0,000	-1,41e-07	-4,45e-08
dOIL						
LD.	,0107624	,0346119	0,31	0,756	-,0570756	,0786003
L2D.	,0174259	,0328535	0,53	0,596	-,0469658	,0818177
L3D.	-,029705	,0354698	-0,84	0,402	-,0992246	,0398146
_cons	1,261756	,6218849	2,03	0,042	,0428838	2,480628

When the short-term relations are examined, the alterations in the exchange rate affect the inflation rates in the short term. Changes in oil prices, conversely, do not affect inflation in the short period, but affect inflation rates in the long period.

#### 4.1.5. Granger Causality Wald Test

Granger Causality Wald Test was used to specify the causal affair amongst the variables (Granger et al., 2000:337-354).

**Table 9. Granger causality wald test**

Equation	Excluded	F	df	df_r	Prob > F
dINF	EXC	10,443	4	8	0,0029
dINF	dOIL	1,0655	4	8	0,4331
dINF	ALL	6,3292	8	8	0,0086

According to the outcomes of the Granger Causality Wald Test, which was conducted to specify the causality affair between the variables, increments in the exchange rate alone affect inflation in the short period, while increases in oil prices alone do not affect general level of prices in the minuscule period. However, when the exchange rate and oil price increase together, it also affects inflation in the minuscule period. In the extended period, both the EXC and OIL affect INF.

## 5. Conclusion and Recommendations

Inflation is among the main problems of many countries, whether developed or developing countries. Cost-based inflation is one of the factors that make up the inflation process. In the study, the influence of EXC and OIL on INF was tried to be investigated by using the annual data of Türkiye between 1995 and 2020. The VECM model was used in the analysis phase of the study. First of all, Augmented Dickey Fuller (ADF) unit root tests were performed to measure the stationarity levels of the variables. In accordance with the ADF Unit Root Analysis, while the EXC is stationary at the level, the INF and OIL variables become stationary after the first difference is taken. Then, the appropriate lag length for the vector error correction model (VECM) was tried to be reached and it was determined as 4. In addition, the Johansen Co-Integration test was used to determine the co-integration affair amongst the variants and it was seen that there was a long-period affair amongst the variants. Parameter estimations were made with the vector error correction model (VECM). Accordingly, there is a strong positive affair between the variants. In addition, a long-period significant affair was detected amongst the variants. Toward the long-run equilibrium, the adjustment takes place as fast as 56%. In other words, changes in EXC and OIL affect INF in the long run. Granger Causality Wald Test was used to specify the causal affair between the variables. While increases in the exchange rate alone affect inflation in the short period, increases in oil prices alone do not affect inflation in the short period. However, when the exchange rate and oil price increase together, it also affects general level of prices in the short-dated. In the long-dated, both the EXC and OIL affect INF.

Based on these results, the necessity of reducing foreign dependency in energy is felt significantly. In an environment where the world is evolving towards renewable energy, Turkey's investments in renewable energy may bring a solution in the long run. Although establishing a renewable energy infrastructure is costly and is expected to increase the foreign exchange deficit in a certain period, it may be advantageous for Türkiye to turn to renewable energy sources such as solar, wind and biogas in the long run. In the long run, it will contribute to keeping the foreign currency payments for energy within the country by reducing energy dependence on foreign countries. In addition, the use of energy-saving machinery and equipment can be supported within the country, and tax deductions can be provided for energy-saving machinery, equipment and household goods. In addition to all these, supporting domestic production and encouraging the production and use of domestic products that can be substituted for imported raw materials or intermediate goods can be considered as another step.

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## The Process of Change in the Understanding of Planning in Türkiye by Periods

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### The Process of Change in the Understanding of Planning in Türkiye by Periods

#### Abstract

In this study, the changing process of planning understanding in Türkiye from the past to the present has been evaluated in terms of periods. The study has evaluated the agriculture-industrial-oriented change of the planned development steps implemented since the Ottoman Empire period and the political and economic factors affecting this change. The State Planning Organization (SPO) and development plans prepared by it, which played an essential role in determining the government policies that have been in power since the 1960s, and industrial plans before the 1960s have been the reference sources that will help the subject. According to the research, the understanding of planning in Türkiye coincides with the political thought shaped by the influence of internal and external cyclical factors. At this point, it is seen that the theoretical frameworks prepared are policies that are compatible with the economic and political perspective of the period and that the deteriorated financial balance and stability depend on the success or failure in implementation regardless of the plans.

### Türkiye’de Dönemler İtibariyle Planlama Anlayışındaki Değişim Süreci

#### Öz

Bu çalışmada Türkiye’de planlama anlayışındaki değişim süreci geçmişten günümüze dönemler itibariyle değerlendirilmiştir. Çalışmada Osmanlı İmparatorluğu döneminden bu yana uygulanan planlı kalkınma adımlarının tarım-sanayi odaklı değişimi ve bu değişimi etkileyen siyasi ve ekonomik faktörler ele alınmıştır. 1960’lı yıllardan itibaren iktidardaki hükümet politikalarının belirlenmesinde önemli rol oynayan Devlet Planlama Teşkilatı (DPT) ve hazırladığı kalkınma planları ile 1960’lar öncesi sanayi planları, konuya yardımcı olacak başvuru kaynaklarını oluşturmuştur. Araştırmaya göre Türkiye’deki planlama anlayışı, iç ve dış konjonktürel faktörlerin etkisiyle şekillenen siyasi düşünce ile örtüşmektedir. Bu noktada hazırlanan teorik çerçevelerin dönemin ekonomik ve siyasi perspektifiyle uyumlu politikalar olduğu ve bozulan mali denge ve istikrarın planlardan bağımsız olarak uygulamanın başarı veya başarısızlığına bağlı olduğu görülmektedir.

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## 1. Introduction

The basis of planning thought in Türkiye dates back to the Ottoman Empire period. The process in which effects of administrative, military, institutional, and social changes have also been felt in the economic area, with the Tanzimat Reform era representing a period in which industrialization movements also accelerated. However, the basis of the economy in the Ottoman Empire has based on the agricultural sector. One of the most important developments in the field of agriculture is the New Land Law (Land Code) enacted in 1858. With the law, a new era has begun in which property rights are redefined and farmers' rights and freedoms are legally protected. The period of the Ottoman Empire, which experienced both economic and social collapse with the wars fought towards the end of the 19th century and the beginning of the 20th century, has entered a new era with the establishment of the Republic of Türkiye.

The process from the Ottoman Empire to the Republic is not a break, but a continuation of continuity. It is seen that the New Türkiye, which came out of the war period with the policies followed under the leadership of M. Kemal Atatürk, the founder of the Turkish Republic, has entered into a rapid development process in many areas. The foundations of the understanding of development in economy has been laid with the 1923 Izmir Economics Congress, which is represented by economic actors from all over Türkiye and from different branches of activity. In the process of adopting the principles of development through industrialization, it has aimed to support the agricultural and industrial sectors and pave the way for the private sector with the investments to be made under the leadership of the state. On the one hand, it has aimed to protect the small producers and on the other hand, it has aimed to establish factories that would meet the needs of the country with the economic reforms made by the state. However, in the period of 1923-1929, when the desired results could not be achieved, the economic environment that would mobilize the private sector has not been not occurred. The economic depression experienced in 1929 led to a change in the method of economic policies, and a new period has been started in which the idea of statist industrialization is dominant within the framework of the planned industrialization approach. The First Five-Year Industrial Plan, prepared in 1933, as the name suggests, is a plan that aims to develop on the basis of the industrial sector. Successful moves in the First Plan have accelerated the preparation of the Second Five-Year Industrial Plan since 1936, but the plan could not be put into practice due to the Second World War.

1950s refers to the years when the agricultural sector has been brought to the forefront and agricultural development was adopted by moving away from the planned development approach. With the planned economy approach that became institutionalized in the 1960s after a ten-year unplanned period, development plans have been prepared in periodic processes by the SPO, which is an independent institution from the state, until 2011. The planned period continued until the end of the 1970s, and by 1980s, it has marked the beginning of the years when the effects of neo-liberal policies were felt in Türkiye as well as all over the world.

Liberalization policies and economic policies have been shaped around liberal economic thought, especially since those years when the dissolution in the field of agriculture accelerated. At that time, development plans continued to be prepared. During the 1990s, which is the continuation of the 1980s, Türkiye has been entered a high inflationary period in an unstable political conjuncture and after the 1994 crisis, it has been survived successive crisis periods in 2000 and 2001.

With the Justice and Development Party, which came to power with the elections held in November 2002, it has not taken long to achieve economic stability in the country where political stability was achieved. During the period of rapid growth, Turkey's macroeconomic balance has begun to deteriorate with the global crisis that started in the USA in 2008-2009 and affected the whole world. State Planning Organisation (SPO), which is assigned to prepare development plans during the AKP rule, was closed and the task of preparing the plans is given to the Ministry of Development. The referendum held in 2017, with the transition from the Parliamentary System to the Presidential Government System, the task of preparing the development plans is given to the Strategy and Budget Directorate under the Presidency.

## 2. Planning Approach in Türkiye from the Late 19th Century to the Atatürk Era

The Land Code of 1858, the first stage of the transition to the agricultural system based on small land ownership during the Ottoman Empire, is the first liberal law in which the practices related to land ownership were carried out legally. The main purpose of the law is based on the protection of the small farmer and the improvement of the government-farmer relations (Barkan, 1940: 377). With the Land Code, which is one of the first examples of planning in agricultural lands, has been tried to create a system that allows the farmers to obtain the right to rent, lend or sell their lands in the lands where the property is in the state but the farmers have been given the right of legal possession and the freedom to plant. In addition, in order to ensure the sustainability of social order and economic activities, it is aimed to protect the social existence and integrity with the necessity of choosing the first buyers of the producers who want to sell or rent their land from the same community (Padel & Steeg 1904 as cited in Quataert, 2008: 59).

The law not only obliges the cultivation of agricultural lands, but also requires sustainability through relevant inspections. There have also been clauses in the law that prevent the fragmentation of the lands to such an extent that agriculture cannot be practiced in the regulations regarding the inheritance system, sales, rental and all kinds of structured activities.

In the Land Code of 1858, the main purpose of which was the protection of small producers, the law has turned into a structure that allowed significant land ownership in time because of some ambiguous statements about the change of the

land, various economic reasons such as the emergence of financial difficulties and the inadequacy of land controls.

On the other hand, due to the state's encouragement of mechanization in large land lands and the need for income, the activities of transforming state have landed into private property left the functionality of the law in the background (Quataert, 2008).

With the Republic, it is seen that economic policies have also been shaped by the idea of national unity and independence. The period of 1923-1929 was founded on an economic understanding based on the development of the private sector, which lacked the necessary knowledge, experience and capital, by the state. The development goals to have been realized through statist policies and public power has determined within the framework of the "National Economic Principles (*Misak-ı İktisadi İlkeleri*)" adopted at the Izmir Economics Congress convened in 1923. Large investments with high risks have been planned to be led by the state (Eroğlu, 2007: 68) and to encourage the private sector to invest. Policies related to agriculture, which is the main field of activity of 80 percent of the population<sup>1</sup>, have been put into practice through the state in this way (Erkun, 1998). While Ziraat Bank, which was established to support farmers in this period, increased the number of branches and funds from 110 to 300 in 1923<sup>2</sup>, the legal infrastructure of agricultural organization was regulated by enacting the "Agricultural Unions Law (*İtibar-i Zirai Birlikler Kanunu*)" in 1924 (Çıkin, 2003: 28). In this period when industrialization has been adopted as the basic principle of development, the Encouragement Industry Law, which was enacted in 1913, was made comprehensive in 1927 and although moves have been made to encourage domestic industry and capital accumulation, most of the enterprises benefiting from the law consisted of small-scale enterprises dealing with mining, agriculture and animal livestock (Özçelik and Tuncer, 2007: 258) have hindered the industrialization steps to from reaching sufficient levels.

While the Aşar tax, which was one of the most important steps taken in the agricultural field, was abolished in February 1925, various legal arrangements were made in 1927 and 1929 regarding the landing of the landless peasants. Between 1923 and 1934, 711 thousand hectares of state land has been distributed to peasants and immigrants (Kepenek, 1990: 37). During this period, while agricultural loan supports have been expanded through Ziraat Bank, the farming schools and trial stations opened, and the experts sent abroad (Şahin, 1995: 41) became an indicator of the importance given to agricultural education. While the Reputation Agricultural Unions Law (*İtibar-i Zirai Birlikleri Kanunu*), enacted in 1924, was transformed into the Agricultural Credit Cooperatives Law (*Tarım Kredi Birlikleri Kanunu*) in 1929 (Çıkin, 2003: 28). Also, Agricultural Credit Cooperatives and

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<sup>1</sup> According to the agricultural census made in 1927, more than 4 million people, which constitute 81.6 percent of the occupational groups, are employed in the agricultural sector (Kepenek, 1990: 37).

