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THE IMPACT OF SOCIAL EXPENDITURES ON POVERTY: A STUDY ON TÜRKİYE

Streszczenie (abstrakt): Nowadays, the problem of poverty is one of the most important challenges to address, and various strategies are employed to combat it. Social expenditures are among the most significant approaches to reducing poverty and increasing welfare. While some literature discusses the effects of specific types of social expenditures on poverty, the majority suggests that social expenditures play a vital role in poverty reduction. Although many institutions and organizations contribute to social expenditures, the state is responsible for a significant portion of social spending in Türkiye and the world. Since 2002, public social expenditures have significantly increased during a more stable period in Türkiye compared to previous years. Therefore, it is essential to investigate the impact of social expenditures on poverty and their effectiveness. This study aims to analyze the effect of public sector social expenditures on poverty in Türkiye from 2006-2021. The study examines the relationship between social expenditures for social security/social assistance, education, and health services and the poverty rate of 50% and 60% of households using panel data analysis. According to the findings, an inverse relationship was found between education services expenditures, social security/social assistance services expenditures, and both the 50% and 60% poverty rates. However, no statistically significant relationship between health services and poverty rates was observed.

Słowa kluczowe: poverty, poverty reduction, social expenditures, Türkiye

WPŁYW WYDATKÓW SPOŁECZNYCH NA BIEDĘ: BADANIE W TURCJI

Abstract: W dzisiejszych czasach problem ubóstwa stanowi jedno z najważniejszych wyzwań do rozwiązania, i stosuje się różne strategie, aby mu przeciwdziałać. Wydatki społeczne są jednymi z najważniejszych zmniejszania ubóstwa i zwiększania dobrobytu. Podczas gdy część literatury omawia wpływ konkretnych rodzajów wydatków społecznych na ubóstwo, większość sugeruje, że wydatki społeczne odgrywają kluczową rolę w redukcji ubóstwa. Chociaż wiele instytucji i organizacji społecznych, to państwo odpowiada za znaczną część wydatków społecznych w Turcji i na świecie. Od 2002 roku publiczne wydatki społeczne znacząco wzrosły w bardziej stabilnym okresie w Turcji w porównaniu z poprzednimi latami. Dlatego ważne jest zbadanie wpływu wydatków społecznych na ubóstwo i ich skuteczności. Niniejsze badanie ma na celu analizę wpływu wydatków społecznych sektora publicznego na ubóstwo w Turcji w latach 2006-2021. Badanie analizuje związek między wydatkami społecznymi na zabezpieczenie społeczne/pomoc społeczną, edukację i usługi zdrowotne a wskaźnikiem ubóstwa w 50% i 60% gospodarstw domowych, korzystając z analizy danych panelowych. Zgodnie z wynikami, odnotowano odwrotny związek między wydatkami na usługi edukacyjne, wydatkami na zabezpieczenie społeczne/pomoc społeczną a wskaźnikami ubóstwa 50% i 60%. Jednakże, nie zaobserwowano statystycznie istotnego związku między usługami zdrowotnymi a wskaźnikami ubóstwa.

Keywords: bieda, redukcja ubóstwa, wydatki społeczne, Turcja

1. Introduction

Poverty is one of the most important problems that must be addressed from the past to the present. While social assistance and solidarity were established to combat poverty before the Industrial Revolution, the significant increase in impoverished individuals and the weakening of social bonds after the Industrial Revolution have undermined the mechanisms of assistance and solidarity. Due to the threat that poverty poses to social order and peace, governments have been compelled to intervene in the free market and implement certain measures, albeit limited, to reduce poverty (Şenkal, 2017). Over time, as these measures became institutionalized and due to changes in the economic understanding, the responsibility of combating poverty has been placed on the government, and the state has emerged as the most critical institution in the fight against poverty (Şenses, 2017; Koray, 2018). Despite the existence of numerous policies and practices in the fight against poverty, they can examine under two categories. The approach to tackling indirect poverty is based on supporting economic growth and the premise that the wealth generated by this growth will either increase or improve the conditions of people experiencing poverty. On the other hand, the approach to direct poverty alleviation involves reforms, subsidies, and expenditures aimed at reducing or eliminating poverty, utilizing resources directly in favor of the poor (Gündoğan, 2019; Şenses, 2017). Among these expenditures, social spending is considered one of the most crucial tools in directly combating poverty.

