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SOCIOECONOMIC FACTORS AFFECTING INDIVIDUALS' LIFE SATISFACTION: DYNAMIC PANEL DATA ANALYSIS FOR SELECTED OECD COUNTRIES

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ABSTRACT

Life satisfaction, which expresses the state of meeting the expectations of individuals as a result of reaching the goals they want in their lives, is the most important factor in ensuring the happiness of individuals, which is their ultimate goal in life. For this reason, it is important to determine the socioeconomic factors that affect the life satisfaction of individuals. In the study, the effect of socioeconomic factors on the life satisfaction of individuals in 25 member countries that are members of the Organization for Economic Co-operation and Development was investigated with the System Generalized Method of Moments for the period 2013-2018. These countries and the period were determined according to the data set of the variables used in the analysis. The socioeconomic factors affecting life satisfaction of individuals in 25 countries that are members of the Organization for Economic Cooperation and Development were determined within the scope of economic conditions, education and, security. System Generalized Method of Moments result shows that mainly economic factors affect on life satisfaction. Accordingly, while unemployment and Gini coefficient negatively affect individuals' life satisfaction; per capita gross domestic product and higher education graduates affect positively. Social expenditures and violent crimes have no effect on life satisfaction.

Keywords: *Life Satisfaction, Socioeconomic Factors, Unemployment, Member Countries of the Organization for Economic Cooperation and Development, System Generalized Method of Moment.*

JEL codes: *D90, I31, O52.*

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BİREYLERİN YAŞAM MEMNUNİYETİNİ ETKİLEYEN SOSYOEKONOMİK FAKTÖRLER: SEÇİLMİŞ OECD ÜLKELERİ İÇİN DİNAMİK PANEL VERİ ANALİZİ

ÖZET

Bireylerin yaşamlarında istedikleri hedeflere ulaşmaları sonucunda beklentilerinin karşılanması durumunu ifade eden yaşam memnuniyeti, bireylerin yaşamlarındaki nihai amaçları olan mutluluklarının sağlanmasında en önemli etkendir. Bu nedenle bireylerin yaşam memnuniyetini etkileyen sosyoekonomik faktörlerin belirlenmesi önem arz etmektedir. Çalışmada Ekonomik Kalkınma ve İşbirliği Örgütü üyesi 25 ülkede bireylerin yaşam memnuniyetine sosyoekonomik faktörlerin etkisi 2013-2018 dönemi için Sistem Genelleştirilmiş Momentler Yöntemiyle araştırılmıştır. Bu ülkeler ve dönem analizde kullanılan değişkenlerin veri setine göre belirlenmiştir. Ekonomik Kalkınma ve İşbirliği Örgütü üyesi 25 ülkede bireylerin yaşam memnuniyetini etkileyen sosyoekonomik faktörler ise ekonomik koşullar, eğitim ve güvenlik kapsamında belirlenmiştir. Sistem Genelleştirilmiş Momentler Yöntemi sonucu ağırlıklı olarak ekonomik faktörlerin yaşam memnuniyeti üzerinde etkisi olduğunu göstermektedir. Buna göre bireylerin yaşam memnuniyetini işsizlik ve Gini negatif yönde etkilerken, kişi başına gayri safi yurt içi hasıla ve yükseköğretim mezunları pozitif yönde etkilemektedir. Sosyal harcamalar ve şiddet suçlarının yaşam memnuniyetine etkisi bulunmamaktadır.

***Anahtar Kelimeler**: Yaşam Memnuniyeti, Sosyoekonomik Faktörler, İşsizlik, Ekonomik Kalkınma ve İşbirliği Örgütü Üyesi Ülkeler, Sistem Genelleştirilmiş Momentler Yöntemi.*

***JEL Sınıflandırması**: D90, I31, O52.*

1. INTRODUCTION

Each individual has goals they want to achieve in their lives. These targets can be listed as; earning money, getting an education, having a profession and status, being successful in business, getting married, having children, and living in economic and social welfare. The life satisfaction of individuals who reach their goals increases, thus they become happy. The achievement of these goals by individuals depends on good economic conditions. When economic conditions are good, individuals will be satisfied and happy with their lives by achieving their goals more easily. Good economic conditions depend on the economic and social policies implemented by the states. Within this context, first, unemployment should be reduced, an increase in gross domestic product per capita and justice in income distribution should be ensured. Thus, the number of people in need of financial assistance will be minimal. The importance of the welfare state appears when there are people in need of assistance in a country.