<sup>2</sup> www.ziraatbank.com.tr

sample farms have been established in the name of cooperatives (Durmuş and Aydemir, 2016: 160).

The Great Depression that emerged in 1929 and the insolvency of the liberal economic approach in the face of the crisis caused the idea of development to be directed from private enterprise to the state through the example of the Union of Soviet Socialist Republics (USSR) with the understanding of statism and successful planned development practices, along with the transition to Keynesian policies; as in almost all countries of the world, the efficiency of the public sector in the economy has been increased in Türkiye as well. In the economy, where public interventions increased in Türkiye as well as in the rest of the world after the Great Depression, the statist understanding prepared the ground for the political economy understanding that is being adopted more and more every day.

In this period, the First and Second Five-Year Industrial Plans (1933, 1937) - (1938-1942) were prepared to develop domestic industrialization investments. In the periods when the First Five-Year Industry Plan was implemented, new steps regarding agriculture have continued to be taken. The way Atatürk's statism principle has been applied in agriculture based on research farms to be established by the state and bringing new technology to agriculture (Hiç, 1998: 3287).

During the period of the 7th İnönü Government in 1935-1937 in which the issue of the agricultural organization has been handled carefully and also the financing and organization problems of the farmers were resolved by the state (Bilgin and Tanıcı, 2008: 142). Also, Agricultural Sales Cooperatives and Unions Law was enacted in 1935 due to the reflection of the global problems experienced in the export of agricultural products due to the Great Depression in the field of credit and marketing. Among the four organizations planned to be established in Iğdır, Kars, İzmir and Thrace, which has been included in the 1937 Government Program, İzmir-based TARIS was established in the same period. Another significant development was the transfer of the task of Ziraat Bank, which was assigned to purchase wheat in 1932, to a new state-owned enterprise established in 1938 under the name of Turkish Grain Board<sup>3</sup>.

At the beginning of the most critical steps taken regarding the issue of education, which is at the base of agricultural development, the village institutes established at that time. The grad teachers has been trained spread all over the country with the intention of, on the one hand, increasing the education and socio-cultural level of the people, on the other hand, introducing and teaching modern agricultural production methods to the villagers. In this regard, tools and equipment provided free of charge to teachers by the state, various seeds and saplings, and instruments such as farm animals (Akandere, 2019: 425) have been valuable efforts to bring new agricultural techniques to rural villages.

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<sup>3</sup> [www.tmo.gov.tr](http://www.tmo.gov.tr)

Although the deterioration in the agricultural terms of trade of the countries affected by the depression relatively affected Türkiye, it has remained at a certain level in Türkiye due to its limited foreign trade and self-sufficiency based on export diversity (Başkaya, 2004: 74). Despite this, the decrease in the prices of agricultural products due to export restrictions and the restricted imports in areas such as sugar and textiles have signaled the realization of industrialization with industries that should be established by the state itself (Ercan et al. 2008: 228). The statist understanding applied in Türkiye represents a mixed system that prioritizes the private sector and applies the state intervention in areas where the private sector is not sufficient to encourage the private sector. The 1930s, when the statist understanding of economy began to prevail, was also the year when the idea of planning emerged. The idea of statist economy, as it has been based on an understanding on development through statist industrialization and makes the state intervention actually valid, has brought along the application of the experience of planned development and industrialization.

The planning process, which started with the 'Report on Our Economic Situation' (*İktisadi Vaziyetimize Dair Rapor*) prepared by the Ministry of Economy (*İktisat Vekaleti*) for the first time in 1930, has been combined with expert opinions and financial support from the USSR which is the model country in the planned economy of the period, the First Five-Year Industrial Plan (1934 -1938) was implemented (Dikkaya et al., 2008: 79).

The First Five-Year Industry Plan has covered the investments to be made in the paper, chemical and stone-soil (Karakayalı, 2003: 77) industries, of which 36 percent belongs to the textile and 23 percent to the mining (Kepenek, 1990: 63). It has been a plan for the development of the industrial sector, in which the services and agricultural sector has been excluded (Özçelik and Tuncer, 2007: 260).

During the Second Five-Year Industrial Plan (1938-1943), which could not be implemented due to World War II, despite approximately 82 percent of total employment, 40 percent of GNP and 80 percent of foreign trade revenues were in the agricultural sector, but only 10 percent of total investments have been separated to the sector (Durmuş and Aydemir, 2016: 165). Despite this, while cultivated lands were 4.86 percent of the total land in 1927, it has increased to 10.2 percent in 1934 (Şahin, 2002: 69). In the period of 1934-1938, efficient planting could not be realized due to the uneven distribution of state lands to the peasants for the purpose of lands the farmer; this situation has constituted a serious obstacle in front of capital accumulation in the agricultural sector (Parasız, 2003: 68).

### 3. Planning Approach in Türkiye from the National Chief Era to the 1960s

The Second World War between 1939-1945 interrupted the development steps in Türkiye as well as in the whole world. Also, The Economic Development Plan, named as the 'Vaner Plan' in 1947, was a plan that determined agriculture as the main starting point of development and constructed other sectors to support

agriculture (Tekeli and Ilkin, 2009: 16). The plan has been based was the principle of ensuring that private enterprises operate freely. The plan could not be put into practice because external resources could not be obtained.

The decade-long process, which started with the Democratic Party that came to power in 1950, started a new process that prioritized the agricultural sector and began to experience innovations and changes in agriculture with foreign aid, with the break with the planning approach. In the new order established by the USA after World War II and shaped by its support, the liberalism trend, which has started to rise again all over the world instead of protectionist policies, also affected economic policies in Türkiye in the same direction. With the Marshall Aids financed by the USA, Turkey's agriculture has expanded its cultivated areas by showing rapid development thanks to the purchase of new vehicles and tractors (Pamuk, 2014: 227-228). This period, in which most of the state-owned lands and pastures were distributed to small producers and landless peasants within the framework of the 'Law on Landing the Farmer' adopted before the Democratic Party government constituted half of the lands opened for production throughout the 1950s. The amount of cultivated land, which increased by 10 percent between the post-World War II period and the 1950s, increased by 50 percent in the 1950s, and agricultural production doubled in 1960 compared to the pre-World War II era. In the last 200 years of Turkey's history, there is no other period in which the cultivated area and agricultural production have increased at this rate (Pamuk, 2014: 228-229).

Towards the end of the 1950s, the problems experienced in the rollover of foreign debts, the failure to achieve the growth rates experienced in the past, the decline in agricultural production due to high inflation and bad weather conditions paved the way for the crisis in 1958. The process in question brought with it the idea of taking a concrete step toward the necessity of transitioning to a planned economy model. In the context of foreign relations, the main motives that prepare the planned development process have been especially the negotiations on the connection of agricultural activities to a plan. After the military coup of May 27, 1960, the planning studies continued by the National Unity Committee, which were assigned to govern, were put into practice primarily to regulate the agricultural sector and against the local forces formed by large landowners (Yenal, 2010: 112). The State Planning Organization (SPO) was established with the decision of the Official Gazette dated 5 October 1960 to carry out the planning activities in an orderly manner.

In this period when Keynesian policies have been dominant in the economy, while the welfare of the people has been increased with the effective power of the public on the one hand, the necessary investments for national capital accumulation have also been made by the state. The common feature of the plans put into effect until the 1960s is that they were made to plan and implement public investments rather than a holistic economic approach. At the same time, a relevant institution has not

prepared the programs in question, and there is no framework for implementation methods (Ministry of Development, 2014: 13).

#### 4. Institutionalization Period in Planning

At the end of the 1950s, the belief that the Turkish economy should have entered into a planned economic restructuring process to control the use of capital in the fight against foreign debt payments and inflation began to become widespread (Kepenek and Yentürk, 2012). In order to realize the planned development, the First Five-Year Development Plan covering the years 1963-1967 was put into effect with the decision published in the Official Gazette dated 3 December 1962. The State Planning Organization, which was established under the Prime Ministry on September 30, 1960, has been assigned to the Development Plans, which were decided to be implemented on a legal basis with the 1961 Constitution.

Agricultural objectives, basic policies, production and investment targets have been determined in the plan, and it has aimed to meet the increasing raw material needs of the industry with the increase in industrialization and exports by increasing agricultural production. While it has been stated that the increase in agricultural production is an effective sector in solving social problems such as internal migration as well as economic; It has been also pointed out that resources should be used effectively and efficiently in order to ensure a long-term balance in land use (FFYP). The experience gained by both the government and the public in planning at the end of the plan period (Tokgöz, 1998: 12) has been an important gain for the following periods.

In 1960 and after, economic and cultural development was one of the main aims of the politics of the period as a matter in itself. In these years, when a total understanding of development has been adopted, the principle of developing import substitution policies and strengthening the private sector by the public, with the support to be transferred from the public to the private sector in order to make the market economy functional within the framework of the basic rules established by the Development Plans.

The first report prepared by the State Planning Organization (SPO), which was one of the first steps of the planned development process in the 1960s, presents a fifteen-year economic perspective. In the first article of the plan, which has included the plan objectives and strategy determined by the High Planning Council Decision, the statement *“A development plan will be made that will ensure and maintain the highest development speed within the democratic order that is the way of life chosen by the Turkish society”* (Official Gazette, 1961: 4530). After these lines, in which the plan's main objective has been explained, the basic strategy of the Development Plans is included in other articles. Accordingly, it has stated that Development Plans covering 15 years with 5-year intervals will be prepared and these plans will be implemented within the framework of the targets determined by considering the relationship between population growth rate and development rate (Official Gazette, 1961: 4530). In the plan, which has been stated that the Turkish economy was a mixed economy model consisting of state and private sector

cooperation, the state would assume the role of encouraging private sector investments and the savings rates needed to realize the investments should be increased. In this regard, it has been emphasized that both the private sector, the public and individuals should show maximum care.

The Second Five-Year Development Plan, covering the years 1962-1968, was implemented by the Justice Party government, which was the ruling party of the period. Similar to the First Plan, it has been stated that the main target of an average of 7 percent growth in national income would be realized through the development in the industrial sector rather than the simultaneous development of agriculture and industry. The development of the industry has been based on the idea of undertaking the production of intermediate and investment goods by the public sector and strengthening the private sector capital (Kepenek, 2012).

The striking feature of the planning approach in the 1960s was that it was compulsory for the public sector and guiding for the private sector (Ministry of Development, 2014: 14). The welfare state or social state understanding adopted until the end of the 1960s after the Second World War has been described as the golden age in terms of national economies and social conditions (O'Connor, 2010: 693).

The Third Five-Year Development Plan to be implemented in 1973-1977 was prepared by the military regime, the Nihat Erim government. In a conjuncture where political turmoil has been at an extreme due to the short-term governments established between 1972-73, the oil crisis that emerged after the Israel-Arab Conflicts that started in 1973, and the Cyprus Peace Operation that took place in 1974, macroeconomic results have been encountered far from the targets. The external deficit problem caused by political behavior and the fluctuations in inflation and growth figures in the relevant period can be considered as the expected results of an unstable process. The Third Plan was prepared within the scope of the Additional Protocol (1970) signed with the European Economic Community, within the walls of customs has been planned to be abolished after twenty-two years, with a perspective on the production of intermediate and investment goods together with industrialization. While the share of industry from the GNP was determined as 35 percent in the plan, it has been aimed to allocate 53.4 percent to the services sector and 11.6 percent to agriculture. Although the agricultural sector grew by 3.5 percent on average, inflation reached double digits and the fluctuation in the average growth rate was due to the dependence of agricultural production on seasonal conditions (Tokgöz, 1998: 15).

The Fourth Five-Year Development Plan was implemented between 1979-1983, and continued to have been implemented as planned by two different governments before and after 1980. The stable execution of the plan was due to the fact that the economy bureaucrats continued their duties in both governments (Tüleykan and Bayramoğlu, 2016: 403). The main objectives of the Fourth Five-Year Development Plan have been based on a self-sufficient national economy,

developing technical and economic development together, meeting the energy needs with domestic resources, specializing in agriculture and realizing acceptable urbanization, paying foreign debts, progress in transportation and stability. (SPO, 1979: 656). The average growth was targeted at 8 percent in this period but was only able to reach the level of 2.6 percent.

The common feature of the first four plans is that they are plans to reach the targeted growth rates by accepting the production techniques as data and developing strategies to prioritize the industry sector (Kepenek, 2012: 140-141).

