Analysis of the Keynesian Saving Function in Turkish Economy: 1985-2021

Abdüsselam SAĞIN[1]

Abstract

The aim of this study is to test the Keynesian savings function for the Turkish economy. To achieve this goal, the fundamental savings function proposed by Keynes was utilized, and data from the years 1985 to 2021 were used for the Turkish economy. The determinants of savings in the model include GDP per capita, income tax rates, deposit interest rates, and inflation rate. The selected variables in the model are in line with the literature. Empirical analysis determined that the most suitable method is the Autoregressive Distributed Lag (ARDL) approach. Based on the conducted empirical analysis, an increase in GDP per capita and deposit interest rates leads to an increase in the amount of savings. On the other hand, an increase in tax rates and inflation rate reduces the amount of savings. According to the findings obtained from the study, the Keynesian savings function is applicable to the Turkish economy for the years 1985 to 2021.

Keywords: Keynesian Saving Theory, GDP per capita, Tax, Deposit Interest Rate, Inflation Rate, ARDL Modelling

Article Type

Research Article

Application Date

11.08.2023

Acceptance Date

03.09.2023

DOI

10.53306/klujfeas.1341504

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Keynesyen Tasarruf Fonksiyonu ve Türkiye Ekonomisi Analizi: 1985-2021

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Öz

Bu çalışmanın amacı Keynesyen tasarruf fonksiyonunu Türkiye ekonomisi için test etmektir. Bu amaçla Keynes'in temel tasarruf fonksiyonundan yararlanılmış ve Türkiye ekonomisinde 1985-2021 yılları arası veriler kullanılmıştır. Modelde tasarrufun belirleyicileri olarak kişi başına düşen milli gelir, gelir vergisi oranları, mevduat faiz oranı ve enflasyon oranı seçilmiştir. Modelde seçilen değişkenler literatür ile uyumludur. Ampirik analiz olarak en uygun yöntemin ARDL olduğu tespit edilmiştir. Yapılan ampirik analiz sonucunda kişi başına düşen milli gelir ve mevduat faiz oranlarının artışı, tasarruf edilen miktarı arttırmaktadır. Diğer taraftan vergi oranlarının artması ve enflasyonun yükselmesi ise tasarruf miktarını azaltmaktadır. Çalışma sonucunda elde edilen bulgulara göre Keynesyen tasarruf fonksiyonu 1985-2021 yılları arası Türkiye ekonomisi için geçerlidir.

Anahtar sözcükler: Keynesyen Tasarruf Modeli, Kişi başına düşen milli gelir, Vergi Oranı, Mevduat Faiz Oranı, Enflasyon Oranı, ARDL Modeli

Makale Türü

Araştırma Makalesi

Başvuru Tarihi

11.08.2023

Kabul Tarihi

03.09.2023

DOI

10.53306/klujfeas.1341504

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Introduction

Economics is a multifaceted and constantly evolving field of study that examines the allocation, production, distribution, and consumption of resources in society. In this regard, saving is a crucial element of the economy, exerting a significant impact on both individual consumers and the overall economic state of society. Economic theories offer various instruments to account for how savings interact with factors such as income levels, interest rates, inflation, and expected income, and how these factors influence economic activity. This paper centres on the Keynesian saving function, which is a significant area of economic theory. This concept describes how savings can change with income levels and the impact it has on economic activity according to John Maynard Keynes. The Keynesian saving function represents not only the inclination of individuals to save a proportion of their income but also has implications for aggregate demand and the level of national income.

This study aims to investigate the impact and applicability of the Keynesian saving model on the Turkish economy from 1984 to 2021. Keynesian theory is centered on the effect of income levels on individual consumption and savings decisions. This framework considers the economic changes, policy preferences, and global influences that the Turkish economy underwent during this period to facilitate an informed understanding of the impact of the Keynesian savings model on Turkey. Saving is a crucial aspect for economies. Especially with regards to financing investment, savings constitute an important accumulation. Economies without a sufficient amount of saving rely on foreign sources. External sources of finance are risky because of their volatility and speculative nature. Moreover, external sources involve interest payments. Considering all these factors, savings are a significant macroeconomic variable, especially for developing economies. The study is composed of five sections: introduction, theoretical background, literature review, econometric application, and conclusion. Following the introductory section, we provide a basic explanation of the concept of Keynesian savings. Next, there is a summary of the pertinent literature as well as the empirical model chosen for the analysis, based on the obtained data, followed by an econometric analysis. The study ends with an evaluation and interpretation of the findings, presented in the conclusion section.