While the definition and scope of social spending remain a subject of debate, there is a common understanding regarding its purpose: the resolution of societal issues and the

improvement of social welfare. Social spending plays a significant role in addressing social problems such as the equitable distribution of income, raising the level of social welfare, and combating poverty (Çelikay and Gümüş, 2017). Social spending can be undertaken by both the private sector and the government. However, as the responsibility for increasing welfare and resolving social problems is primarily attributed to the state, public social spending outweighs private social spending. Furthermore, social spending, to varying degrees, is implemented by all governments. This study primarily focuses on public social spending and conducts evaluations within this context. The OECD (2016) defines public social spending as "social expenditure comprises cash benefits, direct in-kind provision of goods and services, and tax breaks with social purposes. Benefits may be targeted at low-income households, the elderly, disabled, sick, unemployed, or young persons. To be considered "social", programmes have to involve either redistribution of resources across households or compulsory participation. Social benefits are classified as public when general government (that is central, state, and local governments, including social security funds) controls the relevant financial flows. All social benefits not provided by general government are considered private."

Although there is an ongoing debate about the scope of social expenditure, the classification and scope provided by the OECD (SOCX) and Eurostat (ESSPROS) are widely used. Despite some differences between the two methods, the components of social spending are generally similar. The significant differences between the two methods are as follows: (i) In the ESSPROS method, administrative costs are included in social expenditure, whereas they are not included in the SOCX method. (ii) The ESSPROS method presents private and public social spending together, while the SOCX method provides them separately. (iii) The SOCX method includes active labor market programs in social expenditure calculations, whereas the ESSPROS method does not include them (OECD, 2019; Eurostat, 2022). In Türkiye, the ESSPROS method is used for calculating social expenditure. Both the ESSPROS and SOCX methods include expenditures that demonstrate a certain level of development and have a short-term impact. Therefore, the suitability of both the ESSPROS and SOCX methods for Türkiye is a subject of debate. The main reason for this debate is that education and development expenditures are not included in the calculations of both methodologies. Education and development expenditures are highly significant in developing or less developed countries and countries with high regional development disparities. In this context, it is necessary to include these expenditures within the scope of social spending (Keskin, 2023; Erdoğdu, 2013). In this study, education, health, and social security expenditures are considered social spending.

Numerous studies have indicated that countries with high social expenditures tend to have higher levels of social welfare. Examples often cited include Western European and Northern European countries with high social spending, which is associated with higher levels of human development, fairer income distribution, and lower poverty rates. In Türkiye, social expenditures have also increased following a period of more stable economic structure and significant economic growth since 2002. Table 1 presents the share of social spending in Türkiye's GDP.