The welfare state approach emerged after the Great Depression of 1929 when the policies proposed by John Maynard Keynes were expanded to include social expenditures, and it lived its most *popular* period after the Second World War. Struggle policies, which are mostly based on social spending mechanisms, implemented after World War II and adopted until the end of the 1970s, are policies that are generally known as the welfare state and aim to combat poverty directly. It is possible to say that these policies, which include the establishment of a comprehensive social safety net, have achieved significant success in eliminating poverty in general, especially in developing countries.

The concept of "decommodification" is at the center of the work titled "The Three Worlds of Welfare Capitalism", which was carried out by Danish sociologist Gøsta Esping-Andersen in 1990 to reconceptualize the welfare state. Accordingly, "labor is decommodified to the degree that individuals or families can maintain a socially acceptable standard of living independent of market participation" (Pacek ve Radcliff, 2008, p. 269). In the topic study, it is emphasized that the increase in per capita gross domestic product is necessary but not sufficient to reduce poverty and mitigate its negative effects and that the national income should be distributed more equitably. According to Thomas Jefferson (1809), "the first and only legitimate aim of good government is the pursuit of human life and happiness". Aristotle and Ibn Khaldun argued that promoting happiness is one of the important roles of a government. Accordingly, a good government should encourage its citizens to pursue happiness and make an effort (Kasmaouı ve Bourhaba, 2017: 2).

In this study, socioeconomic factors affecting life satisfaction will be discussed within the scope of economic conditions, education, and security. Within the data set used in the analysis, research will be conducted for the Organization for Economic Co-operation and Development 25 (OECD 25) countries. By determining the factors that predominantly affect the life satisfaction of individuals in these countries, it will be specified which policies the states should implement in these countries in order to increase the life satisfaction of individuals. Socioeconomic factors affecting the life satisfaction of individuals may differ according to the socioeconomic structure of each country. However, in this study, it is aimed to determine the main factors affecting life satisfaction according to country groups, since research cannot be done for all countries one by one.

In this study, unlike most studies investigating the effects of socioeconomic factors on life satisfaction, economic factors and crime variables were also included. Although there are not many studies in the literature investigating the effect of crime on life satisfaction, there are not many studies that include the crime variable together with economic factors in the analysis. In addition, the study differs from others with the System Generalized Method of Moments (GMM). Among the studies under the title of literature review, there is no other study other than the study by Kasmaoui and Bourhaba (2017) in which this method is used. Kasmaoui and Bourhaba (2017) searched the relationship between public expenditures and happiness via the system GMM method, but only included the public expenditure variable in the analysis and investigated the effect of public expenditures on happiness instead of life satisfaction. For these reasons, it is thought that this study will contribute to the literature.

In the study, firstly the concepts of happiness, life satisfaction, and subjective well-being will be explained, the theories related to subjective well-being will be briefly mentioned, in the next stage researches on the subject will be included, finally, the data set and method to be used in the analysis of the study will be explained, the analysis findings will be interpreted and the results will be evaluated.