Theoretical Background

The concept of the Keynesian saving function is used in economic theory to explain how individuals tend to save, based on their income levels. This function was one of the fundamental ideas introduced by John Maynard Keynes in his book "The General Theory" (Keynes, 1936). Keynes proposed that as incomes rise, consumers tend to increase their savings. However, the Keynesian saving function (Mankiw, 2020) is used to analyze the extent to which the saving rate changes as income increases and the factors influencing it.

$$S=Y-C$$

Keynesian saving function represents a relationship between disposable income level and savings. This function is used to model how much saving will occur with an increase in disposable income.

Generally, the Keynesian saving function is represented as follows:

$S=-a+bY$

Here:

• S represents the amount of saving.

• Y represents the disposable income level.

• The function uses a and b as parameters, where the term -a denotes the initial savings level. This concept shows that individuals can cover their basic expenses even with no income. The term bY measures the increase in savings as income rises. The parameter b shows the saving increase when income increases by one unit. As per Oster, Case and Fair 2010, when $b > 0$, savings increase with income.

The mathematical equation models how individuals tend to save based on their income level. Nevertheless, saving decisions in the real world are frequently influenced by many factors and are often more intricate. This equation is a fundamental model. The Keynesian saving function aims to determine how the rate of saving changes as income increases. This is crucial for comprehending how individuals react to income increases and their impact on aggregate demand in the economy. Typically, the rate of saving increases with higher income levels, but the rate of increase depends on the marginal propensity to save. Other factors that influence saving include:

Income level: Keynes believed that as income increases, individuals tend to save more. This means that some part of the income increase will be saved instead of being spent. However, this relationship is not exactly proportional. Keynes explained this phenomenon with the concept of the 'marginal propensity to consume'. The marginal propensity to consume is an indication of how much of each unit of income increase will be spent. Keynes noted that as the income increases, the marginal propensity to consume drops, resulting in part of the increased income remaining as savings. This perspective highlights the influence of consumer behaviour, and consequently, the total demand, on economic development and income levels. If there is a substantial amount of saving from the increase in income, it could reduce demand and potentially lead to a slowdown in economic activity. As per the Keynesian theory, augmenting government expenditure and stimulating income growth can aid in resolving economic crises and recessions (Krugman and Wells, 2015).

The interest rate: According to Keynes, interest rates play a pivotal role in balancing between saving and investment. Interest rates act as a mechanism for balancing savings and investments. Keynes (1937) states that interest rates impact the balance between savings and investments. Low interest rates reduce the appeal of saving but may improve investment attractiveness. This has the potential to stimulate economic growth, as low interest rates reduce the cost of financing investments and encourage firms to invest more. Conversely, high interest rates can increase the appeal of saving by offering higher returns. High interest rates can increase the cost of investment, reducing firms' inclination to invest and slowing economic activity. According to Keynes, to stimulate spending and investment during

economic downturns accompanied by low demand and unemployment, it is advisable to lower interest rates, sometimes close to zero (Hicks, 1936; Schumpeter, 1936).

Economic Expectations: As per Keynes, economic expectations significantly impact the spending and saving behavior of individuals. The decisions related to spending and saving by individuals are based on various factors such as future income and job security. When individuals anticipate uncertain future economic conditions with high risks of unemployment, it could lead to an increase in their propensity to save. In such scenarios, individuals may prefer to save more to safeguard themselves against possible future uncertainties (de Carvalho, 2015). This could result in a decrease in demand in the economy, leading to lower economic activity. On the contrary, when people anticipate favourable economic conditions or improved job security in the future, they may tend to spend more. In such situations, individuals may choose to spend more as they expect higher future incomes. This, in turn, can stimulate economic growth. Keynes argued that in times of economic uncertainty, increased individual savings can result in decreased demand and economic downturn. Thus, policymakers must decrease economic uncertainty and enhance positive prospects for the future to stimulate spending (Wärneryd, 1989). To sum up, economic expectations significantly influence people's decisions to spend or save money. Expectations regarding future economic conditions held by individuals can impact overall demand and, thus, the level of economic activity.