Table 1. Share of Social Expenditures in GDP in Türkiye

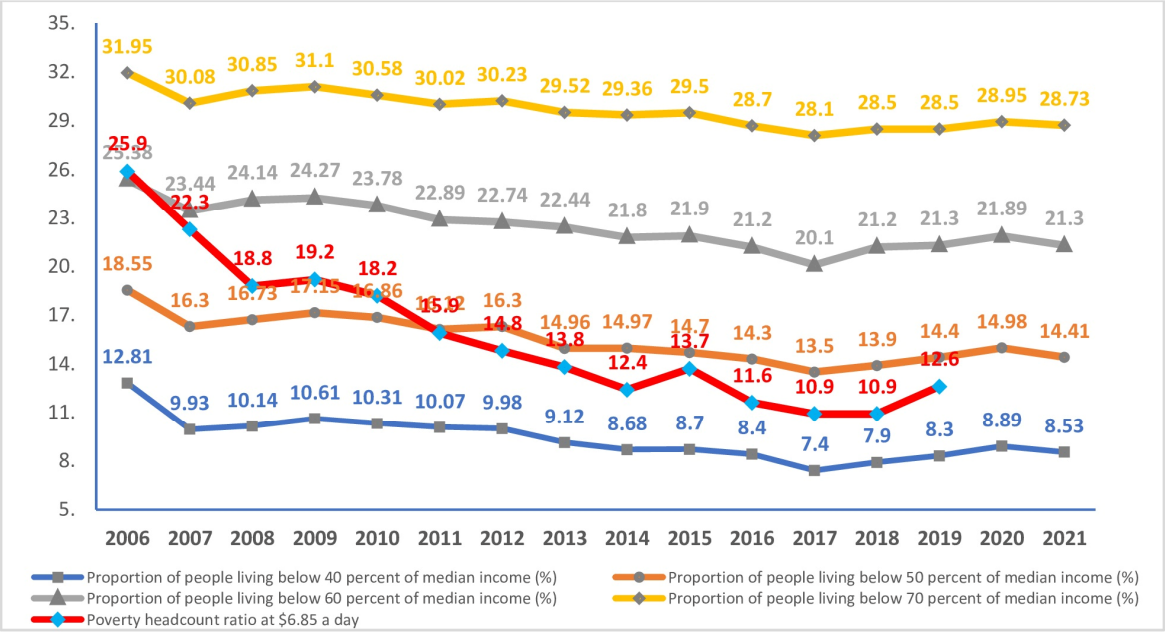
Year	Presidency of Strategy and Budget				SOCX	ESSPROS
	Education	Health	Social Protection	Total	Public Total	
2004	3.1	3.8	6.7	13.6	10.0	10.5
2005	3.1	3.6	7.0	13.6	9.9	10.5
2006	2.9	3.8	7.1	13.8	10.2	10.7
2007	3.0	3.9	7.1	14.0	10.8	11
2008	3.2	4.1	6.9	14.2	11.0	11.3
2009	3.7	4.8	7.9	16.4	12.9	13.4
2010	3.8	4.3	8.0	16.1	12.2	12.7
2011	3.7	4.0	7.8	15.5	11.7	12.2
2012	3.8	3.9	8.1	15.8	11.9	12.4
2013	3.8	3.8	8.0	15.6	11.7	12.1
2014	3.9	3.8	8.0	15.6	11.6	12
2015	3.9	3.7	8.2	15.7	11.5	11.9
2016	4.1	3.8	9.0	16.9	12.5	12.8
2017	3.8	3.7	8.4	15.9	12.0	12.2
2018	3.8	3.6	9.0	16.3	11.8	11.9
2019	3.8	3.8	9.5	17.1	12.4	12.6
2020	3.4	4.1	10.1	17.6	*	13
2021	3.3	4.0	8.6	15.9	*	*
2022	3.3	3.9	8.3	15.4	*	*

Source: (Presidency of Strategy and Budget, 2023; OECD, 2023; Eurostat, 2023)

In Table 1, it can be observed that the share of social spending in GDP has been increasing from 2004 to 2020. There is a significant proportional increase, particularly in social protection expenditures. It is evident that there was an increasing trend in social protection spending until 2020, followed by a proportional decline. This pattern also applies to the overall share of social spending in GDP. There have been no significant changes in the share of education and healthcare expenditures in GDP. However, this does

not imply that there has been no increase in social spending. Considering that Türkiye's GDP has been consistently increasing every year after 2004 (except for 2009), it can be said that there has been an increase in the amount of social spending, even though there have been no changes in the proportion of social spending to GDP. In this context, it is possible to say that the social orientation of the state has developed in Türkiye after 2004. The general outline of poverty in Türkiye is presented below.