#### 4. Planning under Neo-Liberal Policies

The 1980s were the beginning years of a new process dominated by liberal economic understanding. The economic reflections of the social transformation that started in Türkiye after the military intervention in 1980 brought along a series of economic regulations known as the 24 January Decisions. With the transition from import substitution policies to the export-based industrialization model, the process of opening up the economy has begun. Within the industrialization efforts, the private sector has been paved, and the necessary public support have been directed to the development of the private sector. Development Plans, which have progressed in the line of planned economic understanding until the 1980s, became draft texts in which the foundations of a new understanding were laid with the effect of liberal policies since the 1980s.

After the '*transition program*' prepared in 1984, the Fifth Five-Year Development Plan was prepared to cover the 1985-1989 period.

The 1990s, shaped by the influence of the neo-liberal policies of the 1980s, represented a ten-year period in which economic and political instability was experienced and various social divisions were experienced. In 1989, with the transition to external financial liberalization, the Turkish lira became convertible, and capital movements were liberalized, leading to increased foreign exchange inflows to the country and increasing interest rates. The increase in foreign exchange has brought with it an increase in imports.

Turgut Özal, who became the President in the last period of the Fifth Plan, prepared the Sixth Five-Year Development Plan within the framework of his own economic thoughts, but it was Yıldırım Akbulut's government that put it into practice. The first years of the Sixth Plan, which was prepared for the period of 1990-1994, witnessed large-scale movements in world politics. Iraq's invasion of Kuwait in 1990 and the liberation of Kuwait with the coalition forces formed under the leadership of the USA in 1991, the federations that gained their independence with the dissolution of the USSR, have also affected Türkiye closely with its political and economic results.

Due to the 1994 Crisis, which coincided with the last year of the Sixth Plan, negative growth figures were observed that year and the economy shrank by 4.7 percent. The rate of increase in CPI in September 1994 was 111.1 percent. 'Extraordinary Stabilization Measures' based on tight monetary and fiscal policies, which went down in history as the 'April 5 Decisions' in 1995 and described as the 'Economic

Liberation War' by the then Prime Minister Tansu Çiller ineffective against the liberalized financial capital in the country because they have been implemented without adequate economic infrastructure.

The preparations for the Seventh Five-Year Development Plan, which was planned to cover the years 1995-1999, were postponed due to the crisis in 1994, and the year 1995 was started with a 'transitional program'. The Seventh Five-Year Development Plan, covering 1996-2000, bears the first traces of a new understanding of development plans. The first year of the Seventh Plan period was also the beginning of the period when the Customs Union Agreement has entered into force and foreign trade between Türkiye and the European Union evolved into a new dimension. Growing above the average growth rate of 5.5-7.1 percent envisaged in the Seventh Plan, the Turkish economy completed 1996 with a growth of 7.1 percent, while inflation increases of 84.9 percent could not be restrained. The increase in imports from the EU within the framework of the Customs Union was above the increase in total imports. The financial crisis that started in Asian countries at the end of 1997 had a negative impact on Russia, one of Turkey's important trade partners, and indirectly on Türkiye.

In the Turkish economy, which was under the influence of the political and economic depressions of the 1990s, the Long Term Strategy and the Eighth Five-Year Development Plan covering the 2001-2005 period were accepted and approved by the Turkish Grand National Assembly in 2000. After the crisis of November 2000 and February 2001, the Justice and Development Party, which has come to power alone, entered a stable transformation process in the Turkish economy. This process was also reflected in the Development Plans.

## 5. Planning Approach in Türkiye during the Justice and Development Party Era

The 2000s in Türkiye were when the restructuring activities of the economy and the 'regulatory' mission of the state became concrete with the neo-liberal policies that have been tried to be implemented since the 1980s. The success of macroeconomic policies, which have been created with the main goal of ensuring price stability, excessive cheapening in the exchange rate and the increase in foreign goods demand, have brought the current account deficit problem together since the mid-2000s.

The Justice and Development Party, which formed a government alone as a result of the general elections held in 2002, coincided with the first period of the Long-Term Strategy and Eighth Five-Year Development Plan, which was currently being implemented. The main macroeconomic objectives of this plan have been reduce inflation to a level compatible with the EU, to realize sustainable growth and to increase competitiveness and adaptability toward the goal of full membership in the EU (SPO, 2001: 27). In the Plan, with the realization of the structural

transformations envisaged in the process leading up to 2023, the target of entering the world's top ten economies has been determined. It has stated that steps would be taken to redefine the place of the state in the economy, full membership to the EU and to increase efficiency in the Eurasian Region, to become a regional power after 2010 and a global power beyond 2020. The annual growth rate has aimed to be achieved to 7 percent and the national income per capita to the equivalent level of European countries (SPO, 2001: 22).

It has been stated that within the plan period, the Maastricht Criteria would have been fully fulfilled, from budget discipline to reducing inflation to single digits, and the necessary structural and institutional reforms would have been implemented in this context (SPO, 2001: 25). According to 1999 data, although the share of the agricultural sector in GDP was relatively low, such as 15 percent, The Plan has drawn attention to the fact that it has been a significant part of the total employment, but a relatively low level of income (SPO, 2001: 131,132). It has been stated that the situation limited the effective functioning of the labor market (SPO, 2001: 102). For this purpose, it has aimed to create a qualified workforce that will enable the employment structure to turn to non-agricultural sectors and to ensure efficiency in the labor market (SPO, 2001: 103).

The Ninth Development Plan, which was the 2007-2013 period, has been prepared with a broad perspective covering seven years, based on the priorities determined in individual and institutional areas, from Turkey's integration process with the EU to structural and institutional transformations. In the introduction part of the plan, it has been mentioned that development plans are a much more important tool today compared to the past and that they should be redesigned within the framework of changing conditions, and it has been emphasized that the role of the state in the economy should also be redefined (SPO, 2006: 1).

Strategic objectives, which have been defined as development axes in the plan and determined as the main theme of the policies to be implemented: Increasing competitiveness and employment, strengthening human development and social solidarity, ensuring regional development and increasing the quality and efficiency of public services (SPO, 2006: 2).

During this period, the SPO, Turkey's agency responsible for planning and above the ministries, was closed in 2011 and transformed into the Ministry of Development. With this step, the Ministry of Development has undertaken the task of being responsible for preparing and following up the Medium Term Program, strategy and action plans in addition to the Development Plans and Annual Programs for which the SPO is responsible (Decree Law, 2011: 641). While the SPO was an institution responsible for planning at the national level, the Ministry of Development has become the planner of regional development with the committees established within it. The umbrella institution, thought to be established in the Ninth Development Plan to carry out regional policies, has been realized with the establishment of the Ministry of Development.

The GDP, which grew by an average of 4.4 percent annually in the Eighth Plan period with the impact of the economic crisis, has been set at an annual average of

7 percent in the Ninth Development Plan period. With the target of increasing the per capita income above 10,000 dollars, the target of becoming the 17th largest economy worldwide has been determined (SPO, 2006: 54). In this context, growth and an average annual employment increase of 2.7 percent have been expected to be led by the industry and services sector, while the share of the agricultural sector expected to continue to decrease.

With the new Decree, the organizational structure of the SPO and the Ministry of Development has also changed. While the SPO Undersecretariat has been abolished with the transformation into the Ministry, the High Planning Council and the Money, Credit and Coordination Board continued their existence with the change in their administrative structures. While all the High Planning Council members were elected from among the politicians, the number of bureaucrats in the Money, Credit and Coordination Board was reduced and transformed into committees within the ministry. With this difference in organization, it has been seen that a specialized planning understanding at the national level has been abandoned and the Development Plans and Annual Programs to be prepared enter into a structure that is likely to be affected by the political climate (Övgün, 2011: 274-275).

The Tenth Development Plan, prepared between 2014 and 2018, was a plan ready for the first time by the Ministry of Development during the Strategic Plan period covering the years 2009-2023 and prepared with the coordination of the public, private sector, and civil society (Ministry of Development, 2014: 1). Four basic principles has been targeted with the Tenth Development Plan. “Qualified People, Strong Society,” “Innovative Production, Stable High Growth”, “Liveable Spaces, Sustainable Environment” and “International Cooperation for Development” (Ministry of Development, 2014:15). *“To raise the international position of our country and to increase the welfare of the people with the structural transformations to be realized based on the basic values and expectations of our nation in the world that is being reshaped”* (Ministry of Development, 2014: 27) has constituted the main objectives and principles of the plan.

The Tenth Development Plan was prepared by taking into consideration the 2023 targets and accepting that Development Plans should be formed in line with long-term purposes (SPO, 2013: 1). It has been seen that the main objectives, priorities and targets in the plan have prepared in an inclusive and holistic framework. As stated in the introductory part of the plan, in the period when the private sector was at the forefront of the world economic conjuncture and regulation, supervision and coordination missions were assigned to the public sector, it was pointed out that the national plans should prepare with both strategic importance and a large participant mass (SPO, 2013: 2). In this context, the Tenth Development Plan has consisted of public policies that take into account inter-sectoral communication and determined the basic starting points and 25 transformation programs for priority areas.

The other targets set in the plan are to increase the GDP per capita to \$25,000 by 2023, to achieve a sustainable and stable growth performance, to reduce the unemployment rate to 5 percent, and to reduce inflation to single digits permanently. The GDP figure that has expected to be reached at the end of the plan period is 1.3 trillion dollars (billion in today's currency), the per capita income target is 16 thousand dollars and the unemployment figure is 7.2 percent (SPO, 2013: 27). The first of the main objectives have gathered under four main headings, "Qualified People, Strong Society", consists of policies for the realization of development through raising qualified people; The title of "Innovative Production, Stable High Growth" presents policies aiming at structural transformation in production; The title of "Livable Spaces and Environment" is aimed at raising the living standards in rural and urban areas and presents policies to eliminate regional inequalities; The title of "International Cooperation for Development" consists of policies that will ensure the realization of development by considering internal and external dynamics (SPO, 2013: 2).

Growing at an annual average rate of 7.2 percent in the 2002-2006 period, the Turkish economy grew by 3.3 percent in the 2007-2012 period due to domestic political problems and the global crisis during the Ninth Development Plan period. As of 2012, the share of agriculture in GDP has decreased to 7.9 percent. In the same period, the increase in value added in the agricultural sector was 2.1 percent, while it was 3.7 percent in the industry and 4 percent in the services sector (SPO, 2013: 20).

The Eleventh Development Plan, which entered into force on July 23, 2019, covers the period of 2019-2023 and is also the first plan of the Presidential Government System. Preparing the development plans, which the Ministry of Development has undertaken in the previous period, was given to the Department of Strategy and Budget and the Ministry of Treasury and Finance with the system change. The plan, which was prepared with a broad audience, established 75 special expertise commissions and working groups consisting of private sector representatives, universities, civil society, and other ministries and public institutions and organizations. To determine the development priorities, the views and suggestions of almost every segment has been included through 267 meetings and workshops held in 81 provinces, interviews with 12 thousand people, and the "citizen survey" conducted over the Internet with the participation of more than 19 thousand people (DSB, 2019: 3).

The main purpose of the plan has been determined as follows:

*"To raise the international position of our country and to increase the welfare of our people, based on the basic values and expectations of our nation; Turkey's entry into the ranks of high-income countries and countries with the highest level of human development; In addition to the protection of fundamental rights and freedoms with a fair and fast-working legal system, where citizens can lead a happy, healthy and safe life, as well as providing easily accessible and citizen-oriented public services based on equal opportunities with a highly predictable public policy"* (DSB, 2019: 26).

The principles of the plan to achieve the goal have been as follows:

*“Making cities and rural areas offer better job opportunities and living environments in line with the dissemination of social welfare with a human-oriented development approach, raising individual and social competence levels, ensuring intergenerational equity and sustainability in the use of natural resources with social security regulations, and human-orientedness, participation, inclusivity, accountability, transparency and efficiency”* (DSB; 2019: 26).

Within the scope of the Presidential Decree issued in 2018, the Ministry of Industry and Technology has been established by merging the Ministry of Development and the Ministry of Science, Industry and Technology. The authority to prepare development plans within the Ministry of Development has been given to the Department of Strategy and Budget (DSB). According to the Presidential Decree, the task of preparing the Development Plan, the Presidential Program, the Medium-Term Program, the Medium-Term Financial Plan, the Presidential Annual Program, and the sectoral plans and programs within the scope of the main goals, principles and objectives set by the President has been given the Department of Strategy and Budget with the Ministry of Finance (Official Gazette, 2018: 30488). The duties and authorities of the Ministry of Development for development agencies and regional development has been given to the Ministry of Industry and Technology and the Ministry of Trade in the new system. In this way, national and regional planning processes have been separated (Ağdemir, 2021: 96).