2. CONCEPTUAL FRAMEWORK

According to Thomas Jefferson (1809), "The first and only legitimate aim of good government is the pursuit of human life and happiness". Aristoteles ve İbn Haldun argued that promoting happiness is one of the important roles of a government. For this reason, a good government should encourage its citizens to pursue happiness and should strive for it. The majority of governments in the world focus on economic indicators such as Gross Domestic Product (GDP), fiscal deficit, and public debt, leaving aside the subjective well-being of individuals (Kasmaouı and Bourhaba, 2017: 2). However, the focus on national wealth alone is considered insufficient, considering that it excludes important factors such as well-being and overall life satisfaction. From the mid-20th century until the 1990s, there was a widespread view that welfare should be measured by monetary indicators such as per capita income and Gross Domestic Product (GDP). International organizations have created alternative welfare measurement methods since the 1990s, based on the perception that per capita income growth does not fully reflect welfare. The OECD Commission on the Measurement of Economic Performance and Social Progress started a project in 2008 to provide an alternative to the deficiencies in the welfare measurement of the Human Development reports initiated by the United Nations Development Program in 1990 (OECD, 2011). OECD first published the Better Life Index (BLI-) in 2011 with a dataset of 11 welfare issues and 24 indicators for 34 member states. Then, in 2012, non-OECD members Brazil and Russia were also included. Although there have been various changes in metrics since the first publication, BLI has 24 indicators under 11 topics measured in different units (e.g. dollars, years) (Bingöl, 2020: 628).

One of the 11 topics included in the Better Life Index is life satisfaction. In the literature addition to happiness, there are studies in various fields related to subjective well-being and life satisfaction. Although the concepts of happiness, subjective well-being and life satisfaction are thought to be similar, there are differences between these concepts. Happiness is a concept that has been researched by various branches of science in the historical process. While Aristotle and Nietzsche defined happiness as "the final goal of individuals", Jeremy Bentham defined it as "the sum of pleasure and pain". Happiness is also defined as a mood in which individuals have a sense of satisfaction (Kasmaouı and Bourhaba, 2017: 2; Veenhoven, 2004: 1; Leiter, 1997: 273; Diener, 1994: 103). Neugarten (1961) defines life satisfaction as "the positive result that individuals reach when they compare what they have with their expectations from life", and Shin and Johnson (1977) define life satisfaction as "individuals not only cognitively compare their life expectancies with the results they get but also determine their own quality of life, again. evaluated according to a set of criteria that they (Shin ve Johnson, 1977: 478; Neugarten, 1961: 136-138). Subjective well-being, which consists of cognitive components such as life satisfaction and emotional components such as happiness, includes material conditions (income and wealth, work and earnings, housing conditions) and quality of life (health status, work-life balance, education and skills, social connections, civic engagement, and management) it is defined as a multidimensional concept encompassing environmental quality, personal safety) and expresses the degree of positive evaluation of individuals' quality of life in total (Aysan, 2019: 191; OECD, 2013; Pacek ve Radcliff, 2008: 268). The concept of subjective well-being has three basic characteristics. The first feature is that it is based on the experience of individuals, the second it has positive effects, and the third is that subjective well-being measures include a general evaluation of one's life. In other words, subjective well-being is the state of individuals having life satisfaction and positive emotions and not having negative emotions (Alexandrova, 2005: 302).

Various theories deal with the relationship between the concept of subjective well-being and economic factors. These theories are relative theory, absolute theory, adaptation theory, and aspiration theory. The aspiration theory is a theory associated with life satisfaction (Fuentes and Rojas, 2001: 292):

Relative Theory: Easterlin (1974) argues that the effect of income on subjective well-being depends on the individual's expectations and standards that change over time according to social comparisons. According to this theory, factors such as the relationship between the current economic situation and the economic situation in previous years and the wealth of the individual compared to the reference individuals can affect a person's happiness regardless of their income level.

Absolute Theory: Venhoveen (1988, 1991) hypothesizes that there is a relationship between satisfaction of basic needs and subjective well-being. People with a high-income level reach higher subjective well-being as they can easily meet their basic needs (food, shelter, health expenditures, etc.). Venhoveen (1988, 1991) suggests the existence of a threshold level at which the effect of income on subjective well-being is not significant.

Adaptation Theory: Brickman et al. (1978) focus on individuals' emotional abilities to adapt to positive and negative events. According to this theory, individuals with higher adaptability tend to be happier than individuals who do not have high adaptability, even if they are at a lower income level.

Aspiration Theory: According to this theory, the degree of satisfaction a person experiences is related to the ratio of her satisfied desires to her total desires. Individuals who believe that their desires are fully satisfied tend to be happier than those who feel that they have unfulfilled desires, regardless of their income level. The theory takes into account not only the degree of needs met but also the total desires of the individual.