Figure 1. Outlook of Poverty in Türkiye (2006-2021)



Source: (Turkstat, 2023; World Bank, 2023)

In Figure 1, poverty indicators in Türkiye are presented after 2006. It can be observed that there have been significant reductions in both relative poverty rates and absolute poverty since 2006. Particularly, there has been a high level of change in the poverty rate of $6.85 per day, and the absolute poverty rate has decreased by approximately 13.3%. In the period from 2006 to 2021, there has been a 4% decrease in the relative poverty rates of 40%, 50%, and 60%. Overall, it is possible to say that significant reductions in both absolute and relative poverty rates occurred in Türkiye after 2006.

Social spending is one of the most effective tools in combating poverty, which is a significant societal problem arising from the lack of welfare (Kalkavan and Ersin, 2020). Particularly, education, health, and social security expenditures play an important role in reducing or eliminating absolute poverty and reducing disparities in the society's welfare levels. There exists a direct and indirect relationship and a vicious cycle between education, health, social security, and poverty. In other words, inadequate or nonexistent access to education, health, and social security services leads to poverty, while poverty hinders access to education, health, and social security services. In this context, social spending provided by the state plays a crucial role in breaking the cycle of poverty and combating poverty. Additionally, through the positive externalities of social spending,

poverty can be indirectly reduced (Keskin, 2023). Therefore, it is necessary to examine the impact of changes in public social spending on poverty in Türkiye. The aim of this study is to investigate the effect of education, health, and social security expenditures on poverty in Türkiye. Following a literature review, information about the data set and methodology is provided. Subsequently, an empirical analysis was conducted, findings was presented, and finally, the conclusions section evaluates the findings.

2. Literature Review

There are numerous studies examining the impact of social expenditures on poverty. The majority of these studies have found a negative relationship between social spending and poverty. Kenworthy (1999) conducted a study using data from 15 developed countries between 1960 and 1990 and concluded that poverty decreases as social spending increases. Uza (2021) examined the relationship between the share of social assistance in GDP and the lowest 20% income group in 36 OECD countries using the panel cointegration method for the years 2000-2018. It was found that an increase in social assistance expenditures as a share of GDP reduces poverty. In his study, Atkinson (2000) found that an increase in the share of social spending in GDP leads to reduced poverty. In other words, the research indicates a negative relationship between social spending and poverty.

Akbulut, Altundemir and Güven (2022) investigated the impact of social protection benefits on poverty using the Driscoll-Kraay estimator for 28 EU countries, including Türkiye. The study utilized data from 2007 to 2018, with the dependent variables being the 50% and 70% median income thresholds and the independent variables being the ratios of family assistance, healthcare assistance, retirement benefits, and unemployment benefits to GDP. The results showed a negative effect of family and healthcare assistance on the 50% and 70% poverty rates, a positive effect of retirement benefits on the 50% and 70% poverty rates, and finally, a positive effect of unemployment benefits on the 70% poverty rate. Ertekin and Hayat (2022) examined the impact of social spending on poverty using panel data analysis for 23 EU countries, including Türkiye. The study used the poverty risk indicator as the poverty measure and found that increasing public social spending as a share of GDP reduces poverty. Olopade et al. (2019) examined the relationship between human capital and poverty in 12 OPEC countries. The study found that education and health expenditures have a negative impact on poverty. Miežienė and Krutulienė (2019) found in their research on 28 EU countries, Caminada et al. (2021), Caminada, Goudswaard and Koster (2012) for 22 OECD countries, Cammeraat (2020) for 22 EU countries, Longford and Nicodemo (2010) for 26 EU countries, Lustig, Pessino and Scott (2014) for 6 South American countries, and Caminada and Goudswaard (2009) for 15 EU countries that social spending reduces poverty.

Çelikay and Gümüş (2017) examined the relationship between education, health, and social security expenditures as a share of Gross Domestic Product (GDP) and poverty rates (at 50% and 60% of median income) for 26 regions in Türkiye from 2004 to 2011. The study found that an increase in the share of social expenditures in GDP reduced poverty

rates (at 50% and 60%). Additionally, it concluded that social spending had a short-term reducing effect on poverty but an increasing effect in the long run.