Tax policies: Tax policies have the potential to influence individuals' saving decisions. Tax reductions or incentives may promote saving. As per Keynes, reduced tax rates result in higher disposable income for households, which can lead to an increase in savings. In simpler words, individuals may intend to allocate a portion of their earnings towards savings. (Collier, 2006). Nevertheless, although tax reduction may encourage saving, it may pose a challenge in financing public spending. This may result in a decrease in public expenditure which, in turn, could reduce aggregate demand. It is therefore important to strike a balance between tax rates and the financing of public services (Pressman, 1997).

Inflation: Nominal interest rates generally rise with increasing inflation. This increase, however, may be slower than the rate of inflation. Consequently, it results in diminishing real interest rates. As per Keynes, when real interest rates decrease in times of high inflation, individuals may choose to spend instead of saving. This is because the actual returns on monetary assets decrease. Additionally, anticipations of future inflation may also affect saving behaviour. Should individuals anticipate higher inflation rates in the future, saving could become less appealing. Individuals may choose to save less since the value of their savings could decrease over time. Individuals may prefer to save less if they anticipate having less purchasing power in the future (Humphrey, 1981).

Financial Obligations: Financial obligations such as debts, loans, and commitments can also impact one's decision to save. People with significant debt may have to allocate some of their earnings to pay off their debt, resulting in lower savings. Debt, especially those with a high interest rate, can restrict a person's capacity to save money. Substantial credit card debt or loan repayments may demand individuals to spend a portion of their income on repaying debts, lowering their ability to save. Debt can decrease the will to save and harm people's

financial security in the future. Furthermore, insufficient individual or societal financial knowledge can hinder the ability to forecast forthcoming financial requirements, lowering the propensity to save. Improving financial literacy can equip individuals with better skills to prepare for future financial challenges (de Carvalho, 2012).

Demographic factors: Demographic factors such as age, family size and marital status can also influence saving behaviors. For example, larger family sizes may lead to higher levels of saving.

In summary, the Keynesian saving function highlights the influence of various factors on individuals' saving decisions. These factors shape individuals' propensity to consume and save, while at the same time affecting the overall level of demand in the economy. It is therefore important to take these factors into account when designing economic policy.

Literature Review

Numerous empirical studies have modelled and analyzed Keynesian economic theory over time, creating a vast body of literature. This study analyzes the impact of income, interest rates, inflation, and tax rates on the concept of savings in Keynesian economics. This literature section provides a summary of the relevant studies. This literature section will only include studies analyzing the concept of savings in the Turkish economy, since this study analyzes the Turkish economy.

Çinko (2019) found a positive relationship between GDP and savings in a study that compared the Turkish economy with the BRICS countries. In their 2012 study, Çolak and Öztürkler observed that income level, especially for the high-income group, is the most influential variable on savings. In their study analyzing the saving behaviour of different income groups, Şengür and Taban found that although the amount of savings varied across income groups, income still influenced savings for all groups. Zengin, Yüksel, and Kartal's (2018) survey-based study also discovered a positive correlation between income level and savings. These studies indicate that as income increases, people are more inclined to save money.

Various examples in the literature, such as Fry (1979), Rittenberg (1991), Çağlayan (2006), Demirci (2019), Afşar (2007), Özlale and Karakurt (2012), Matur, Sabuncu, and Bahçeci (2012), and Uçgun (2017), reveal that higher interest rates result in increased savings in the Turkish economy. Nonetheless, some studies in the literature, such as those by Çakmak (2004), Duzgun (2009), and Ozcan, Gunay and Ertac (2012), have discovered no association or even a negative correlation between interest rates and savings.

The correlation between inflation rates and savings is a well-researched area in the literature. Research findings regarding this matter are inconclusive. For instance, in a recent study, Okşak and Özen (2020) found that there exists a positive correlation between inflation and savings in the short run, however in the long run, this relationship turns negative. Conversely, studies conducted by Celasun and Tansel (1993) and Ozcan et al. (2012) suggest that inflation has a positive impact on saving.