In the Eleventh Development Plan, which was prepared by a department affiliated with the Presidency in the new system, the importance of a planned economy approach in the medium and long-term strategies of countries has been underlined as in the previous periods (DSB, 2019: 1). Similar to the previous plan, guiding basic development axes have been determined in the Eleventh Plan. “Stable and Strong Economy”, “Competitive Production and Productivity”, “Qualified People and strong Society”, “Livable Cities and Sustainable Environment” and “Rule of Law, Democratization and Good Governance” the development axes have gathered under it. The plan has aimed to realize the vision of *“Türkiye that produces more value, shares more equitably, is stronger and prosperous”* by the axes (DSB, 2019: 2). The plan has also emphasized that the fast and effective executive mechanism introduced by the Presidential Government System would increase efficiency in practice (DSB, 2019: 3).

In the plan, the increase in food demand and the negative impact of urbanization on natural resources and agriculture in connection with climate change, food security and efficient water use, which have been discussed under the heading of global developments and trends have been mentioned. Against possible risks, it has been stated that there is a greater need for qualified workforce and technology assets to produce plants and animals suitable for the climate, to protect the environment and biodiversity, and to carry out effective production (DSB, 2019: 11). It has been stated that Türkiye is in an effort to activate production according

to demand by making progress in the fields of sustainable resource use, prevention of agricultural population migration, rural development, use of technology and marketing (DSB, 2019: 13).

In the Eleventh Plan mentioned that the share of the agricultural sector in GDP in the previous period has decreased compared to the industry and services sector, according to 2018 data. The share of agriculture in GDP was 5.8 percent, while the share of the industry was 22.2 percent and the share of the services sector was 61.5 percent. In the Eleventh Plan period, the domestic product has been expected to grow by 3.1 percent annually on average, and the share of agriculture in the product will decrease to 5.4 percent. In comparison, the industry share is expected to increase to 24.2 percent and the percentage of services decrease to 60.1 percent (DSB, 2019: 35).

## 6. Conclusion

The planning process in Türkiye has started during the Ottoman Empire period and has come to the present day by going through various stages. The planning process, which started with the Land Code of 1858 during the Ottoman Empire and was shaped by agriculture-oriented policies, was founded on the understanding of development through industrialization and the establishment of the Republic of Türkiye, where industry-oriented policies were produced. In this period, which could be described as the liberal period, in which steps were taken to develop the private sector under the state's leadership, a new period began in which economic policies were adopted within the framework of the statist approach after the 1929 depression. The understanding of statism in Türkiye has been based on establishing an economic system in which the state and the private sector operate coordinated, unlike socialist regimes. Taking the Soviet Union as an example, two industrial plans were prepared to ensure industrial development after 1929, when planned industrialization moves were implemented in Türkiye. Despite its successful implementation in the First Plan (1933-1937), the Second Plan (1938-1942) could not have been implemented because it coincided with the Second World War. The 1950s was a period when liberal thought re-emerged. It refers to an agricultural sector where industrialization steps have been taken directly in agriculture and developed with foreign aid. The planned development period started again in the 1960s after a short period of ten years, was implemented until the 1980s with the five-year development plans prepared by the SPO. Since the process of opening up, which emerged in the 1980s, has been adopted without the necessary economic and institutional infrastructure works, the fragilities of the Turkish economy and the foreign deficit problems increased, has brought new decades with it. This period is the beginning of the process in which the planned economy approach is moved away and development plans are evaluated as plans on paper.

The unstable political conditions of the 1990s caused a new crisis at the beginning of the 2000s in the Turkish economy, where coups and crisis periods are experienced almost every decade. The beginning of the political stabilization

process in 2002 brought economic stability as well. The development plans, which started to be abandoned in the 1980s and did not find any response in practice, took on a new systematic that came under the partial control of the government and was shaped according to government policies as of 2011 with the closure of the SPO. Since 2017, development plans have started to function as an organ of political authority, starting to be prepared by an institution wholly affiliated with the Presidency. Periodically implemented economic policies and prepared development plans are typical indicators of not acting independently from domestic and foreign political and economic actors.

As for the Ninth Plan, it can be said that the coordinated action of the development plans shaped by the participatory policies of many independent actors and prepared in a broad perspective, theoretically contributed positively to the projects. The most fundamental deficiency of the planning tradition from the past and the planning understanding of today can be considered as the success or failure of the plans in practice, regardless of the institution that prepared the plan. Although it is seen that each plan period has consistent texts in terms of targets and decisions taken, the main problem is related to the effectiveness of the plans in practice.

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## Contemporary Issues of Waqf in Indonesia

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**Keywords:** Islamic Economics, Islamic Finance. Waqf Fund, Indonesia

### Contemporary Issues of Waqf in Indonesia

#### Abstract

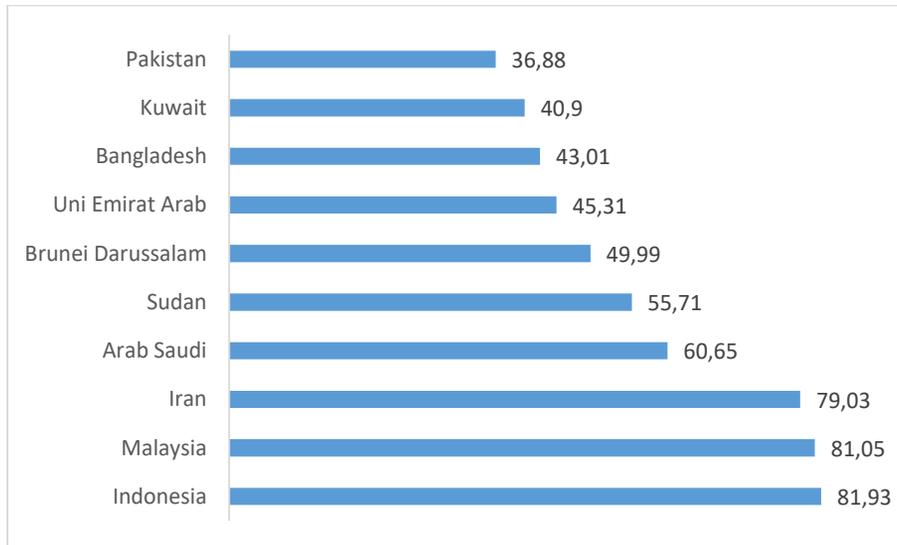
Islamic economics and finance in Indonesia have recently developed rapidly. Therefore, this conceptual paper aims to find out the realization, potential, and solution of waqf fund collection in Indonesia. The method used in this research is qualitative with a study approach based on secondary data and previous research, which aims to answer the formulation of the problem, namely how the realization, potential, and solution of waqf fund collection in Indonesia. The result of this conceptual paper is that there is still a significant gap between the realization of waqf fund collection and its potential. Therefore, some solutions should be done, which include (i) The Indonesian government should intensify the socialization of Cash Waqf Linked Sukuk; (ii) The Indonesian government must continue to intensify the national cash waqf movement; (iii) There is collaboration in collecting waqf funds with Islamic financial institutions such as Islamic banking. Thus, the implication of this research is as information and reference for both academics and practitioners in the field of waqf related to the realization, potential, and collection solutions of waqf funds in Indonesia. The novelty of this conceptual paper is related to information on the condition of waqf funds in Indonesia in the 2020 period.

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## 1. Introduction

The current dynamics of Islamic economics and business in Indonesia is the center of international attention where the score of Islamic financial development in Indonesia is ranked first in the world, which is illustrated in the following figure:

**Figure 1.** Islamic Finance Country Index Score in 2019



Source: Lidwina (2019)

Moreover, according to Figure 1 above, it can be seen that among countries with a majority Muslim population in the world, the development of Islamic finance in Indonesia is much better than in other countries such as Iran, Saudi Arabia, Bangladesh, and Sudan, which have a higher percentage of the Muslim population. For example, the percentage of the Muslim population in Iran reached 99.4%, Saudi Arabia reached 98.2%, Bangladesh reached 90.4%, and Sudan reached 97% (Kusnandar, 2021a).

The rapid development of Islamic economics and finance in Indonesia is inseparable from the function of Islamic economics and finance, which aims to improve people's welfare. The application of Islamic economics and finance based on sharia principles is one of the solutions to the world's economic and financial crisis caused by the element of greed from humans in business and commercial transactions (Lucky Nugroho et al., 2017; Lucky Nugroho, Meiwanto Doktoralina, et al., 2020; Priyambodo et al., 2023). According to Nugroho et al. (2023), Islamic economics and finance can be a solution due to the following points:

- The foundation of Islamic Economics and Finance is Maqasid Syariah. Maqasid sharia, as the foundation of Islamic economics and finance, has six aspects which include (i) protecting religion, (ii) protecting the soul, (iii) protecting the mind, (iv) protecting offspring, (v) protecting

property, and (vi) preserving the environment (Karyanto et al., 2021; Lucky Nugroho, Ghazali, et al., 2020; Lucky Nugroho & Mariyanti, 2021);

- Referring to the foundation of Islamic economics and finance in the form of maqasid sharia, in fulfilling their needs and in conducting business transactions, a Muslim must pay attention to the principles of (i) the Prophet, (ii) Profit, (iii) People, and (iv) Planet (Imani et al., 2022; Lucky Nugroho et al., 2019; Lucky Nugroho, Nugraha, et al., 2020);
- Plafond of Islamic Economics and Finance is Maslahah, where the implementation of Islamic economics and finance must provide benefits for humanity (Lucky Nugroho, 2022b; Lucky Nugroho, Mastur, et al., 2020; Satibi et al., 2018);
- The roof of Islamic Economics and Finance is Falah. The purpose of implementing Islamic economics and finance in totality or kaffah based on the Qur'an, Hadith, and other legal sources, it is hoped that a Muslim will obtain the safety of life in the world and the happiness of life in the hereafter (Falah) (Lucky Nugroho et al., 2022; Lucky Nugroho, Hidayah, et al., 2020; Vidyaningrum et al., 2023);
- In addition, there are principles in Islamic economics and finance in business transactions, namely prohibiting transactions that contain elements of MAGHRIB or an abbreviation of (i) Maysir which means the prohibition of transactions containing elements of gambling or speculation; (ii) Gharar, which means the prohibition of transactions containing elements of uncertainty; (iii) Riba which means the prohibition of transactions containing elements of usury (L Nugroho et al., 2020; Lucky Nugroho, 2022a; Lucky Nugroho, Badawi, et al., 2020). Moreover, with the MAGHRIB principle, business activities or transactions that contain injustice and greed can be avoided (Utami et al., 2022)

Therefore, referring to the foundation, pillars, ceiling, and roof as well as the principles of business transactions from Islamic economics and finance, Islamic economics and finance are not only looking for profit but also in their operational activities must embed spiritual, social, and environmental sustainability elements (Afoukane et al., 2021; Lucky Nugroho, 2015; Lucky Nugroho et al., 2018). Furthermore, the phenomenon of sharia economic and financial functions based on spiritual and social elements in Indonesia can be seen during the Covid-19 pandemic, which includes:

- Indonesia, according to the 2019 World Giving Index Report, is the most generous country in the world (Andika et al., 2020);
- Indonesia's huge potential for zakat, infaq, shodaqoh, and waqf (ZISWAF), if zakat is mandatory in Indonesia as it is in Malaysia, then

the potential for zakat based on the 2019 GDP, according to Bambang Sudibyo as Chairman of the National Amil Zakat Agency (Baznas) can reach IDR 500 trillion (Handayani & Hafil, 2020).

- The increase in the amount of zakat, infaq, and shodaqoh (ZIS) collection during the Covid-19 pandemic in 2020 reached above the target by 101.44% or Rp385.5 billion. Meanwhile, in 2019 it only reached IDR 296 billion. This shows that Islamic economic and financial activities based on spiritual and social elements in Indonesian society during the Covid-19 pandemic increased by 30.24% (Humas-Baznas, 2021).

However, another phenomenon is the realization of waqf fund collection, which is a challenge in Indonesia. According to Deputy Minister of Religious Affairs Zainut Tauhid Sa'adi, there is a high potential gap between the realization and potential of waqf funds in Indonesia (Sani, 2021). Therefore, the problem statement in the conceptual paper is how the realization, potential, and solution of waqf fund collection in Indonesia?. Based on the formulation of the problem, this conceptual paper aims to find out the realization, potential, and solution of waqf fund collection in Indonesia. Thus, the implication of this research is as information and reference for both academics and practitioners in the field of waqf related to the realization, potential, and collection solutions of waqf funds in Indonesia. The novelty of this conceptual paper is related to information on the condition of waqf funds in Indonesia in the 2020 period.