Keskin (2023) investigated the relationship between education, health, and social security/social assistance expenditures and poverty rates (at 50% and 60% of median income) for 12 regions in Türkiye from 2006 to 2021. The study employed four models and utilized the Seemingly Unrelated Regression (SUR) method. The findings varied across regions and models, but it found that education was more effective in reducing poverty compared to health and social security/social assistance expenditures. In other words, it concluded that education had a stronger impact on poverty reduction. Furthermore, the study identified that social spending increased poverty in some regions.

Dal and Temiz (2023) examined the relationship between social assistance expenditures and poverty rates in Türkiye from 2002 to 2021. They employed the Johansen-Juselius cointegration, Granger causality, and Toda-Yamamoto causality tests. The research identified a long-term unidirectional relationship between social assistance expenditures as a share of GDP and poverty rates.

Beyaz Sipahi (2021) investigated the relationship between education expenditure, health expenditure, income distribution, and poverty in Türkiye from 2002 to 2019. The study employed the Johansen cointegration method. It found a significant and negative long-term relationship between health expenditure, education expenditure, and poverty rates. Çetin (2020) examined the relationship between education and poverty in Türkiye from 2008 to 2018 using regional data and the Ordinary Least Squares (OLS) and Dynamic OLS methods. The study concluded that education contributed to poverty reduction. Sağdıç (2021) examined the relationship between social expenditures and the risk of poverty (at 60%) in 12 regions of Türkiye from 2006 to 2019. The study utilized the Durbin-Hausman panel cointegration and Panel Autoregressive Distributed Lag (ARDL) methods. The findings indicated that social spending had a long-term reducing effect on poverty.

These studies provide valuable insights into the relationship between social expenditures and poverty in Türkiye, highlighting the significance of education, health, and social security/social assistance expenditures in poverty reduction efforts.

3. Data and Methodology

The aim of the study is to analyze the relationship between social expenditures such as education, social security and social assistance and health expenditures and poverty in Turkey. From 2006 to 2021, panel data at the regional level in 12 regions were utilized to achieve this aim. The independent variables in the study are per capita education, social security/social assistance, and health expenditure, while the dependent variable is the poverty rate at 50% and 60% of the median income. The dataset and data sources for the research are presented in the table below

Table 2. Dependent and Independent Variables

Variables	**Abbreviations**	**Source**
50% Poverty Rate (Dependent 1)	PR%50	Turkstat
60% Poverty Rate (Dependent 2)	PR%60	Turkstat
Educational services expenditures per capita	ESE	Ministry of Treasury and Finance
Healthcare expenditures per capita	HSE	Ministry of Treasury and Finance
Social security/social assistance sevices expenditures per capita	SSSE	Ministry of Treasury and Finance

The data in the study is presented on an annual basis. The poverty rates (at 50% and 60%) represent the proportion of the population below the median income. The social security/social assistance, health, and service expenditures reflect only the expenditures made by the central government. In this context, the annual nature of the data, the absence of other regional poverty data, and the inclusion of only central government expenditures are the most significant limitations of this study.

3.1. Panel Data Analysis

Panel data analysis allows researchers to obtain more valid and comprehensive results in scientific studies compared to statistical techniques that utilize cross-sectional data, as it employs a more complex research design incorporating both cross-sectional and time-series analyses. Due to its advantages, panel data analysis has become increasingly popular among researchers in various scientific studies in the social sciences. It has become an essential component of quantitative methods and is widely used in disciplines such as economics, business, public administration, political science, finance, and many other social science fields.