In most of the studies investigating the effect of socioeconomic factors on life satisfaction, the effects of economic factors, especially income and unemployment, on life satisfaction are investigated. The best-known study on the determination of the relationship between income and life satisfaction belongs to Easterlin. According to the results of the study, there is a linear-logarithmic relationship between income and life satisfaction. Accordingly, the increase in income level increases the life satisfaction level of individuals at the beginning, but after a point, this effect is fixed. In the literature, this situation is expressed as the Easterlin Paradox (Kızılarslan ve Usta, 2021: 533).

3. LITERATURE REVIEW

Olson, Martin, and Connell (2020) investigated the relationship of high life satisfaction with low crime and deviant behavior with logistic regression analysis using survey data of students from two universities in Pennsylvania. In this study, it was concluded that life satisfaction requires intervention in the criminal justice system and that there is a negative relationship between life satisfaction and the tendency to crime and deviant behavior.

Sevgi and Başol (2020) investigated the effect of the development of the industrial relations system on the quality of life for OECD countries in 2017 using the structural equation modeling method. The development of the industrial relations system was measured by the rate of workers covered by the collective labor agreement and union density variables, and the quality of life was measured by the life expectancy at birth, life satisfaction and health variables based on individual declarations. In this study, it was determined that the development of the industrial relations system has a positive effect on the quality of life. It has been concluded that average happiness is higher in countries with high per capita income than in countries with low per capita income.

Nordheim and Martinussen (2020) investigated the relationship between social expenditures and subjective well-being and unemployment and life satisfaction for OECD countries using the Eurobarometer and World Values Survey (1980-2012 period data), using the fixed effects method. In the search, it was concluded that there was no relationship between social expenditures and subjective well-being. It has been determined that there is a negative relationship between unemployment and life satisfaction.

Lee, Kim, Rodgers, and Subramanian (2020) modeled the variance of life satisfaction for 60 countries separately according to national income and income inequality, in addition to the mean relationships, in the multilevel study of variance in which they used wave 6 (2010–2014 period) of the World Values Survey. In the study after adjusting for covariates at the country and individual level, middle-income and high-income countries were found to have higher life satisfaction than low-income countries

Aksoy and Taşkaya (2020) investigated the relationship between the macroeconomic indicators of countries and their degree of happiness with regression analysis using data obtained from the World Bank database of 2017 and the World Happiness Report for 142 countries. In the analysis, it is concluded that the gross domestic product per capita has a positive relationship with the level of happiness of the countries, while unemployment and inflation rates are negatively related. In addition, it has been determined that government expenditures are not related to happiness.

Aysan (2019) investigated the relationship between social policy practices and subjective well-being with Welch-ANOVA tests using 2012 data from the European Living Conditions Survey for a total of 34 countries, 28 European Union member countries, and 6 European Union candidate countries. In the study, it was concluded that the subjective well-being levels in countries where social policy practices are institutionalized and developed welfare regimes are applied are higher than in countries where underdeveloped welfare regimes are applied.

Cömertler (2019) investigated the relationship between crime and life satisfaction in his study. In the study, it was concluded that there is a negative relationship between some types of crime and life satisfaction, and there is no relationship between some types of crime and life satisfaction.

Krulichová (2018) investigated the effect of fear of crime and victimization on life satisfaction and happiness using the fifth European Social Research data of 2011, in which 2386 participants participated, using the hierarchical order of least squares method for the Czech Republic. While there was a direct relationship between fear of crime and subjective well-being in the study, it was determined that fear of victimization affected life satisfaction and happiness indirectly as a result of fear of crime. It has been observed that fear of crime has a negative effect on life satisfaction and happiness. It has been determined that fear of crime reduces life satisfaction in men more than women, and there is no gender difference between fear of crime and happiness.

Başol (2018) investigated the factors affecting life satisfaction in OECD member countries using the 2016 Better Life Index data via the structural equation modeling method. In this study, it was concluded that health and positive job quality affect life satisfaction positively, while income and negative job quality affect negatively.