Sağdiç and Sandalci's (2020) research into the impact of tax rates on savings revealed that direct taxes have a negative effect on long-term savings, while indirect taxes have a positive

effect. Değirmen and Şengönül (2012) established no appreciable connection between the two variables. Nevertheless, Çevik (2015) ascertained that augmented income taxes decrease long-term saving.

Data Set and Methodology

The study utilises yearly data for the Turkish economy ranging from 1985 to 2021. Variables selected comprise of GDP per capita, deposit interest rate, inflation rate, personal income tax, and savings to GDP ratio, based on the Keynesian savings function and commonly used variables in existing literature. The selection of the aforementioned variables is based on the Keynesian savings function and the usage of such variables in previous academic literature. Data was retrieved from the World Bank's WDI database.

To conduct the econometric analysis, the most suitable approach was determined to be the Auto Regressive Distributed Lag (ARDL) model. The ARDL model considers the partial adjustment process and long-run disequilibrium in the data. The model incorporates lagged values of both the dependent and independent variables. This feature allows for separate analyses of their short-run and long-run effects.

The ARDL model was originally developed by Pesaran, Shin, and Smith in 2001. A method was developed that enables carrying out cointegration analysis despite the presence of weak stationarity requirements and structural breaks in time series data. Their paper, "Bounds Testing Approaches to the Analysis of Level Relationships" provided a framework to explore short-run and long-run relationships and made a noteworthy contribution to the literature. Narayan and Popp further developed the ARDL model in 2010, extending Pesaran and Shin's approach. The ARDL approach by Pesaran and Shin has been recognised for its flexibility in accommodating different degrees of stationarity and structural breaks in time-series data. It has become an important tool in analysing short-term and long-term interactions, conducting cointegration analysis, and predicting dynamic regression models in economic research.

The parameters p, q, and d determine the lagged terms and transformations to be included in the ARDL model. They indicate the number of previous time periods and the extent to which transformations are employed.

The parameter p, representing lagged orders, determines how many past values of the dependent and independent variables will be considered in the model. The 'p' parameter plays a crucial role in capturing the impact of past periods and should be determined based on theoretical foundations.

The 'q' parameter, which refers to the error correction term, determines the number of past values that are related to the dependent and independent variables: It is essential to determine the 'q' parameter as it governs the relationship between the past values of the error correction term and the dependent and independent variables. The 'q' parameter is critical in capturing the long-run equilibrium represented by the process of cointegration. The model is also referred to as the Error Correction Model (ECM) and it is used to analyze long-term disequilibrium.

The parameter 'd' represents the order of integration: It determines the degree of differencing that is applied to the variables. The parameter 'd' is used to correct the statistical properties of time series data, thereby achieving a stable relationship. It is crucial in cases where differencing is required to achieve stationarity, as suggested by Narayan and Popp (2010) and Pesaran et al. (2001).

The mathematical formulation of the ARDL model demonstrates the combination of dependent and independent variables and construction of the model. This formulation presents a regression equation and offers the essential analytical framework.

The mathematical formulation of the ARDL (p, q, d) model is expressed below:

$$Yt=\beta 0+\beta 1Yt-1+\beta 2Yt-2+...+\beta pYt-p+\gamma Xt-1+\delta Xt-2+...+\delta pXt-q+\alpha \Delta Yt-1+\theta \Delta Xt-1+\varepsilon tYt=\beta 0+\beta 1Yt-1+\beta 2Yt-2+...+\beta pYt-p+\gamma Xt-1+\delta Xt-2+...+\delta pXt-q+\alpha \Delta Yt-1+\theta \Delta Xt-1+\varepsilon t$$

Here:

- Yt represents the dependent variable,
- Xt represents the independent variable,
- p is the number of lagged terms in the dependent variable in the model,
- q is the number of lagged terms in the independent variables in the model,
- d is the differencing order of the series,
- β represents the coefficients,
- γ and δ represent the coefficients of lagged independent variables,
- α and θ represent the difference coefficients,
- εt represents the error term.

We apply the ARDL method – the selected approach – by conducting a stationarity analysis on the data and determining its degree. Next, we determine the appropriate number of lags to make model predictions. Following the prediction, we analyse the obtained coefficients and significance levels and conduct a cointegration analysis. Finally, we interpret the obtained results and present the final analysis.