## 2. Literature Review

The literature review in this conceptual paper presents concepts related to Islamic Economics and Finance that not only aim to fulfill commercial aspects but also consider social aspects, including waqf activities. When the Prophet was alive, all his words, actions, and attitudes did not need to be written down because they could directly meet and ask the Apostle, but after He died, there was a need for documentation carried out by the Companions who had met and seen firsthand what the Apostle did and said in the form of Hadith, Ijma and Qiyas. In addition, the Qur'an and Hadith are the guides of human life. They are contextual (following the changing times), so with the development and changing times, the Qur'an and Hadith need to be interpreted by scholars through the exchange of ideas and discussion forums so that there is Ijtihad. Furthermore, knowledge is an essential element that distinguishes humans from other creatures of God. Allah created humans equipped with reason so that humans are perfect creations as stated in Q.S At-Tiin Verses 1-4 "(1) By the fig and the olive, (2) And by the Mount Sinâi, (3) And (by) this secure city (city of Makkah), (4) Certainly we have created the human (soul) in a calendar of perfection (so that it can turn to be the best in a period by doing the soul's cleansing and purification)."

Furthermore, the position of science is vital in human life. Even the first revelation revealed to the Prophet Muhammad mentioned the importance of reading, writing, and knowledge for humans as stated in Q.S Al-Alaq 1-5 "(1) Read in the Name of

your Lord Who Created, (2) He created the human being from Alaq (an embryo), (3) Read, and your Lord is the Owner of the Greatest Honor, (4) That He taught with pen, (5) (He has) taught the human being what he did not know.” Thus, faith and piety must be implemented with science and technology to implement science that embeds faith and piety in human life and activities. Thus, in everyday life, economic activity in accordance with the principles of sharia will improve social welfare (maslahat) for the people.

Therefore, if social welfare has been realized, a civilization is created, namely the creation of a civil society where the fulfillment of intellectual aspects (Tamadun) and spiritual aspects (Tsaqâfah) in social life. Therefore, social activity in Islam is a must and becomes an integral part of daily life, including meeting Muslims' needs. Furthermore, social finance activities include zakat, infaq, shodaqoh, and waqf (ZISWAF). The definition of ZISWAF is as follows:

- Zakat: a certain part of the property that must be spent by every Muslim when it has reached the specified conditions to be given to the rightful parties (mustahiq) under certain conditions (Lucky Nugroho et al., 2022);
- Infak: Money spent by a person or business entity in addition to zakat for public benefit (Sukmadilaga et al., 2021).
- Shodaqoh: voluntary giving of wealth or foodstuffs to fulfill the needs of others. The rules of sadaqah are more liberal than zakat or infaq. Sadaqah is not an obligation but a good deed (Aziz et al., 2021).

Waqf: the holding of an object according to the law and in the waqif to use its benefits for virtue. In addition, waqf can be defined as a permanent gift of property for social purposes (Karyanto et al., 2019)

### 3. Methodology

This conceptual paper deployed a content analysis approach, a research approach that focuses on an in-depth investigation of the research problems. This conceptual paper's research problems related to the problem statement in the conceptual paper is how the realization, potential, and solution of waqf fund collection in Indonesia. The data were obtained by purposive sampling to focus on concept development based on the existing literature related to the purpose of the study (Napitupulu et al., 2020; Oktris et al., 2022). The obtained data were then analyzed using an interactive analysis model. This model consists of three stages: data collection, data reduction, data display, and conclusion (Shenton, 2004).

### 4. Results and Discussion

This section will describe the analysis result of the realization, potential, and solution of waqf fund collection in Indonesia. Referring to the data submitted by the realization of waqf funds in Indonesia in 2018 only reached IDR 255 billion, while in 2020, it reached IDR 328 billion or an increase of IDR 73 billion. So, it can be

said that the growth of waqf funds for two years reached 28.63%. When viewed from this growth, the average annual growth only reaches 14.31%, so it can be said to be relatively low because it is less than 20%. The development of waqf in other countries where the percentage of Muslims is lower than in Indonesia, such as Turkey, has been relatively developed compared to Indonesia. This is shown by the management of waqf in Turkey, which is involved in the country's development. The form of waqf contribution to development in Turkey, according to Akgul (2021), is as follows:

- Waqf in Turkey is used for the construction of city infrastructure: such as waterways, roads, bridges, sidewalks, and so on;
- In addition, waqf in Turkey is also used to build educational facilities such as libraries, campuses, and schools from elementary to high school levels, and also build social facilities such as hospitals, orphanages, and so on;
- Waqf in Turkey is also used to build religious facilities such as mosques, musholla, and religious, educational institutions such as Islamic boarding schools in Indonesia.

Referring to the strategic role of waqf funds in Turkey, Indonesia, which has the largest Muslim population in the world, should be able to increase its waqf potential. Therefore, the potential of waqf in Indonesia is relatively large if calculated from its population. (Afiyana et al., 2019; Soeharjoto et al., 2019; Zainuddin et al., 2022). Furthermore, when viewed from the amount of expenditure, according to Kusnandar (2022), several layers of public expenditure include:

- The upper-class people have an expenditure of > Rp6 million per month;
- Middle-class people have expenditures of > Rp1.2 million to Rp6 million per month;
- The middle-class people have an expenditure of > Rp532 thousand to Rp1.2 million per month;
- Vulnerable class people have an expenditure of Rp354 thousand to Rp532 thousand per month;
- The poor class people have an expenditure of < Rp532 thousand per month.

Furthermore, based on the layers of public expenditure, the portion of the Indonesian population in 2016 referring to expenditure is as follows:

- There are 10.7% of Indonesians belong to the poor class;
- There are 23.6% of Indonesians in the vulnerable class;
- There are 20.5% of Indonesians belong to the middle class;
- There are 1.2% of Indonesians belong to the upper class;
- There are 44% of Indonesians heading toward the middle class.

Furthermore, based on the total population of Indonesia in 2016, which reached 216 million, the number of people by class and percentage can be illustrated in the Table 1.

**Table 1. Total Population of Indonesia in 2016 by Class in Society**

Community Class	Portion	Total (million)
Upper-class society	1.2%	2.6
Middle-class society	20.5%	44.3
Toward the middle-class society	44.0%	95.0
Vulnerable-class society	23.6%	51.0
Poor-class society	10.7%	23.1
<b>Total</b>	<b>100.0%</b>	<b>216</b>

Source: Kusnandar (2022)

Related to table 1 above, it is known that the potential people who can donate their funds to productive waqf funds are the middle and upper classes, who already have an established and more stable income than other classes of society. Furthermore, according to Kusnandar (2021b) as the share of the Muslim population in Indonesia reaches 86.88%, the estimated potential of productive waqf funds that can be raised is as in the Table 2.

**Table 2. Calculation of Waqf Potential in Indonesia based on Population and Public Expenditure**

Society Class	Portion	Total (million)	Expenditure @month (million)	Expenditure @year (million)	Total Expenditure of Population @year (million)	Total Expenditure of Muslims (86.8%) @year (million)	Waqf Potential 1% of Total Muslim Spending @ year (million)
Upper-class society	1.2%	2.6	6.0	72.0	187,200,000	162,489,600	1,624,896
Middle-class society	20.5%	44.3	1.2	14.4	637,920,000	553,714,560	5,537,146
<b>Total</b>	<b>22%</b>	<b>46.9</b>	<b>7.2</b>	<b>86.4</b>	<b>825,120,000</b>	<b>716,204,160</b>	<b>7,162,041</b>

Source: Author

Regarding table 2 above, it is known that Indonesia's waqf potential, assuming a population of 216 million, the potential waqf funds that can be raised is IDR 7.16 trillion. Meanwhile, the realization of waqf fund collection in 2020 was IDR 328 billion. This shows a significant gap between the community's potential and the

realization of waqf funds. Therefore, there are solutions to reducing the amount of the gap, which include:

- The Indonesian government should intensify the socialization of Cash Waqf Linked Sukuk (CWLS) so that there are alternative products for people to place their waqf funds;
- The Indonesian government must continue to intensify the national cash waqf movement (GNWU), which has started since 25 January 2021;
- Financial institutions such as Islamic banks must actively participate in socializing waqf fundraising services through their digital applications.

## 5. Conclusion

The gap between realization and potential Sukuk fundraising in Indonesia is still relatively large. Therefore, all stakeholders, such as the government and financial institutions such as banks, should be able to collaborate in increasing the collection of Sukuk that can be used in national development to improve people's welfare. Indonesia's waqf realization has only reached Rp326 billion, while the potential waqf based on the population and expenditure of the upper and middle class is Rp7.16 trillion, so there is a significant gap. The alternative solutions that can be implemented to overcome the gap between the realization and potential of waqf funds are as follows: (i) The Indonesian government should intensify the socialization of Cash Waqf Linked Sukuk; (ii) The Indonesian government must continue to intensify the national cash waqf movement; (iii) There is collaboration in collecting waqf funds with Islamic financial institutions such as Islamic banking.

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## The Impact of Public Investment Expenditures on Economic Growth in Turkey

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### The Impact of Public Investment Expenditures on Economic Growth in Turkey

#### Abstract

In this study, the effect of public investment expenditures made from the general government budget on economic growth in the Turkish economy for the period 2012Q1:2022Q3 was investigated by ARDL analysis. The empirical findings of the research show that the investment expenditures made by the public sector from the general government budget have a positive effect on economic growth in both the long and short term. In the long run, %1 change in general government investment expenditures will cause %0,28 percent positive change in economic growth. In addition, the causality test results showed the existence of a bidirectional causality relationship between investment expenditures from the general government budget and economic growth. These results point to the positive effect of public investments on economic growth with the effect of crowding in the Turkish economy.

#### Türkiye’de Kamu Yatırım Harcamalarının Ekonomik Büyüme Üzerindeki Etkisi

#### Öz

Bu çalışmada, Türkiye ekonomisinde 2012Q1:2022Q3 dönemi için genel yönetim bütçesinden yapılan kamu yatırım harcamalarının ekonomik büyümeye etkisi ARDL analizi ile araştırılmıştır. Araştırmanın ampirik bulguları, Türkiye’de hem uzun hem de kısa dönemde kamu kesimi tarafından genel yönetim bütçesinden yapılan yatırım harcamalarının ekonomik büyümeyi olumlu yönde etkilediğini göstermektedir. Uzun dönemde genel yönetim yatırım harcamalarında meydana gelecek %1’lik değişim ekonomik büyüme üzerinde %0,28’lik pozitif yönlü bir değişime neden olmaktadır. Ayrıca, nedensellik testi sonuçları genel yönetim bütçesinden yapılan yatırım harcamaları ve ekonomik büyüme arasında çift yönlü nedensellik ilişkisinin varlığını göstermiştir. Bu sonuçlar, Türkiye ekonomisinde tamamlayıcılık (crowding in) etkisiyle kamu yatırımlarının ekonomik büyüme üzerindeki olumlu etkisine işaret etmektedir.

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## 1. Giriş

İktisat teorisi yatırımın bir üretim faktörü olması nedeniyle çıktığı artırabileceğini ve marjinal getirinin azalıp azalmadığına bağlı olarak büyüme düzeyine veya büyüme hızına etkisi olabileceğini öne sürmektedir. Solow modelinde (1956), yatırım oranı ne kadar yüksekse, çıktı seviyesinin de o kadar yüksek olacağı varsayılmaktadır (Fournier, 2016: 5). Gelişmekte olan ekonomiler ekonomik büyüme politikalarını desteklemek için daha fazla kamu altyapı yatırımına gereksinim duymaktadırlar. Özel sektörün kamu altyapı yatırımlarından kaynaklanan pozitif dışsallıklardan daha fazla faydalanması ve ekonomik büyümenin desteklenmesi beklenmektedir (Serdaroğlu, 2016: 15). Fournier (2016), kamu yatırımlarının uzun dönemli büyüme ve işgücü verimliliği üzerinde olumlu etkide bulunduğu özellikle sağlık, araştırma ve geliştirmeye ilişkin kamu yatırımlarının etkisinin daha yüksek olduğunu belirtmektedir. Hükümetlerin güçlü kamu yatırım politikaları uygulaması (doğru teşvikleri sağlaması, iyi verilerle desteklenen maliyet/fayda analizi yapması) ve yüksek dışsallıklara sahip alanlara odaklanması durumunda kamu yatırımlarının uzun vadede büyümeyi hızlandıracak bir kaldıraç etkisi oluşturacağını belirtmiştir. Scandizzo ve Pierleoni (2020), ekonomide talep ve arz tarafındaki olumlu etkileri nedeniyle üretimin artmasına katkı sağlaması ve özel yatırımları destekleme ve performanslarını artırmadaki tamamlayıcı rolüyle (crowding in etkisi) ekonomik büyümenin desteklenmesini kamu yatırımlarının olumlu etkileri olarak belirtmiştir (Scandizzo ve Pierleoni, 2020: 860). Ayrıca, kurumsal kalite ve yönetim süreçlerinin kamu yatırımdan beklenen getirileri etkilediği ve kamu yatırımlarının özel kesim yatırımlarını doğrudan dışlamak yerine özel yatırımlardan yararlanma kapasitesini olumlu etkileyerek ekonomik büyüme üzerinde olumlu etki gösterdiği belirtilmektedir (OECD, 2018: 27). IMF (2015), daha güçlü altyapı yönetim kurumlarına sahip ülkelerin daha düşük ortalama artımlı kamu sermayesi-çıktı oranlarına sahip olma eğiliminde olduklarını ve bu nedenle yatırımlar karşılığında daha fazla büyüme elde ettiklerine dikkat çekmiş, kamu yatırım verimliliği yüksek olan ülkelerin kamu yatırımlarından daha yüksek çıktıya ulaştıkları değerlendirmesinde bulunmuştur.