Kasmaoui and Bourhaba (2017) investigated the relationship between public expenditures and happiness using the data for the period of 2006-2015, using fixed-effect panel data analysis and system Generalized Moments Method for 132 countries. It was concluded that there is a positive relationship between public expenditures and happiness.

Welsch and Kühling (2016) investigated the effects of changes in gross domestic product, inflation and unemployment on life satisfaction of individuals in 25 OECD countries during the 2008-2009 crisis period, using European Social Studies life satisfaction data, using least squares and ordered probit maximum likelihood model. It has been determined that unemployment and inflation affect the life satisfaction of individuals negatively and the gross domestic product affects positively.

Krekel and Poprawe (2014) investigated the relationship between crime and life satisfaction within the scope of well-being for Germany using the data of the German Socio-Economic Panel for the period 1994-2012 via the fixed effects method. It was determined that while violent crimes had a negative effect on life satisfaction, crimes against property and other types of crimes had no effect on life satisfaction.

Proto and Rustichini (2013) used World Values Survey (WVS) and integrated European Value Survey data in country-based analysis, and European Values Survey data in European region-based analysis, and analyzed the relationship between GDP per capita and life satisfaction with ordered probit analysis. Research results show that there is a strong positive relationship between GDP and life satisfaction in low-income countries, and this relationship is flat in rich countries. In other words, this relationship becomes much less steep beyond a GDP of $10,000, then flattens out in countries with a GDP above $15,000. For the richest countries, life satisfaction tends to decline with an increase in GDP. The results obtained in the study confirm the Easterlin Paradox.

Hanslmaier (2013) investigated the effects of crime victims, fear of crime, and crime rates on life satisfaction with linear multiple regression analysis for Germany using 2010 survey data. It was concluded that crime victims and fear of crime reduce life satisfaction, and district crime rates do not have a significant effect on life satisfaction.

Ambrey, Fleming, and Manning (2013) investigated the impact of crimes against the property on participants' life satisfaction using the 2002-2010 data of the Household, Income, and Labor Dynamics survey in Australia with a fixed effect panel data method. It was observed that the crimes committed against the property of the individual in the region decreased the life satisfaction of him/her. It has been determined that on average an individual is willing to pay tacitly $3,213 in annual household income to reduce crimes against the property by one unit per 1,000 inhabitants per year in his/her area. Considering that 2.6 people live on average in each household in the sample, it was determined that the implicit willingness to pay is equal to the willingness to pay 1,236 dollars per capita.

Timofeyev and Timofeyeva (2012) investigated the effect of social policies on happiness for 23 selected countries using the Human Development Index for the years 1990, 2000, and 2005, and the data on the share of public social expenditures in gross domestic product via correlation analysis. In this study, it was concluded that the efficient social policies implemented by the public and wealth alone do not affect happiness.

Boarini, Comola, Smith, Manchin, and Keulenaer (2012) investigated the effects of household income, unemployment, education, health status and demographic variables on individuals' life satisfaction for 34 OECD countries, using Gallup World survey data via regression analysis. In this study, it was concluded that the income of the household, education level, being ability to walk alone, clean air and not having children positively affect the life satisfaction of individuals, while unemployment and health problems affect negatively.

Degutis, Urbonavičius, and Gaižutis (2010) investigated the relationship between GDP and subjective well-being, which is expressed as individuals' life satisfaction. Collected country-level data on life satisfaction and GDP per capita data from the standard Eurobarometer survey were used in the study, where they tested Easterlin's paradox, which claims that life satisfaction remains flat in the face of increasing wealth of nations, based on the European Union data for the period 2000-2009. Regression analyzes of both inter-country correlation and intra-country trends show that GDP is positively correlated with life satisfaction. Although the relationship is strongly expressed in Eastern European countries, it also maintains its positivity in many more prosperous European Union (EU) countries.