Findings

The section initially provides descriptive statistics for the variables, followed by an exposition of the outcomes of the unit root tests. Next, the findings of the ARDL bounds test are presented and their long-term implications are elucidated.

Table 1: Descriptive Statistics

Variable		Obsv.	Mean	Med.	Maks.	Min.	Std.D.	Source
Gross Domestic Saving (% of GDP')	SAVINGS	37	3.209	3.209	3.649	2.832	0.183	WB, WDI
GDP per capita	GDP	37	8.809	8.754	9.499	8.277	0.360	WB, WDI
Deposit Interest Rate (%)	INTEREST	37	3.307	3.586	4.656	1.833	0.948	WB, WDI
Inflation (Annual %)	INFLATION	37	3.419	3.416	4.475	1.792	0.720	WB, WDI
Tax on Personel Income	TAX	37	1.386	1.335	1.740	1.099	0.184	WB, WDI

Note: The natural logarithm of all variables used in the study has been taken.

Table 2: ADF Unit Root Test Results

Variable	Level		1st Diff.	
	Intercept	Intercept&Trend	Intercept	Intercept&Trend
SAVINGS	-2.383	-2.194	-8.596***	-8.843***
GDP	1.0172	-2.841	-6.462***	-6.619***
INFLATION	-1.277	-1.471	-6.020***	-5.959***
INTEREST	-2.383	-3.248*	-5.804***	-6.116***
TAX	-2.694*	-3.091	-4.945***	-4.884***

*Note: ***, ** and * indicate significance at the 1%, 5% and 10% levels, respectively.*

Table 3: PP Unit Root Test Results

Variable	Level		1st Diff.	
	Intercept	Intercept&Trend	Intercept	Intercept&Trend
SAVINGS	-2.062	-1.835	-8.607***	-9.068***
GDP	1.704	-2.862	-6.563***	-7.522***
INFLATION	-1.296	-1.538	-6.010***	-5.948***
INTEREST	-2.430	-3.349*	-5.800***	-6.116***
TAX	-1.875	-2.453	-4.952***	-4.891***

*Note: ***, ** and * indicate significance at the 1%, 5% and 10% levels, respectively.*

Table 4: KPSS Unit Root Test Results

Variable	Level		1st Diff.	
	Intercept	Intercept&Trend	Intercept	Intercept&Trend
SAVINGS	0.173*	0.168**	0.189***	0.044***
GDP	0.827	0.202**	0.261***	0.062***
INFLATION	0.561	0.109***	0.128***	0.127***
INTEREST	0.270*	0.178	0.376***	0.161***
TAX	0.357	0.068***	0.064***	0.063***

*Note: ***, ** and * indicate significance at the 1%, 5% and 10% levels, respectively.*

According to the results of the ADF, PP and KPSS unit root tests, the most appropriate model for our study has been identified as the Autoregressive Distributed Lag (ARDL) model. Therefore, within this framework, we will use the ARDL model in our study.

Table 5: ARDL Bound Test

Model	Lag	F-statistic	Critical Value %5		Critical Value %1	
			I(0)	*I*(I)	*I*(0)	*I*(I)
F(Savings $_{(M-D)}$ | GDP, Inflation, Interest, Tax)	(2, 1, 0, 1, 0)	9.421***	2.56	3.49	3.29	4.37

*Note: ***, ** and * indicate significance at the 1%, 5% and 10% levels, respectively.*

Table 6: Long Run Results

Dependant Variable: SAVINGS$_{(M-D)}$	Long Run Coefficents
Variables	
GDP	**1.474*** **
Inflation	**-0.610*** **
Interest	**1.301*** **
Tax	**-0.507** **
C	**-1,740*** **
Diagnostic Test	***P value***
χ^2 *(Serial)*	**0,70**
χ^2 *(Arch)*	**0,86**
χ^2 *(Normal)*	**0,95**
χ^2 *(Ramsey Test)*	**0,67**
CUSUM	**Stable**
CUSUMSQ	**Stable**

*Note: ***, ** and * indicate significance at the 1%, 5% and 10% levels, respectively.*

The empirical analysis revealed that an upsurge in GDP per capita and interest rates during this period led to an increase in savings for the Turkish economy. An increase of 1% in GDP

per capita resulted in 1.47% increase in saving. This suggests that households tend to save more as the economy grows and income rises. This also suggests that individuals are more willing to save in order to secure their future income. Likewise, a 1% increase in deposit interest rates results in a 1.3% rise in saving. This result shows that higher interest rate can make saving more profitable, and individuals can earn more by holding their money in the bank. These findings align with the fundamental theoretical principles of the Keynesian model. In conclusion, based on the available data, an increase in GDP per capita and an increase in interest rates contribute to an increase in savings in the Turkish economy. These findings can help economic policy makers and investors to understand the factors influencing savings behaviour and support policy decisions aimed at ensuring economic stability.