Modern altyapıya yapılan yatırımlar, ekonomik gelişme ve büyümenin temeli olarak kabul edilmektedir. Enerji, su, ulaşım, dijital iletişim, enerji nakil hatları, atık bertaraf ağları gibi modern ve iyi işleyen altyapı sektörleri ile eğitim ve sağlık gibi sosyal sektörler rekabetçi bir ekonomi için gereklidir. Araştırmalar, iyi tasarlanmış altyapı yatırımlarının uzun vadeli ekonomik faydalar yarattığını göstermiştir. Altyapı yatırımları, potansiyel ekonomik büyümeyi ve verimliliği artırabileceği gibi, ekonomide önemli pozitif etkiler de sağlayabilir (Serdaroğlu, 2016: 1). Özellikle kentleşme, iklim değişikliği, demografik baskılar ve dijitalleşme alanındaki yeni trendler daha fazla ve daha nitelikli kamu yatırımı talebini artırırken aynı zamanda ulusal ve bölgesel kamu maliyesi üzerinde etki yaratmaktadır. OECD ülkelerinde üretken net yatırım stokunun küresel krizin ortaya çıktığı 2008 öncesi hızda büyümesini sağlamak için mevcut brüt sabit yatırım harcamalarının yaklaşık %12 oranında artırılması gerektiği tahmin edilmektedir (OECD, 2019: 8).

Bu çalışmada, Türkiye özelinde genel yönetim bütçesinden yapılan kamu yatırım harcamalarının ekonomik büyümeye etkisi 2012Q1:2022Q3 dönemi için ARDL analizi ile araştırılmıştır. Çalışmanın giriş bölümü devamındaki birinci bölümde kamu yatırım harcamaları ve ekonomik büyümeye ilişkisine yönelik teorik çerçeve ve Türkiye’de kamu harcamalarının ekonomik sınıflandırma özelinde boyutları değerlendirilmiştir. İkinci bölümde literatürde kamu yatırım harcamaları ile ekonomik büyüme ilişkisini inceleyen ampirik literatür değerlendirilmiştir. Üçüncü bölümde veri seti, model ve yöntem; dördüncü bölümde ekonometrik analizler sonucunda ulaşılan bulgular ve sonuç bölümünde araştırma bulguları tartışılarak, öneriler sunulmuştur.

## 2. Teorik Çerçeve ve Türkiye’de Kamu Yatırım Harcamalarının Gelişimi

Kamu yatırımı, bir ekonominin tasarrufunu ve sermaye yatırımını azaltan tüketim malı olarak ifade edilir. Kamu yatırımlarının ekonomik büyüme üzerinde ikili etkisi vardır; olumlu ya da olumsuz bir etkisi olabilir. Başlangıçta, kamu yatırımları üretimde artışa neden olur, ülkenin çıktı ve istihdam düzeyini artırmasına yardımcı olur ve ülkenin ekonomik büyümesi hızlanmaya başlar (Rabnawaz ve Jafar, 2015: 1). Kamu kesimi tarafından altyapıya yönelik artan yatırımlar hem kısa hem de uzun dönemde ve özellikle ekonomik durgunluk dönemlerinde çıktının artmasına neden olur ve yüksek yatırım verimliliği sağlar (Serdaroğlu, 2016: 15). IMF (Uluslararası Para Fonu), kamu yatırımını “genel devlet brüt sabit sermaye oluşumu olarak ölçülür ve belirli bir dönem boyunca genel devlet (merkezi hükümet ve yerel yönetimler) tarafından edinilen sabit varlıkların toplam net değeri ile üretilmeyen varlıkların (örn. toprak altı varlıkları) değerlendirilmesindeki değişimleri içerir” şeklinde tanımlamıştır (IMF, 2015: 7). Kamu sermaye stoğu kamu yatırımının zaman içindeki birikmiş değeridir, kamu altyapısı ise kamu yatırımı tarafından yaratılan fiziksel varlıklar ağıdır. Bu sabit varlıklar, hem ekonomik altyapıyı (örneğin, otoyollar, havaalanları, yollar, demiryolları, su ve kanalizasyon sistemleri, kamu elektrik ve gaz tesisleri, boru hatları ve telekomünikasyon) hem de sosyal altyapıyı (örneğin, devlet okulları, hastaneler ve hapishaneler) içerir. Altyapı hacmi, yollar, elektrik, su, eğitim ve sağlık kurumları dahil olmak üzere temel altyapı varlıklarına hem erişim hem de kalite göstergeleri kullanılarak ölçülür (IMF, 2015: 7).

Ekonomi literatüründe kamu yatırımları ile ekonomik büyüme arasındaki ilişkiye yönelik iki temel yaklaşım vardır. Bu yaklaşımlardan Keynesyen görüş, kamu yatırımı ile özel yatırım arasındaki tamamlayıcılık (crowding in) yoluyla kamu yatırımının büyüme üzerindeki olumlu etkisine işaret etmektedir. Neoklasik teori ise, kamu yatırımlarının finansmanının bireyler ve firmalar üzerindeki doğrudan vergileri artırarak veya borçluluk düzeyini yükselterek elde edilebileceğini, bu durumun piyasa faiz oranını yükselteceği için özel sektörü dışlayıp (crowding out) büyümeyi negatif yönde etkileyeceğini varsaymaktadır (Bah ve Kpognon, 2021: 713). Keynes

tarafından öne sürülen yatırım çarpanı modeli teorisi milli geliri (ulusal çıktıyı) artırmak için yatırımların artırılması gerektiğini, yatırımlardaki artış ile bunun sonucunda milli gelirdeki artış arasındaki ilişkiyi açıklamaktadır (Nguyen ve Nguyen, 2021: 346).

Kamu harcamaları ekonomik açıdan etkileri dikkate alınarak reel (gerçek) harcamalar ve transfer harcaması olarak sınıflandırılmaktadır. Reel harcamalar, ekonomide milli gelir üzerinde doğrudan etkisi olacak nitelikte ve kamu kesiminin mal/hizmet alımına yönelik harcamalardır. Bu harcamalar niteliklerine göre cari nitelikte ve yatırım niteliğinde kamu harcamaları olarak sınıflandırılır. Bu harcamalar içinde yatırım harcamaları ekonomideki sermaye stoğunun gelişimini sağlayan, etkileri gelecek dönemlere yayılabilen nitelikte harcamalar olduğundan ekonomik büyüme üzerindeki etkileri uzun dönemlidir. Yatırım harcamaları altyapı, ulaştırma, büyük onarım, fabrika yapımı, makine-teçhizat alımı ve enerji gibi alanlara yönelik yapılan kamu harcamalarından oluşmaktadır (Öztürk, 2013: 101-102; Demirkılıç ve Yıldız, 2022: 11-12).

Türkiye’de 2021 yılından itibaren performans esaslı program bütçe sistemini kapsayan analitik bütçe sınıflandırması uygulanmaktadır ve bu sınıflandırma kamu harcamalarının programlar bazında sınıflandırılarak ekonomik, fonksiyonel, kurumsal ve finansman türü niteliğinde sınıflandırılmasını içermektedir (Strateji ve Bütçe Başkanlığı Bütçe Hazırlama Rehberi (BHR), 2021). Bu sınıflandırmada ekonomik sınıflandırma; “*Personel giderleri, sosyal güvenlik kurumlarına devlet primi giderleri, mal ve hizmet alım giderleri, faiz giderleri, cari transferler, sermaye giderleri, sermaye transferleri, borç verme ve yedek ödenekler*” olarak dokuz temel başlıkta I. düzey olarak sınıflandırılmaktadır (Strateji ve Bütçe Başkanlığı BHR, 2021: 245-297). Bu harcama türlerinden sermaye giderleri (yatırım harcamaları); “*mamul mal alımları, menkul sermaye üretim giderleri, gayri maddi hak alımları, gayrimenkul alımları ve kamulaştırması, gayrimenkul sermaye üretim giderleri, menkul malların büyük onarım giderleri, gayrimenkul büyük onarım giderleri, stok alımları*” kategorilerinden oluşmaktadır (Strateji ve Bütçe Başkanlığı BHR, 2021: 273-281).

5018 sayılı KMYKK<sup>1</sup> çerçevesinde, Türkiye’de genel yönetim kapsamındaki idarelerin bütçeleri; merkezi yönetim bütçesi, sosyal güvenlik kurumları bütçeleri, mahallî idareler bütçeleri olarak hazırlanır ve uygulanır (5018 say. KMYKK md.12). Bu çerçevede Türkiye’de genel yönetim bütçesi kapsamındaki kurumlar; Merkezi yönetim bütçesi kapsamındaki kurumlar (genel bütçeli idareler, özel bütçeli idareler ve düzenleyici denetleyici idareler), mahalli idareler (Belediyeler, il özel idareleri ve mahalli idare birlikleri) ve sosyal güvenlik kurumlarıdır (Meriç ve Bülbül, 2013: 48). Tablo 1’de 1999-2022 döneminde ekonomik sınıflandırma bazında tüm kamu kesimini kapsayan genel yönetim kapsamındaki kamu kurumlarının harcamalarının GSYH’ya oranı sunulmuştur.

<sup>1</sup> “5018 sayılı Kamu Mali Yönetimi ve Kontrol Kanunu”

**Tablo 1. Genel Devlet Toplam Harcamaları (GSYH'ya Oran %)**

Yıllar	Cari Harcamalar	Yatırım Harcamaları	Transfer Harcamaları	Toplam Harcamalar
1999	12.65	3.22	18.67	34.54
2000	12.10	3.32	<b>20.50</b>	35.92
2001	12.68	3.44	<b>25.39</b>	<b>41.51</b>
2002	13.49	3.53	<b>23.37</b>	<b>40.39</b>
2003	13.33	2.77	<b>21.90</b>	<b>38.00</b>
2004	13.04	2.33	18.74	34.11
2005	12.77	2.76	15.95	31.48
2006	13.87	2.82	15.16	31.85
2007	14.23	3.01	14.87	32.12
2008	14.86	3.22	14.69	32.78
2009	<b>16.77</b>	3.12	18.06	<b>37.96</b>
2010	16.09	3.22	16.90	36.20
2011	15.37	3.08	15.50	33.96
2012	15.67	3.15	15.99	34.80
2013	15.44	<b>3.61</b>	15.88	34.94
2014	15.31	3.26	15.59	34.16
2015	15.21	3.45	15.43	34.09
2016	<b>16.24</b>	<b>3.48</b>	16.09	35.81
2017	15.32	<b>3.67</b>	15.65	34.64
2018	15.82	<b>3.77</b>	15.72	35.31
2019	<b>16.53</b>	2.67	17.00	36.20
2020	<b>16.20</b>	2.58	17.57	36.36
2021	14.42	2.57	16.54	33.53
2022	13.42	2.97	16.37	32.76
<b>1999-2022 Ortalama</b>	<b>14.62</b>	<b>3.13</b>	<b>17.40</b>	<b>35.14</b>

**Kaynak.** T.C. Cumhurbaşkanlığı Strateji ve Bütçe Başkanlığı (2023), Gösterge ve İstatistikler – Temel Ekonomik Göstergeler – Bütçe verileri – Kamu Maliyesi Gerçekleşmeleri - Genel Devlet Toplam Gelir ve Harcamaları, Erişim adresi: [https://www.sbb.gov.tr/wp-content/uploads/2022/11/Genel\\_Devlet\\_Gelir\\_ve\\_Harcamaları-1999-2023.xls](https://www.sbb.gov.tr/wp-content/uploads/2022/11/Genel_Devlet_Gelir_ve_Harcamaları-1999-2023.xls).

Tablo 1'deki verilere göre; 1999-2022 döneminde GSYH'ya oranı ortalamaları genel kamu harcamalarında %35.14, cari harcamalarda %14.62, yatırım harcamalarında %3.13 ve transfer harcamalarında %17.40'tır. 1999-2022 döneminde genel kamu harcamalarının en yüksek olduğu yıllar özellikle ekonomik sorunların kamu harcamaları üzerinde artış yönlü baskı oluşturduğu 2001, 2002, 2003 ve 2009 yıllarıdır. Aynı dönemde transfer harcamaların en yüksek olduğu yıllar 2000, 2001, 2002 ve 2003 yılları; yatırım harcamaların en yüksek olduğu yıllar 2013, 2016, 2017 ve 2018 yılları; cari harcamaların en yüksek olduğu yıllar ise 2009, 2016, 2019 ve 2020 yıllarıdır.