Sanfey and Teksöz (2007) investigated the factors affecting life satisfaction for transition economies and some other countries during the 1999-2002 period. The integrated data set of the World Values Survey and the European Values Survey was used in the study. The study adopts a two-way fixed effects methodology, which captures country-specific fixed effects by adding country puppets to the regressions and time-specific fixed effects by adding puppets for individual waves of the survey. The analysis shows that individuals in transition economies record lower values in life satisfaction, on average, compared with individuals in countries without transition economies. In the study, it was concluded that the Gini coefficient, which is used to determine inflation, per capita income and inequality in income distribution, affects life satisfaction in transition economies. Also, countries with the most developed economic governance standards and countries with lower inequality have the highest levels of life satisfaction.

Cohen (2007) investigated the effect of crime (violent crime and burglary) and unemployment on life satisfaction with ordinal probit regression analysis using data from the General Social Survey for the United States of America for the years 1993, 1994, 1996, 1998, 2000, 2002, and 2004. It was determined that the crime rates at the district level and the perception of neighborhood security had a low effect on life satisfaction, while burglary had a higher effect on life satisfaction. It has been determined that unemployment, violent crime and burglary negatively affect the life satisfaction of individuals.

Di Tella, MacCulloch, and Oswald (2003) investigated the economic factors affecting happiness by using ordinal probit regression analysis using data from 1975-1992 for 12 European countries and 1972-1994 for the United States. In the study, it was determined that unemployment and inflation affect happiness negatively, and gross domestic product per capita affects positively.

Fuentes and Rojas (2001) investigated the effect of socioeconomic status on subjective well-being for Mexico by regression analysis using data from 339 questionnaires applied in Monterrey and Puebla. In the study, it was concluded that income does not have a strong effect on well-being and happiness. In addition, it was determined that subjective well-being was positively related to needs satisfaction, but not to income.

Adams and Serpe (2000) investigated the relationship between social integration, fear of crime and subjective well-being with multiple regression analysis using 1991 years Los Angeles data for the United States of America. In the study, it was determined that social integration increased life satisfaction by reducing chronic environmental stress factors, fear of crime and being vulnerable to crime. It has been observed that individuals are more defenseless to crime in areas that are described as slums. It was concluded that being vulnerable to crime and fear of crime decrease life satisfaction.

Witter, Okun, Stock, and Haring (1984) investigated the relationship between formal education and subjective well-being for the United States of America using meta-analysis method. It has been concluded that formal education is positively related to subjective well-being. It has been determined that this relationship is stronger in women than in men and the elderly than in the young.

4. DATA SET AND METHOD

The effect of socioeconomic factors on life satisfaction was investigated by System GMM analysis for 25 OECD countries[1] for the period 2013-2018 using OECD, European Statistical Office (Eurostat- European Statistics), and the data of the Turkish Statistical Institute (TUIK). In the analysis, independent variables (unemployment rate, gross domestic product per capita, Gini coefficient (Gini coefficient of disposable income), social expenditures (the ratio of public social expenditures to gross domestic product), number of higher education graduates (higher education graduate 25- 64 age group population) and violent crimes (murder, injury and sexual crimes) were included as independent variables) were included within the scope of socioeconomic factors. Life satisfaction was included as a dependent variable. Life satisfaction data are derived from OECD Better Life Index data.

Since the life satisfaction variable has data for the period of 2013-2018, the analysis period in the study was determined as 2013-2018. Gini coefficient and violent crimes data were obtained from Eurostat; unemployment rate, gross domestic product per capita, social expenditures, and the number of higher education graduates were obtained from OECD data. Since the Gini coefficient and violent crimes are the data of 25 OECD countries, 25 OECD countries are included in the analysis, although there is data for 34 OECD countries for other independent variables (unemployment rate, gross domestic product per capita, social expenditures and the number of higher education graduates).

Dependent and independent variables are abbreviated in Table 1 for ease of use. In this context, the life satisfaction variable is abbreviated as LS, unemployment rate UR, gross domestic product per capita GDPPC, Gini coefficient GINI, social expenditures SE, violent crimes VC, higher education graduates HEG.