On the other hand, tax rates and inflation have an adverse effect on the saving level. Put differently, a rise in tax rates and inflation causes a reduction in the amount of saving within the economy. During the review period, a 1% rise in tax rates resulted in a saving reduction of 0.5% in the Turkish economy, while a 1% growth in the inflation rate led to a saving decrease of 0.6%. Likewise, the observation that inflation has an adverse effect on savings is consistent with economic intuition. Inflation erodes the purchasing power of money over time. As the general price level increases, the real value of savings diminishes, leading to a decrease in the amount of goods and services that can be purchased with the same amount of money. The empirical finding that a 1% growth in the inflation rate is associated with a 0.6% decrease in savings highlights the importance of maintaining stable prices to encourage a culture of saving among the population.

The reference to the Keynesian saving theory adds theoretical support to the findings. The Keynesian perspective emphasizes the role of aggregate demand and consumer behavior in shaping the economy. The observation that changes in tax rates and inflation influence saving levels aligns with the notion that these factors can impact households' willingness and ability to save. The applicability of the Keynesian consumption function to the Turkish economy from 1985 to 2021 suggests that the Turkish consumer behavior is sensitive to shifts in economic variables and government policies, reinforcing the notion that macroeconomic factors play a significant role in shaping individual financial decisions. The analysis results demonstrate an evident correlation between tax rates, inflation and savings levels. It appears that the increase of tax rates can hamper individuals and households from saving, due to a negative relationship between tax rates and saving. As tax rates rise, disposable income reduction may lead to decreased ability to save. The study found that, during the reviewed period, a rise in taxes by 1% resulted in a decrease in savings of 0.5% within the Turkish economy, highlighting the sensitivity of saving behaviour to alterations in tax policies. In conclusion, the study of tax rates, inflation, and their effects on savings patterns yields significant implications for policymakers and economists in developing effective economic policies. By comprehending the intricate relationships between these factors, one can formulate strategies that promote higher savings rates, sustain economic stability, and avert potentially detrimental impacts of taxation and inflation on households' financial health.

Conclusion

This study examined the applicability of the Keynesian saving function in the context of the Turkish economy, focusing on data from 1985 to 2021. Following Keynesian economic theory, the research aimed to identify the factors that affect savings levels, with a focus on GDP per capita and tax rates. The model used also included commonly addressed control variables in the existing literature, such as interest rates and inflation.

The empirical analysis produced significant results that reveal the dynamics of savings behaviour in the Turkish economy during the specified time period. In particular, it was found that increases in GDP per capita and interest rates had a positive influence on savings. Notably, an increase of 1% in GDP per capita resulted in a significant increase of 1.47% in savings, suggesting a correlation between increased individual prosperity and a propensity to save. Similarly, a 1% increase in deposit interest rates led to a noteworthy 1.3% increase in savings, indicating that favorable interest rate conditions incentivize saving behavior. These results are in line with the fundamental principles of the Keynesian economic theory, which suggests that changes in macroeconomic factors can significantly affect the propensity of consumers to save.

Conversely, the analysis revealed a contrasting narrative when considering tax rates and inflation. It was found that both increases in tax rates and inflationary pressures have a negative impact on savings levels. This discovery emphasises the fact that increased taxation diminishes disposable income available for saving, which ultimately results in a decrease in overall savings. The correlation observed in the study showed that a 1% increase in tax rates was accompanied by a significant 0.5% decrease in savings in the Turkish economy. Similarly, a 1% increase in inflation rates resulted in a notable 0.6% drop in savings. These findings support the fundamental principles of Keynesian economics, which suggest that factors like taxation and inflation have a bearing on customer behaviour, eventually affecting savings.