### 3. Seçilmiş Ampirik Literatür İncelemesi

Kamu yatırımlarının ekonomik çıktı üzerindeki etkisine ilişkin ampirik literatürde yaygın olarak olumlu bir etkinin varlığı gözlemlenirken, tahminler döneme, ülkeye, sermaye ölçüsüne ve tahmin yöntemine göre farklılık göstermektedir. Benzer şekilde, kamu sermayesinin üretkenliği de zaman içinde değişebilir ve düşebilir. Kamu yatırımındaki herhangi bir artışın verimliliği, yatırımların finansmanı, finansman seçeneklerinin görece maliyeti ve faydaları ışığında değerlendirilmesi gerektiği belirtilmektedir (Jong ve ark., 2017: 3). Literatürde kamu yatırımlarının ekonomik büyüme ile ilişkisini araştırmak amacıyla yapılan çalışmalar ve ulaşılan sonuçları özet olarak sunulmuştur.

Kamu yatırımlarının üretkenliğine ilişkin ciddi araştırmalar, 1980'lerin sonlarında ve 1990'ların başlarında David Aschauer (1989) tarafından yapılan araştırma ile başlamıştır. Aschauer (1989) tarafından yapılan çalışmada kamu sermaye stokundaki %1'lik bir artışın toplam faktör verimliliğini %0,4 oranında artıracığı tahmin edilmiştir. Bu çalışmanın sonuçlarında Aschauer (1989) kamu sermayesinin getiri oranının özel sermayeninkinden birkaç kat daha yüksek olduğunu bulmuştur. Yine Aschauer (1990) kamu yatırımlarının özel yatırımlar üzerinde dışlama etkisine neden olup olmayacağına ilişkin yaptığı çalışmada, kamu sermaye stokundaki artışın özel sermaye birikiminde dışlama etkisinden ziyade tamamlayıcılık etkisi ile özel sermayenin getirisini yükselteceği sonucuna ulaşmış ve Aschauer (1989) çalışmasındaki sonuçlara benzer ampirik kanıtlar sunmuştur.

Deverajan ve ark. (1996), 1970-1990 yılları arasında 43 gelişmiş ve gelişmekte olan ülke örneğini kullanarak kamu harcamaları ile ekonomik büyüme arasındaki ilişkiyi araştırdıkları çalışmada, kamu yatırım harcamalarının gelişmekte olan ülkelerde ekonomik büyüme üzerinde olumlu bir etkiye sahipken, etkinin gelişmekte olan ülkeler için olumsuz olduğunu ortaya koymaktadır. Ramirez ve Nazmi (2003), 1983-1993 döneminde dokuz Latin Amerika ülkesinde hem kamu hem de özel yatırımın GSYH büyümesini olumlu etkilediği sonucunu elde etmiştir. Ayrıca, merkezi yönetim tüketim harcamalarının ise özel yatırımları ve ekonomik büyümeyi olumsuz etkilediği, eğitim ve sağlık alanındaki kamu harcamalarının özel sermaye oluşumu ve uzun vadeli ekonomik büyüme üzerinde pozitif bir etkiye sahip olduğu tespit edilmiştir.

Yılmaz ve Kaya (2005), 1975 ile 2003 döneminde Türkiye'de cari harcamaların ekonomik büyümeyi etkilemediğini, yatırım harcamalarının ise ekonomik büyümeyi pozitif yönde etkilediğini belirlemişlerdir. Le ve Suruga (2005), 1970-2001 dönemi için 105 gelişmekte olan ve gelişmiş ülkeden doğrudan yabancı yatırımlar, kamu yatırımları ve özel yatırımların ekonomik büyümeyi teşvik etmede önemli roller oynadığını, kamu yatırım dışı harcamalarının ise ekonomik büyümeyi olumlu yönde etkilemediğini tespit etmişlerdir. Ghani ve Din (2006), Pakistan ekonomisi bağlamında ekonomik büyüme sürecinde kamu yatırımlarının rolünü VAR modeli ile analiz ettikleri çalışmada, ekonomik büyümenin büyük ölçüde özel yatırım tarafından yönlendirildiğini ve kamu yatırım harcamaları ile kamu tüketim harcamalarının ekonomik büyüme üzerindeki etkilerinden güçlü bir çıkarımın yapılamayacağı sonucunu bulmuşlardır. Aytaç ve Güran (2010), Türkiye'de 1987-

2005 döneminde kamu harcama bileşenlerinin ekonomik büyümeye olan etkisini araştırdıkları çalışmada, yatırım harcamaları ve transfer harcamaları ile ekonomik büyüme arasında nedensellik ilişkisine rastlanmamıştır. Gül ve Yavuz (2011), 1963-2008 dönemi Türkiye’de yatırım harcamalarından ekonomik büyümeye doğru tek yönlü bir nedensellik ilişkisi tespit ederek Keynesyen yaklaşımı destekleyen sonuca ulaşmışlardır.

Rabnawaz ve Jafar (2015), Pakistan’da 1980-2009 dönemini kapsayan çalışmada kısa dönemde GSYH ile kamu yatırımları arasında pozitif bir ilişki olduğunu ve GSYH ile kamu yatırımları arasında çift yönlü nedensel bir ilişkinin varlığını tespit etmişlerdir. Mourougane ve ark. (2016), OECD ülkelerinde sabit faiz oranları ve kısa dönemde kamu yatırımlarında GSYH’nın %0,5’i oranında bir artışın büyük gelişmiş ülkelerde üretimi ortalama olarak ilk yılda %0,4 - %0,6 oranında ve uzun dönemde ise üretimi ortalama %1,8 oranında artış yönlü etkilediği tespit edilmiştir. Serdaroğlu (2016), Türkiye’de 1980-2013 döneminde kamu alt yapı yatırımlarının ekonomik büyümeyi desteklediğini, kamu kesimi sosyal alt yapı ve fiziki sermayenin Türkiye ekonomisinde çıktığı esnekliğinin (0,24) olduğunu, bu değer diğer OECD ülkelerine göre daha yüksek olduğu tespit edilmiştir. Abbas ve Masih (2017), 1980-2014 döneminde Güney Afrika’da kamu ve özel sektör yatırımlarının ekonomik büyümeyi artırmadaki rolünü araştırdıkları çalışmada, hem kamu hem de özel yatırımın ekonomik büyümeyi artırmada önemli bir rol oynadığını, ancak özel yatırımların kamu yatırımlarından görece daha büyük bir rol oynadığını belirlemişlerdir. Değer ve Receptoğlu (2018), Türkiye’de iller düzeyinde 2004-2014 döneminde kamu yatırımları ile yatırım teşviklerinin ekonomik büyüme üzerindeki etkisini araştırdıkları çalışmada, tüm illeri kapsayan panel genelinde kamu yatırım harcamaları ve yatırım teşviklerinden ekonomik büyümeye doğru tek yönlü nedensellik ilişkisi belirlemelerine rağmen illerin alt gruplarında bu etkinin farklılaştığını tespit etmişlerdir.

Makuyana ve Odhiambo (2018), Güney Afrika’da 1970-2017 döneminde özel yatırımların hem uzun dönem hem de kısa dönemde ekonomik büyüme üzerinde olumlu bir etkiye sahip olduğunu, kamu yatırımlarının ise uzun dönemde ekonomik büyüme üzerinde olumsuz bir etkiye sahip olduğunu ortaya koymaktadırlar. Bu çerçevede Güney Afrika’da ekonomik büyüme sürecinde özel yatırımların kamu yatırımlarından daha önemli olduğu vurgulanmaktadır. Bah ve Kpognon (2021) çalışmalarında 15 ECOWAS ülkesinde 1996-2016 döneminde uzun dönemde kamu yatırımlarının ekonomik büyüme üzerinde pozitif ve anlamlı bir etkiye sahip olduğunu, yönetim (siyasi istikrar ve hukukun üstünlüğü) kalitesinin iyileştirilmesi ve artan kamu yatırımlarının ekonomik büyümeyi desteklemek için tamamlayıcı unsur olduğu belirlenmiştir. Nguyen ve Nguyen (2021), Vietnam’da 63 il düzeyinde 2000-2020 döneminde uzun dönemde kamu yatırımlarının ekonomik büyüme üzerinde olumsuz bir etkisi olduğunu, yerli özel yatırım, doğrudan yabancı yatırım, ticari açıklık ve işgücünün ise ekonomik büyüme üzerinde olumlu etkilerinin olduğu sonucuna ulaşmışlardır. Araştırma sonuçlarında ekonomik büyüme üzerinde işgücü

en çok katkıda bulunurken, bunu ticarete açıklık, doğrudan yabancı yatırım ve yerli özel yatırım izlemektedir.

#### 4. Veri, Hipotez, Model ve Yöntem

Bu çalışma, kamu yatırım harcamalarının ekonomik büyüme üzerindeki etkisini Türkiye'nin 2012Q1:2022Q3 dönemini kapsayan çeyrek dönemlik verilerini kullanarak inceleyecek olup, çalışmada analiz edilecek olan model denklem 1'de sunulmaktadır ve araştırmanın temel hipotezi "*Kamu yatırım harcamaları ile ekonomik büyüme arasında doğrusal (pozitif) bir ilişki vardır.*" olarak belirlenmiştir.

$$\ln \text{GSYH} = \beta_0 + \beta_1 \ln \text{KYH} + \varepsilon_i \quad (1)$$

Denklem (1)'de, kamu yatırım harcamalarını temsil eden genel yönetim bütçesi yatırım harcamaları ( $\ln \text{KYH}$ ) bağımsız değişkeni, ekonomik büyümeyi temsil eden gayri safi yurtiçi hasıla değişkeni ise ( $\ln \text{GSYH}$ ) bağımlı değişkeni temsil etmektedir. Denklem (1)'de ifade edilen tüm serilerin logaritması ( $\ln$ ) alınmıştır. Çalışmanın veri seti olarak 5018 sayılı KMYKK<sup>2</sup> yürürlüğe girdiği dönem sonrası dikkate alınmış, genel yönetim bütçesi kamu yatırım harcamaları verisi üçer aylık dönemler itibarıyla 2012 yılından itibaren yayımlandığından dolayı başlangıç 2012Q1 dönemi ve son yayımlanan veri 2022 yılı 3.çeyrek dönemi olduğundan bitiş 2022Q3 dönemi olarak seçilmiştir. Araştırmada kullanılan değişkenlere ilişkin kullanılan seriler "*Tramo-Seat Yöntemi*" ile mevsimsellikten arındırılmıştır. Gayri safi yurtiçi hasıla ( $\ln \text{GSYH}$ ) değişkenine ilişkin veriler Türkiye Cumhuriyet Merkez Bankası elektronik veri dağıtım sisteminden (EVDS)<sup>3</sup>, genel yönetim bütçesinden yapılan yatırım harcamaları ( $\ln \text{KYH}$ ) değişkenine ilişkin veriler ise Hazine ve Maliye Bakanlığı Muhasebat Genel Müdürlüğü<sup>4</sup> genel yönetim mali istatistiklerinden elde edilmiştir.

Tablo 2'de sunulan korelasyon analizi sonucundaki korelasyon matrisi sonuçları kamu yatırım harcamaları ile ekonomik büyüme değişkeni arasında pozitif yönde bir ilişkiye işaret etmektedir. Çalışmanın analiz kısmı dört aşamadan oluşmaktadır. İlk adımda birim kök testleri (Augmented Dickey Fuller ve Phillips Perron) kullanılarak serilerin durağanlıkları test edilecek, devamında eşbütünleşme ilişkisi ARDL yöntemi ile incelenecektir. Eşbütünleşme ilişkisi tespit edildikten sonra tanısız testler ile uzun dönem ve kısa dönem ARDL (3, 1) modeli tahmin sonuçları sunulacaktır. Son olarak, Türkiye ekonomisi için 2012Q1:2022Q3 dönemine yönelik genel yönetim bütçesinden yapılan yatırım harcamaları ve ekonomik büyüme arasındaki nedensellik ilişkisi araştırılmıştır.

<sup>2</sup> "5018 sayılı Kamu Mali Yönetimi ve Kontrol Kanunu"

<sup>3</sup> Türkiye Cumhuriyet Merkez Bankası (2023). *Elektronik Veri Dağıtım Sistemi* [Veri Seti]. <https://evds2.tcmb.gov.tr/>.