The model of the study was created linearly. In the model in Equation 1, y_it represents "life satisfaction" ; x_{it} represents the independent variables affecting life satisfaction (UE, GDPPC, GINI, SE, VC, HEG), In the ε_{it} error component consisting of μ_i and v_{it}; μ_i stands for fixed effects, v_{it}v_

[1] Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Poland, Portugal, Slovak Republic, Spain, Sweden, Switzerland, Turkey, United Kingdom, Estonia, Slovenia.

represents shocks known as idiosyncratic. i is the country (25 OECD countries) and t is the time (2013-2018).

$$y_{it} = \alpha y_{i,t-1} + x_{it}\beta + \varepsilon_{it} \quad (1)$$

Models in which the lagged value of the dependent variable is included as an independent variable in the model are defined as dynamic models. In these models, different estimation methods have been developed since the error term and the lagged value of the dependent variable are correlated and therefore consistent and ineffective estimation results occur in dynamic models. In the method developed by Anderson and Hsiao (1981), in which instrumental variables were used, the correlation between the lagged value of the dependent variable and the error term was tried to be eliminated by taking the difference. In addition, it has been taken into account that the instrumental variables used in the method are correlated with the independent variables that are not correlated with the error term. Arellano and Bond (1991), in the method developed by Anderson and Hsiao (1981), the GMM method was developed by using the lagged values of the dependent and independent variables as the instrumental variable in the first difference equation, on the grounds that all moment conditions were not used in this method. Arellana and Bover (1995) and Blundell and Bond (1998) developed the system GMM estimator, which is an improved version of the Arellano and Bond (1991) estimator, in which the difference and level equations are included in the model. In the method developed by Arellano and Bond (1991), they suggested that the results obtained from the model may be biased in cases such as the short analysis period of the study and working with unbalanced panel data (Blundell and Bond, 1998: 116-122).

In dynamic panel data analysis, the system GMM estimator gives more consistent and unbiased estimation results than the difference GMM estimation results, since it reduces the finite sample bias compared to the difference GMM estimator (Baltagi, 2005: 147-148).

There are necessary conditions for the validity of the system GMM estimator. In the model, out of the test results AR (1) ve AR (2) according to AR (2) test results, the null hypothesis must be accepted. In this case, it will be determined that there is no quadratic autocorrelation in the error term. In the model, the number of instrumental variables should be less than the number of observations. When there are too many instrumental variables, the estimation results may be inconsistent and biased. According to the Hansen test result, the null hypothesis should be accepted. In this case, the validity of the instrumental variables is accepted in the model. In addition, the dependent variable less than one must have a lagged value (Roodman, 2006: 33-43).

5. ANALYSIS RESULTS

As seen from the System GMM results in Table 1 below, the model of the study is meaningful as a whole. The statistical significance of the lagged value (LS t-1) of the dependent variable (LS) in the model at the 0.01 level indicates the validity of the dynamic features in the model. The significance of Wald test statistic at 0.01 level, Hansen test statistic, and AR (2) test statistic above 0.05 support the validity of the model. Due to the test statistics in question being greater than 0.05, it means that the null hypothesis is accepted. In this case, the Hansen test statistic shows the validity of the instrumental variables in the model, and the AR (2) test statistic shows that there is no autocorrelation in the model. Thus, there will be no identification errors in the model.

According to the analysis results in Table 1, the significance of the value of the lagged dependent variable at the 0.01 level supports the validity of the model. It was observed that this variable affected the dependent (explained) variable positively. This result shows that the life satisfaction levels of individuals one year ago positively affect their life satisfaction levels in this period. According to other results obtained in the analysis, unemployment and income negatively affect individuals' life satisfaction, while gross national product per capita and higher education graduates affect positively. Social expenditures and violent crimes have no effect on life satisfaction.