In light of these findings, the study infers that the Keynesian consumption function accurately describes the behaviour of the Turkish economy throughout the studied period. The observed interactions among GDP per capita, interest rates, tax rates, and inflation in Turkey from 1985 to 2021 are in line with the fundamental principles of the Keynesian model. This suggests that the model effectively explains the relationship between economic variables and savings choices in the Turkish context. This insight has significant implications for policymakers and economists, highlighting the need to effectively manage these variables in order to promote healthy saving habits and enhance overall economic stability.

Ethical Statement Information of the Article Titled As ""Analysis of the Keynesian Saving Function in Turkish Economy: 1985-2021"	
	This study has been prepared in accordance with the values of "Research and Publication Ethics" and checked in a plagiarism control software. All responsibility of the article belongs to the author(s).
Acknowledgement	There is not any.
Conflict of Interest Statement	There is not any.
Author Contributions	The author prepared the article.
Support	There is not any.
Ethics Committee Certificate Of Approval	Ethics Committee approval is not required.
Scale Permission	Scale permission is not required.

References

Afşar, A. (2007). Finansal Gelişme İle Ekonomik Büyüme Arasındaki İlişki. *Muhasebe ve Finansman Dergisi,* (36), 188-98.

Asimakopulos, A. (1986). Finance, Liquidity, Saving, And İnvestment. *Journal of Post Keynesian Economics, 9*(1), 79-90.

de Carvalho, F. J. C. (2012). Aggregate Savings, Finance And İnvestment, *European Journal of Economics and Economic Policies, 9*(2), 197-213.

de Carvalho, F J. C. (2015). Keynes On Expectations, Uncertainty And Defensive Behavior. *Brazilian Keynesian Review, 1*(1), 44-54.

Celasun, M., ve Aysit T. (1993). Distributional Effects And Saving-İnvestment Behaviour İn A Liberalizing Economy: The Case Of Turkey. *METU Studies in Development, 20*(3), 269-98.

Collier, P. (2006). "War and Military Expenditure in Developing Countries and Their Consequences for Development". *The Economics of Peace and Security Journal* 1(1), 4.

Çağlayan, E. (2006). "Enflasyon, faiz oranı ve büyümenin yurtiçi tasarruflar üzerindeki etkileri". *Marmara Üniversitesi İktisadi ve İdari Bilimler Dergisi* 21(1), 423-38.

Çakmak, H. K. (2004). Finansal Serbestleşmenin Tasarruf Kararlarına Etkisi: Türkiye Örneği. *Hacettepe Üniversitesi İktisadi ve İdari Bilimler Fakültesi Dergisi, 22*(2), 1-15.

Çevİk, S. (2015). Domestic Saving and Tax Structure: Evidence from Turkey. *Sosyoekonomi 23*(23), 87-112. doi: 10.17233/se.48977.

Çinko, L. 2019. Brics Ülkeleri ile Türkiye'de Tasarruf Davranışlarını Belirleyen Faktörler. *Sosyal Bilimler Araştırma Dergisi, 8*(4), 98-112.

Çolak, Ö. F, ve Harun Ö. (2012). Tasarrufun Belirleyicileri: Küresel tasarruf Eğiliminde Değişim Ve Türkiye'de Hanehalkı Tasarruf Eğiliminin Analizi. *Bankacılar Dergisi, 82*, 3-44.

Değirmen, S., ve Ahmet Ş. (2012). *Türkiye'de Net Tasarruf-Yatırım Açığının Belirleyicileri*. Discussion Paper.

Demirci, O. (2019). Türkiye'de Mali Derinlik, Faiz, Tasarruf İlişkisi ve Politika Uygulamaları (Basılmamış Yüksek Lisans Tezi), İnönü Üniversitesi Sosyal Bilimler Enstitüsü, Malatya.

Duzgun, R. (2009). Determinants of Private Saving in Turkey. *Erciyes University Journal of Faculty of Economics and Administrative Sciences,* 32, 173-89.

Fry, M. J. (1979). The Cost Of Fınancıal Repressıon In Turkey/Le Cout De La Repressıon Fınancière En Turquıe. *Savings and Development,* 127-35.

Hicks, J. R. (1936). Keynes' Theory of Employment. *The Economic Journal, 46*(182), 238. doi: 10.2307/2225227.