A panel data set is a collection of data involving multiple observations of a set number of variables across various entities, such as individuals, households, firms, or cities. Unlike cross-sectional data, which captures observations at a single point in time, and time series data, which tracks variables over a series of periods, panel data combines both dimensions by providing repeated measurements over time for the same set of variables (Hsiao, 2003).

$$Y_{it} = a_{it} + \beta_k X_{it} + u_{it} \qquad i=1,.....,N; \quad t=1,....T \qquad (1)$$

In panel data, the number of cross-sectional units (N) is typically greater than the number of time periods (T) (N > T). Panel data consists of observations on cross-sectional

units over a specific period of time. In this context, the panel data regression equation can be expressed as follows:

In other words, in the equation mentioned above, Y represents the dependent variable or the variable to be explained, while X represents the explanatory variable(s) in the model. The α in the equation denotes the intercept or the constant term of the model, β represents the slope parameter(s), and u represents the error term. The subscript i in the equation refers to the cross-sectional units (such as countries, cities, or sectors), and the subscript t represents time periods (such as days, months, or years) (Baltagi, 2021).

Classical Pooled Ordinary Least Squares (OLS) Method: The classical panel data regression model assumes that both the intercept and slope parameters do not vary across units and time. In other words, all observed units are homogeneous. If the error terms in the panel data regression model do not incorporate unit and time effects, the classical OLS estimator is a good predictor, and the obtained coefficients are consistent. In the pooled least squares method, the error terms should have constant variance and a mean of zero. The units should be uncorrelated, meaning there should be no correlation among units, and there should be no issue of autocorrelation in the model. If the error terms of the panel data regression include unit and time effects, and these effects are only correlated with the independent variables, the coefficients estimated by the pooled least squares (PLS) are consistent (Yaffee, 2003).

$$Y_{it} = \beta_0 + \sum_{k=1}^{k} X_{kit} + \upsilon_{it} \tag{2}$$

$$Y_{it} = X_{it}\beta + \upsilon_{it} \qquad i = 1,.....N \qquad t = 1,.....T \tag{3}$$

Fixed Effects Model: The fixed effects model assumes that the slope coefficients are constant and that the intercept varies across cross-sectional units. This approach implies that the slope parameters are the same for all horizontal units, while the fixed parameters vary from unit to unit. In the fixed effects regression model, the dummy variable approach is used to account for the variation across units, known as the Least Squares Dummy Variable (LSDV) model (Gujarati and Porter, 2014).

In the fixed effects regression model, there are n fixed coefficients, one for each unit. The obtained intercept coefficients can be represented by the indicator variable. The resulting binary variables include all excluded variables that are constant over time while varying from unit to unit (Stock and Watson, 2011).

$$Y_{it} = \beta_1 X_{1,it}.....\beta_k X_{1,it} + \alpha_i + ...\upsilon_{it} \tag{4}$$

The fixed effects regression model can be represented as follows:

$$i = 1,.....N \;,\; t = 1,.....T \tag{5}$$

Random Effects Model: The fixed effects model allows for the inclusion of unobserved individual effects correlated with the included variables. This model can be seen as applied only to the cross-sectional units in the study rather than to additional units outside the sample. A cross-country comparison may include all countries for which the assumption of fixed effects is reasonable. If individual effects are unrelated to the explanatory variables, then it may be appropriate to model individual-specific fixed terms as randomly distributed among the cross-sectional units. In the random effects model, the unit effects are not fixed but random and are included in the error term. If we define the composite error term, the random effects model can be expressed as follows (Wooldridge, 2018: 469; Gujarati, 2016):

$$Y_{it} = \beta_0 + \beta_1 X_{it1} + ...\beta_k X_{itk} + \alpha_i + ...\upsilon_{it} \tag{6}$$

$$\beta_0 = \overline{\beta} + a_i \tag{7}$$

This model is the error terms model and β_0 is the population mean constant parameter a_i is the unit effect error term component.

4. Results

The relationship between per capita education, health, and social security/social assistance expenditure and poverty has been examined. The descriptive statistics of the variables are presented in Table 3.