<sup>4</sup> HMB Muhasebat Genel Müdürlüğü (2023). *Genel Yönetim Mali İstatistikleri, Genel Yönetim Bütçe İstatistikleri* [Veri Seti]. <https://muhasebat.hmb.gov.tr/genel-yonetim-butce-istatistikleri>.

**Tablo 2. Tanımlayıcı İstatistikler ve Korelasyon Matrisi**

	<i>ln GSYH</i>	<i>ln KYH</i>
Ortalama	8.922832	7.415576
Medyan	8.876541	7.438430
Maksimum	9.629992	8.057973
Minimum	8.526000	6.682434
Standart Sapma	0.261098	0.287688
Çarpıklık	0.810991	-0.097244
Basıklık	3.178528	3.066505
Gözlem	43	43
<i>Korelasyon Matrisi</i>		
<i>ln GSYH</i>	1	0.7792
<i>ln KYH</i>	0.7792	1

## 5. Ampirik Sonuçlar

Tablo 3'te sunulan birim kök testi sonuçlarına göre değişkenlerin ADF ve PP birim kök testi sonuçlarında genel yönetim bütçesinden yapılan kamu yatırım harcamaları (*ln KYH*) değişkeninin düzeyde, gayri safi yurt içi hasıla (*ln GSYH*) serisinin ise birincil farkta durağan hale geldiği tespit edilmiştir. Bu sonuca göre farklı durağanlık seviyelerine sahip serilerde eşbütünleşme ilişkisini belirlemek için ARDL modelinin tercih edilmesi uygundur.

**Tablo 3. Birim Kök Testi ve ARDL Sınır Testi Sonuçları**

Değişkenler	I (0)		I (1)	
	ADF Test İst.	PP Test İst.	ADF Test İst.	PP Test İst.
<i>ln GSYH</i>	2.212915 (0.9999)	3.190236 (1.0000)	-16.32776 (0.0000)	-5.825066 (0.0000)
<i>ln KYH</i>	-10.44301 (0.0000)	-4.334746 (0.0013)	-10.22851 (0.0000)	-19.57581 (0.0001)
Kd.%1	-3.621023	-3.596616	-3.615588	-3.600987
Kd.%5	-2.943427	-2.933158	-2.941145	-2.935001
Kd%10	-2.610263	-2.604867	-2.609066	-2.605836
<i>ARDL Sınır Testi Sonuçları</i>				
<b>Model: <math>ln GSYH = \beta_0 + \beta_1 ln KYH + \varepsilon_i</math></b>				
F İstatistiği	17.09019 ( <b>0.0000</b> )			
Model	ARDL (3, 1)			
Anlamlılık Düzeyi	<i>Kritik Değer</i>			
	<i>Alt Sınır</i>		<i>Üst Sınır</i>	
%1	4,94		5,58	
%2,5	4,18		4,79	
%5	3,62		4,16	
%10	3,02		3,51	

Değişkenler arasındaki uzun dönemli eşbütünlük ilişkisi olup olmadığını belirlemek için Pesaran ve ark. (2001) F-sınır testi sonuçlarında hesaplanan test istatistiğinin değerine göre " $H_0$ : Değişkenler arasında herhangi bir eşbütünlük ilişkisi yoktur" hipotezi sınanmaktadır (Serin ve Demir, 2023: 162-163). Tablo 3'te hesaplanmış olan F istatistik değeri (17,09019), %1 anlamlılık düzeyinde üst sınır (5,58) değerinin üzerinde olduğundan  $H_0$  hipotezi reddedilmiştir. ARDL (3, 1) modeli uzun dönem tahmin sonuçları ile tanısıl testlerin sonuçları tablo 4'te sunulmaktadır. Bu çalışmada oluşturulan (1) nolu eşitlik göz önünde bulundurularak uzun dönem katsayılarının tahmin edilmesi için (2) nolu eşitlikte belirtilen ARDL (m, n) modeli oluşturulmuştur.

$$\ln GSYH = \beta_0 + \sum_{i=1}^m \beta_{1i} \ln KYH_{t-1} + \varepsilon_i \quad (2)$$

**Tablo 4. ARDL (3, 1) Modeli Uzun Dönem Katsayıları ve Tanısal Test Sonuçları**

Bağımlı Değişken: $\ln GSYH$				
Değişkenler	Katsayı	t istatistiği (Olasılık)	Tanısal Testler	
$\ln KYH$	0.283649**	2.706829 (0.0105)	LM=1.1367 (0.333)*** BPG=8.85951 (0.1148)***	Ramsey= 0.7703 (0.447)*** JB=0.6166 (0.7346)***
C	-0.839238***	-3.644787 (0.0009)	ARCH LM= 0.2526 (0.618)*** Cusum (CusumQ) = S(S)	White Test= 1.1674 (0.3637)*** F- istatistiği=76.2112 (0.000)***

**Not:** \*\*\*, \*\* sırasıyla %1 ve %5 düzeyinde anlamlılığı göstermektedir. Tanısal testlerde olasılık değerleri parantez içindedir ve S kararlılığı gösterir.

Tablo 4'te sunulan ARDL (3, 1) modelinin uzun dönem tahmin sonuçları,  $\ln KYH$  değişkeni için %5 anlamlılık düzeyinde pozitifdir. Genel yönetim yatırım harcamalarındaki ( $\ln KYH$ ) meydana gelecek %1'lik değişim ekonomik büyüme ( $\ln GSYH$ ) üzerinde %0,28'lik pozitif yönlü bir değişime neden olmaktadır. Bu sonuçlar, Türkiye'de uzun dönemde kamu kesimi tarafından genel yönetim bütçesinden yapılan yatırım harcamalarının ekonomik büyümeyi olumlu yönde etkilediğini göstermektedir. Ayrıca tanısal test sonuçları; otokorelasyon olmadığını, hata terimlerinin normal dağılımlı olduğunu, değişen varyans sorunu olmadığını, model kurma hatası sorunu bulunmadığını, Cusum ve CusumQ test sonuçları %5 anlamlılık düzeyinde kararlı katsayılar aralığında olduğunu ve modelin tümüyle istatistiksel olarak anlamlı olduğunu göstermektedir. Kısa dönem katsayılarının tahmin edilmesi için (3) nolu eşitlikte belirtilen hata düzeltme modeli oluşturulmuştur.

$$\Delta \ln \text{GSYH} = \beta_0 + \sum_{i=1}^m \beta_{1i} \Delta \ln \text{KYH}_{t-1} + \beta_2 \text{ECM}_{t-1} + \varepsilon_i \quad (3)$$

**Tablo 5. ARDL (3, 1) Modeli Kısa Dönem Katsayıları**

Bağımlı Değişken: $\Delta \ln \text{GSYH}$		
Değişkenler	Katsayı	t istatistiği (Olasılık)
$\Delta (\ln \text{GSYH}(-1))$	-0.148358	-1.575659 (0.1244)
$\Delta (\ln \text{GSYH}(-2))$	-0.422964***	-4.271606 (0.0001)
$\Delta \ln \text{KYH}$	0.083603***	5.405439 (0.0000)
$\text{ECT}_{t-1}$	-0.128380***	7.367936 (0.0000)

**Not:** \*\*\*%1 düzeyinde anlamlılığı göstermektedir.

Tablo 5'te genel yönetim bütçesinden yapılan yatırım harcamalarının ekonomik büyüme üzerindeki etkisi kısa dönemde pozitif yönde bir işarete sahiptir ve hata düzeltme katsayısı ( $\text{ECT}_{t-1}$ ) negatif ve istatistiksel olarak anlamlıdır. Bu katsayının -0,128 ve istatistiksel olarak %1 düzeyinde anlamlı olması kısa dönem şoklarının etkisiyle oluşacak dengeden sapmaların sonraki dönemde %13'ünün düzeltilebileceğine işaret etmektedir.

**Tablo 6: Granger Nedensellik (Pairwise) Testi Sonuçları**

Nedensellik Yönü	Gecikme	Gözlem Sayısı	F-Değeri	P- Değeri
$\ln \text{KYH} \rightarrow \ln \text{GSYH}$	2	41	22.8568	0.0000***
$\ln \text{GSYH} \rightarrow \ln \text{KYH}$	2	41	29.9880	0.0000***

**Not:** \*\*\*%1 düzeyinde anlamlılığı göstermektedir.

Tablo 6'da Türkiye ekonomisi için 2012Q1:2022Q3 dönemine ilişkin kamu yatırım harcamaları ve ekonomik büyüme arasındaki nedensellik testi sonuçları verilmiştir. Nedensellik testi sonuçları genel yönetim bütçesinden yapılan yatırım harcamaları ve ekonomik büyüme arasında çift yönlü nedensellik ilişkisinin varlığına işaret etmektedir.

## 6. Sonuç

Literatür, kamu yatırımındaki artışın olumlu talep etkilerine sahip olduğunu ve kamu yatırım stokundaki artışın ekonominin potansiyel çıktısına katkıda bulunabileceğini öne sürmektedir. Bu yaygın görüş, tamamlayıcılık (crowding in) etkisiyle kamu yatırımlarının ekonomik büyüme üzerindeki olumlu etkisine işaret etmektedir. Ayrıca, literatürde sınırlı düzeyde de olsa kamu yatırımlarının vergi artışları veya kamu borçluluk düzeyini artırarak piyasa faiz oranlarını yükseltip özel sektör yatırımlarını dışlayacağı (crowding out) ve ekonomik büyümeyi negatif yönde etkilediğine ilişkin ampirik kanıtlara da ulaşılmıştır.

Bu çalışmada, Türkiye’de 2012Q1:2022Q3 dönemi için genel yönetim bütçesinden yapılan kamu yatırım harcamalarının ekonomik büyümeye etkisi ampirik olarak incelenmiştir. Öncelikle araştırma kapsamında kullanılan değişkenlerle ilgili ADF ve PP birim kök testleri uygulanmış ve birim kök testi sonuçlarında kamu yatırım harcamaları (*In KYH*) değişkeninin düzeyde, gayri safi yurt içi hasıla (*In GSYH*) değişkeninin ise birincil farkta durağan olduğu belirlenmiştir. Devamında oluşturulan ARDL(3,1) modelinde ARDL sınır testi uygulanmış ve seriler arasında uzun dönemli eşbütünleşme ilişkisinin var olduğu tespit edilmiştir. ARDL (3, 1) modelinin uzun dönem tahmin sonuçlarında genel yönetim yatırım harcamalarındaki (*In KYH*) meydana gelecek %1’lik değişimin ekonomik büyüme (*In GSYH*) üzerinde %0,28’lik pozitif yönlü bir değişime neden olduğu sonucuna ulaşılmıştır. Benzer şekilde kısa dönemde de genel yönetim bütçesinden yapılan yatırım harcamalarının ekonomik büyüme üzerindeki etkisi pozitif yönde belirlenmiştir. Son olarak Türkiye’de 2012Q1:2022Q3 dönemine ilişkin kamu yatırım harcamaları ve ekonomik büyüme arasındaki nedensellik ilişkisi çift yönlü olarak bulunmuştur. Analiz sonucunda ulaşılan bulgular Türkiye’de 2012Q1:2022Q3 döneminde tamamlayıcılık (*crowding in*) etkisiyle kamu yatırımlarının ekonomik büyüme üzerindeki olumlu etkisine işaret etmektedir. Araştırma sonuçları temel hipotezimiz olan “*Kamu yatırım harcamaları ile ekonomik büyüme arasında pozitif (doğrusal) bir ilişki vardır.*” hipotezini destekleyici yöndedir.

Araştırma bulguları kamu yatırım harcamalarına ilişkin politikalar ile ekonomik büyümeyi destekleyici ekonomi politikaları arasındaki ilişkiyi belirlemesi yönüyle önemlidir. Türkiye’de kamu yatırımlarının finansman maliyetlerinin düşük olduğu dönemlerde kamu kesiminde karar vericilerin ekonomik büyümeyi desteklemek için kamu yatırımlarını artırıcı politikalar uygulayabileceklerini göstermektedir. Bu durum, Türkiye ekonomisinde kamu yatırımlarının ekonomik büyümeye doğrudan katkısı ve özel sektörün üretken faaliyetlerinde artış sağlayarak hedeflenen verimlilik kazanımlarından faydalanmasını sağlayacaktır. Ayrıca, kamu yatırım politikalarının oluşturulmasında ekonomik, sosyal ve fiziki yatırım önceliklerinin belirlenmesi, kamu yatırım projelerinin iyileştirilmiş planlama, uygulama, izleme ve değerlendirme süreçlerinin geliştirilmesi, kamu yatırımlarının verimlilik ilkesi gözetilerek gerçekleştirilmesi ve kamu yatırımlarının bölgeler arası dengesizlikleri azaltmadaki rolünün dikkate alınması alternatif politika önerileri olarak düşünülmektedir.

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