Humphrey, T. M. (1981). Keynes on Inflation. *FRB Richmond Economic Review, 67*(1), 3-13.

Keynes, J. M. (1936). *İstihdam, Para ve Faizin Genel Teorisi*, (Çev. Baltacıgil A.). İstanbul: Liberus Yayınları.

Keynes, J. M. (1937). The General Theory Of Employment. *The Quarterly Journal Of Economics, 51*(2), 209-23.

Krugman, P. ve Robin W. (2015). *Macroeconomics* 4th ed.. Duffield, UK: Worth Publishing.

Mankiw, N. G. (2020). *Principles of macroeconomics*. Boston, Massachusetts, USA: Cengage Publishing.

Matur, E. P., Ali S., ve Sema B. (2012). Determinants Of Private Saving And İnteraction Between Public & Private Savings İn Turkey. *Topics in Middle Eastern and North African Economies, 14*.

Narayan, P. K., ve Stephan P. (2010). A New Unit Root Test With Two Structural Breaks İn Level And Slope At Unknown Time. *Journal of Applied Statistics, 37*(9), 1425-38.

Okşak, Y. ve Eda Ö. (2020). Tasarruf Ve Enflasyon İlişkisi Türkiye İçin Bir Eş-Bütünleşme Analizi. *Manisa Celal Bayar Üniversitesi Sosyal Bilimler Dergisi, 18*(3), 353-69.

Oster, S. M., Karl E. C., ve Ray C. F. (2010). *Ekonominin İlkeleri*, (Çev. Deliktaş E., Karadağ M., Güçlü M.). Ankara: Palme Yayıncılık.

Ozcan, K. M., Asli G. ve Seda E. (2012). Macro And Socioeconomic Determinants Of Turkish Private Savings. *Journal of Economic Cooperation and Development, 33*(2), 93-130.

Özlale, Ü., ve Alper K. (2012). Türkiye'de Tasarruf Açığının Nedenleri ve Kapatılması İçin Politika Önerileri. *Bankacılar Dergisi, 83*(2).

Pesaran, M. H, Yongcheol S, ve Richard J. S. (2001). Bounds Testing Approaches To The Analysis Of Level Relationships. *Journal of Applied Econometrics, 16*(3), 289-326.

Pressman, S. (1997). Consumption, İncome Distribution And Taxation: Keynes' Fiscal Policy. *Journal of Income Distribution, 7*(1), 29-44.

Rittenberg, L. (1991). Investment Spending And İnterest Rate Policy: The Case Of Financial Liberalisation İn Turkey. *The Journal of Development Studies, 27*(2), 151-67.

Sağdıç, E. N., ve Sandalcı İ. (2020). Vergi Yapısının Yurt İçi Tasarruflar Üzerindeki Etkisi: Türkiye'den İller Düzeyinde Bir Kanıt. *Maliye Dergisi*, 179. 213-239.

Schumpeter, J. A. (1936). [Review of The General Theory of Employment, Interest and Money., by J. M. Keynes]. Journal of the American Statistical Association, 31(196), 791–795. https://doi.org/10.2307/2278703

Şengür, M., ve Sami T. (2016). Gelir Dağılımı-Tasarruf İlişkisi: Türkiye'de Hanehalkı Gelir Türünün Tasarruflar Üzerindeki Etkisi. *Anadolu Üniversitesi Sosyal Bilimler Dergisi 16*(1), 49-71.

Uçgun, S. (2017). Türkiye'de Makroekonomik Faktörlerin 2000-2014 Döneminde Yurtiçi Tasarruflara Etkisi. *Süleyman Demirel Üniversitesi Vizyoner Dergisi, 8*(18), 111-26.

Wärneryd, Karl-Erik. (1989). On The Psychology Of Saving: An Essay On Economic Behavior. *Journal of Economic Psychology, 10*(4), 515-41.

Zengİn, S., Serhat Y, ve Mustafa T. K. (2018). Türkiye'deki Düşük Hanehalkı Tasarrufuna Neden Olan Faktörlerin Belirlenmesine Yönelik Bir Araştırma. *Yaşar Üniversitesi E-Dergisi 13*(49), 86-100. doi: 10.19168/jyasar.350497.