Table 3. Descriptive statistics

	ESE	HSE	SSSE	PR50	PR60
Mean	0.402378	0.143059	0.521259	11.75349	18.93104
Median	0.392913	0.138808	0.497866	11.60000	18.86000
Maximum	0.891796	0.302028	0.780254	18.90000	26.39000
Minimum	0.150062	0.058507	0.286039	6.930000	13.90000
Std. Dev.	0.132948	0.041387	0.132002	2.058406	2.247924
Skewness	0.820579	0.850680	0.147397	0.331568	0.235581

Kurtosis	4.207241	4.327811	2.164556	3.458167	3.402029
Jarque-Bera	33.20666	37.26165	6.278967	5.197330	3.068970
Probability	0.000000	0.000000	0.043305	0.074373	0.215567

According to the calculated Jarque-Bera tail probabilities, considering the skewness and kurtosis statistics, it is found that the variables ESE, SSE, and SSSE do not exhibit a normal distribution. On the other hand, the tail probabilities of the PR50 and PR60 variables are greater than 0.05, meaning that they have a normal distribution.

Table 4 presents the model selection hypotheses for the panel data regression models conducted for poverty at 50% and poverty at 60%.

Table 4. Panel Data Model Selection Hypotheses

PR %50			
	Hypotheses	**Statistics**	**P value**
F test	**H_0:** pooled model is suitable **H_1:** fixed effects model is suitable	F	0.0000
Hausman Test	**H_0:** random effects model is suitable **H_1:** fixed effects model is suitable	chi2	0.0804
Lagrange Multiplier test (LM)	**H_0:** pooled model is suitable **H_1:** random effects model is suitable	chibar2	0.0000
PR %60			
	Hypotheses	**Statistics**	**P value**
F test	**H_0:** pooled model is suitable **H_1:** fixed effects model is suitable	F	0.0000
Hausman Test	**H_0:** random effects model is suitable **H_1:** fixed effects model is suitable	chi2	0.1661
Lagrange Multiplier test (LM)	**H_0:** pooled model is suitable **H_1:** random effects model is suitable	chibar2	0.0000

In the analysis, fixed effects, random effects, and Pooled regression methods were applied. F-test, Hausman test, and LM test were used to determine the most suitable model among the three calculated models. The F-test was used to compare the Pooled regression model with the fixed effects model, the Hausman test was used to compare the random effects model with the fixed effects model, and the LM test was used to compare the Pooled and random effects models. The test statistics are presented in Table 4. According

to the results, the random effects model was determined as the most suitable model for both the 50% poverty rate and the 60% poverty rate estimation models. The results of the random effects model are presented in Table 5 and Table 6.

Table 5. Random Effects Model Coefficient Results for %50 PR

PR %50	**Coef.**	**Std. Err.**	**z**	**P>|z|**
HSE	6.959367	4.311062	1.61	0.106
ESE	-3.911268	1.784605	-2.19	0.028
SSSE	-4.386005	1.567125	-2.80	0.005
C	14.63357	.6824194	21.44	0.000
R^2 0,2355	Prob > chi2=0.0000			

In Table 5, an increase in healthcare expenditures positively affects the 50% poverty rate. In comparison, increased education and social security/social assistance costs negatively impact the 50% poverty rate. A one-unit increase in healthcare expenditures leads to a 6.95% increase in poverty. Additionally, a one-unit increase in education expenditures decreases poverty by -3.9%, while a one-unit increase in social security/social assistance expenditures reduces poverty by -4.38%. The coefficient of healthcare expenditures (P= 0.106) is statistically insignificant, whereas the coefficient of education expenditures (P= 0.028) and social security/social assistance expenditures (P= 0.005) are statistically significant. In other words, the findings suggest that while healthcare expenditures have a positive but statistically insignificant impact, the results for education and social security/social assistance expenditures are negative and statistically significant. The independent variables explain 23.55% of the dependent variable.