The results of the analysis support that good economic conditions rather than security will increase the life satisfaction of individuals in 25 OECD countries. Although the increase in violent crimes will pose a danger to the life safety of individuals, the low rate of the murder crime, one of the violent crimes in almost all 25 OECD countries may have an effect on the fact that it does not affect their life satisfaction. It can be thought that these crimes do not affect the life satisfaction of individuals. Although the decrease in violent crimes reduces the anxiety of individuals in terms of their safety, it may not increase their life satisfaction. It is seen that the satisfaction of individuals with their lives depends on the decrease in unemployment and the Gini coefficient, which are economic factors, and the increase in gross national product per capita. The fact that social expenditures do not affect individuals' life satisfaction suggests that individuals in these countries want to get job opportunities rather than help. It can be said that providing justice in income distribution will be effective in the satisfaction of individuals with their lives by increasing their economic welfare in their countries. When these situations occur, it can be thought that social expenditures do not have an effect on the life satisfaction of individuals, since there will not be much need for an increase in social expenditures. Considering that the majority of individuals with a high level of education are employed, it can be accepted that the level of education is indirectly related to economic factors. In this case, it can be thought that as the level of education increases, the economic conditions will be better and thus the life satisfaction of the individuals will increase. If separate analyzes are made for each of the 25 countries, it can be thought that different results may be obtained for some countries with relatively different socioeconomic structures. It can be said that the results obtained in the study are in accordance with the expectations since the socioeconomic structure shows similarity across the countries.

Table 1. System GMM Results

Dependent Variable: Life Satisfaction (LS)	
Independent Variables	**Coefficicent**
LS $_{t-1}$	0.5641449***
	(0.000)
UR	-0.016599***
	(0.010)
GDPPC	5.4600006
	(0.006)
GINI	-0.0200798***
	(0.000)
SE	0.002312
	(0.650)
VC	1.7200008
	(0.869)
HEG	0.0138319***
	(0.002)
Number of Observations	125
Number of Instrumental Variable	21
Wald (chi2)	142078.99***
	(0.000)
AR(1) test probability value	0.015
AR(2) test probability value	0.258
Hansen test probability value	0.197

*** It shows the level of significance at the 0.01,** 0.05, * 0.10 level.

6. CONCLUSION

It can be said that the results obtained from this analysis are in accordance with the expectations and show similarities with the results obtained from the studies in the literature. Although the variables in the analysis are used separately in different studies, it is aimed to determine the effect of each variable by including these variables together in this study. According to the results of the analysis, it has been determined that economic variables have a predominantly effect on life satisfaction in 25 OECD countries. In these 25 countries, it is necessary to attach importance to the economic policies to be implemented by the state in order to ensure the life satisfaction of individuals and therefore their happiness, in this context, first of all, unemployment should be reduced, gross national product per capita should be increased and inequality in income distribution should be eliminated. The results of this analysis show that social expenditures do not affect the life satisfaction of individuals in these countries. In this case, it can be thought that individuals want to have job opportunities rather than social assistance.

An increase in the gross national product per capita in a country will create an increase in production and investment, leading to an increase in employment opportunities and a decrease in unemployment. In this case, there will be a decrease in the number of the population in need of help, and there will be no requirement for an increase in social expenditures. According to the welfare state approach, the state plays an active role in ensuring the economic and social welfare of individuals, and in this context, it carries out social expenditures, thus ensuring that individuals are satisfied with their lives. On the other hand, expenditures are withdrawn from the whole society, including the low-income and businesses, through taxes. If positive results are obtained from the economic policies implemented by the state in order to ensure the economic welfare of the society, it may not be necessary to increase the social expenditures to be made so that the individuals are not below the minimum living standards. For this reason, it can be thought that social expenditures do not affect the life satisfaction of individuals. Considering the result of the analysis, although the importance of making social expenditures in accordance with the welfare state, the factor that increases the life satisfaction of individuals is the policies that will eliminate the economic problems such as reducing unemployment. In order to investigate the life satisfaction of individuals within the scope of security, violent crimes were included in the analysis as an indicator of life safety. In the analysis, it was determined that violent crimes including murder, injury and sexual crimes do not have an effect on the life satisfaction of individuals like social expenditures, and it can be said that the low rate of murder crimes in 25 OECD countries may have an effect on this situation. It can be accepted that violent crimes do not have an effect on individuals' life satisfaction, due to the significant differences between countries in violent crimes and the absence of very high rates of violent crime across 25 countries. The results of the analysis present that governments in 25 OECD countries should develop policies to improve economic conditions rather than their efforts to provide minimum living conditions through social expenditures.

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