Table 6. Random Effects Model Coefficient Results for %60 PR

PR %60	**Coef.**	**Std. Err.**	**z**	**P>|z**
HSE	7.291788	4.654887	1.57	0.117
ESE	-2.90094	1.946346	-1.49	0.036
SSSE	-5.691779	1.702069	-3.34	0.001
C	22.03768	.7507947	29.35	0.000
R^2 0,2381	Prob > chi2=0.0000			

The result in Table 6 show that an increase in healthcare expenditure positively affects the 60% poverty rate. In comparison, an increase in education expenditure and social

security/social assistance expenditure negatively affects the 60% poverty rate. A unit increase in healthcare expenditure leads to a 7.29% increase in poverty. On the other hand, a unit increase in education expenditure decreases poverty by -2.9%, and a unit increase in social security/social assistance expenditure decreases poverty by -5.69%. The coefficient for healthcare expenditure (P=0.117) is statistically insignificant, while the coefficients for education expenditure (P=0.036) and social security/social assistance expenditure (P=0.001) are statistically significant. In other words, the findings indicate that while healthcare expenditure has a positive but statistically insignificant impact on poverty, education, and social security/social assistance, expenditures have significant adverse effects on poverty. The independent variables explain 23.81% of the dependent variable.

5. Discussion and Conclusion

Poverty remains one of the most crucial issues that need to be addressed today, and governments, along with numerous voluntary organizations, are combating poverty through various means. Social expenditures are considered to be one of the most effective tools in the fight against poverty. While the government and the private sector carry out social spending, a significant portion of social expenditures is undertaken by the public sector. The most important reason for this is that the responsibilities and opportunities of the state are broader in solving social problems and increasing social welfare.

Poverty, stemming from a lack of welfare, is one of the most significant social problems that must be resolved. Ensuring a more equitable income distribution and reducing or eliminating poverty are crucial reasons why the public sector engages in social spending. Moreover, due to the positive externalities and essential nature of subcomponents of social expenditure, such as healthcare, education, and social security, governments intervene in the market. Certain goods and services the market provides may not be accessible to all consumers, or some goods and services may not be produced in sufficient amounts due to their lack of profitability. Inadequate consumption of these goods or services, such as vaccinations, primary education and healthcare services, social assistance, food, and shelter, can result in problems that impose costs exceeding the production costs of the goods or services. Therefore, the public sector engages in social spending to address potential economic and social issues that may arise from insufficient consumption of specific goods and services. Public production and provision of education, health, and social security services, among the fundamental human rights in national and international conventions, are of great importance in the fight against poverty.

Since the establishment of the Republic of Türkiye, societal welfare has not sufficiently developed due to the unique economic, social, political, and cultural problems of each period. Particularly, the economic, political, and social issues between 1990 and 2002 have significantly contributed to the decline in societal welfare. However, after 2002, the formation of a more stable political and economic structure has led to a substantial increase in the amount of social expenditures. Therefore, it is necessary to investigate the direction of the impact of social expenditures on poverty. This study aims to examine the effect of social expenditures on poverty in Türkiye during the period of 2006-2021. To

achieve this objective, empirical tests have been conducted to explore the relationship between per capita education, healthcare, social security/social assistance expenditures, and poverty rates (%50 and %60) at the regional level.

According to the findings obtained from the empirical part of the study, education and social security/social assistance services expenditures per capita reduce the 50% and 60% poverty rates. Besides, no statistically significant relationship was found between health services expenditures per capita and poverty rates (50% and 60%). The coefficients of the relationship between education and social security/social assistance services expenditures and poverty rates show that social security/social assistance services reduce poverty rates more than education services expenditures. However, the fact that social security/social assistance services expenditures reduce the 60% poverty rate more than the 50% poverty rate can be contributed to the fact that these expenditures do not reach the poorer segments. In this context, increasing social expenditures seems to be a good method for reducing poverty. In societies with high levels of welfare and low levels of poverty, the share of public social expenditures in GDP is above 25%. In Türkiye, this ratio has been between 15-18% in the last ten years. Although the increase in the amount of social expenditures seems to be a good method for combating poverty in Türkiye, it is necessary to determine the target groups for social expenditures correctly and to spend efficiently.

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