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HOŞNUTSUZLUĞUN SEÇİLMİŞ EKONOMİK FAKTÖRLER İLE İLİŞKİLENDİRİLMESİ: G7 ÜLKELERİ İÇİN BİR UYGULAMA

CORRELATING DISCONTENT WITH SELECTED ECONOMIC FACTORS: AN APPLICATION FOR G7 COUNTRIES

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ÖZET
Hoşnutsuzluk az gelişmiş ve gelişmekte olan ülkelerin en büyük sorunlarından biri olarak yer almaktadır. Gelişmiş ülkeler açısından durum merak edilerek çalışmada G7 ülkeleri incelenmektedir. Yoksulluk bir tek ekonomileri değil sosyal ve demografik olarak da birçok olumsuzlukları doğurmaktadır. Bu çalışmanın amacı, gayri safi yurt içi hasılanın 1991-2022 yıllarında hoşnutsuzluk endeksi, gayri safi sabit sermaye oluşumu ve işgücü toplamı üzerindeki etkisini ölçmektir. Bu amaçla G7 ülkelerinin verileri kullanılarak bir panel veri analizi yapılmaktadır. Analiz sonuçlarına göre, tesadüfi etkiler yönteminin kullanılmasına karar verilmiştir. Gayri safi yurt içi hasılanın, hoşnutsuzluk endeksi, gayri safi sabit sermaye oluşumu ve işgücü toplamı değişkenleri üzerinde pozitif ve hoşnutsuzluk endeksi harici diğer değişkenlerden anlamlı bir etkisi olduğu gözlenmektedir.
Anahtar Kelimeler: Hoşnutsuzluk Endeksi, Panel veri, G7 ülkeleri

ABSTRACT
Discontent is a significant issue in both underdeveloped and developing nations. However, the situation in developed countries also warrants examination. This study therefore focuses on the G7 countries to explore this phenomenon. Poverty induces numerous adverse effects, not only economically but also socially and demographically. This study aims to measure the impact of gross domestic product (GDP) on the discontent index, gross fixed capital formation, and total labor force from 1991 to 2022. To achieve this, panel data analysis was conducted using the data from the G7 countries. The analysis results indicated that the random effects method was appropriate. The findings revealed that GDP positively and significantly affected gross fixed capital formation and the total labor force. However, no significant relationship was found between GDP and the discontent index.
Key Words*:* Discontent Index, Panel data, G7 countries

INTRODUCTION

Countries aim to bolster their development by enhancing per capita income. Concurrently, there is a pressing need to enhance both economic development and social structure. In essence, quantitative progress should be complemented by qualitative parameters. Achieving this necessitates improving the social fabric within production processes. Thus, the significance of human satisfaction becomes pivotal for countries, influencing not just economic growth but also human development.

In national economies, inflation and unemployment, which are macroeconomically crucial, stand out prominently compared to other economic issues. The discontent index aggregates these two variables. Changes in the revised discontent index over time are directly influenced by additions of economic growth and long-term interest rates. Increases in economic growth also have significant implications for discontent, thereby directly impacting the quality of life in the country.

The study examines the data on the discontent index, economic growth, gross fixed capital formation, and total labor force for the G7 countries (France, Germany, Italy, Japan, Canada, United Kingdom, and the United States) from 1991 to 2022. The data analyzed were sourced from the official websites of the International Monetary Fund and the World Bank. The objective of the study was to investigate the interrelationships among economic growth, the discontent index, gross fixed capital formation, and total labor force within the G7 countries.

Theoretical Background

In the 1970s, the oil crisis led to a decrease in oil supply, which caused prices to rise and increased costs for oil-importing countries, resulting in economic contractions. The price increases led to inflation, while economic stagnation became apparent. As a result of this crisis, the concept of stagflation, where inflation and stagnation occur simultaneously, emerged (Kaya, 2023).

Inflation and unemployment rates, which are macroeconomic variables indicating a country's healthy economy and development, form the basis of the discontent index proposed by Arthur Okun in the 1970s. The discontent index, introduced by Okun as the sum of inflation and unemployment rates, has been revised by many economists over the years (Tunçay, 2021:242). Arthur Okun's discontent index (ODI) is expressed as follows:

ODI = |Unemployment Rate| + |Inflation Rate|

The reason for considering the absolute values of the rates is that both inflation and deflation cause discontent in the country (Lowell & Tien, 2000:1). The discontent index, revised by many economists, was expanded in 1999 by Robert Barro to include economic growth and long-term interest rates (10-year bond yield) (Kasap, 2023). In this index, as growth decreases, discontent increases (Barro, 1999). Robert Barro's discontent index (BDI) is expressed as follows:

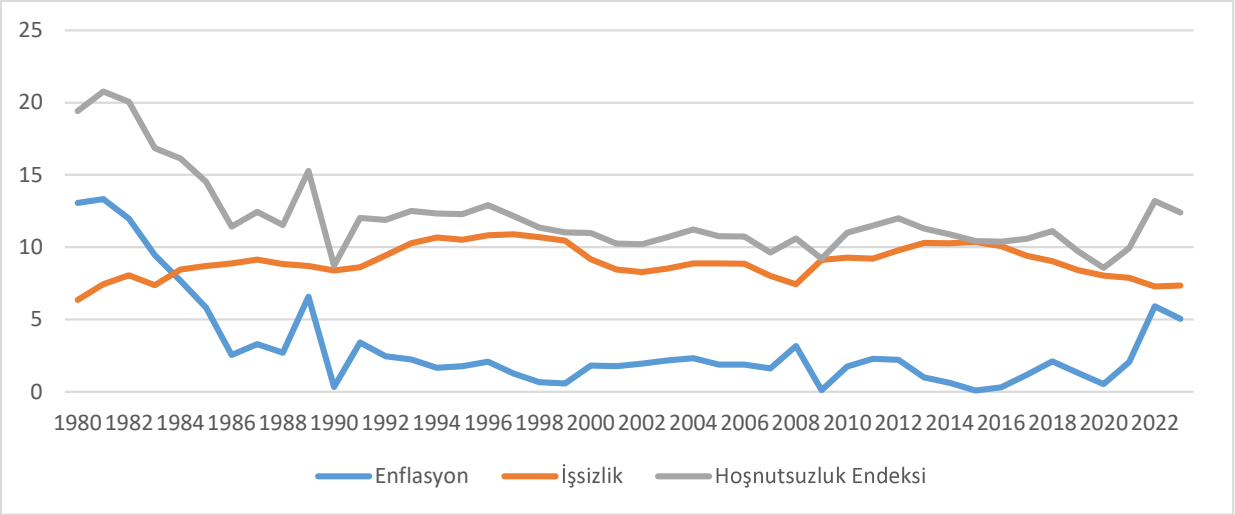
BDI = (Unemployment Rate + Inflation Rate + Interest Rate) – Growth Rate

The observed increase in the discontent index in the economy reveals an unhealthy macroeconomy, indicating adverse economic effects (Tunçay, 2021). The discontent index, which holds a significant and influential place in the literature, maintains part of its dominance through macro policies, while the other part is heavily influenced by internal and external economic conditions that are unavoidable due to external risks (Pogoy et al., 2016). It is evident that the discontent index is an effective indicator in the literature.

Development of the Index Across Countries

The discontent index of the G7 countries is measured by inflation and unemployment. The index results for each country are presented in separate graphs, with corresponding inflation and unemployment rates provided for each index. The data for each country is depicted in the graphs below.

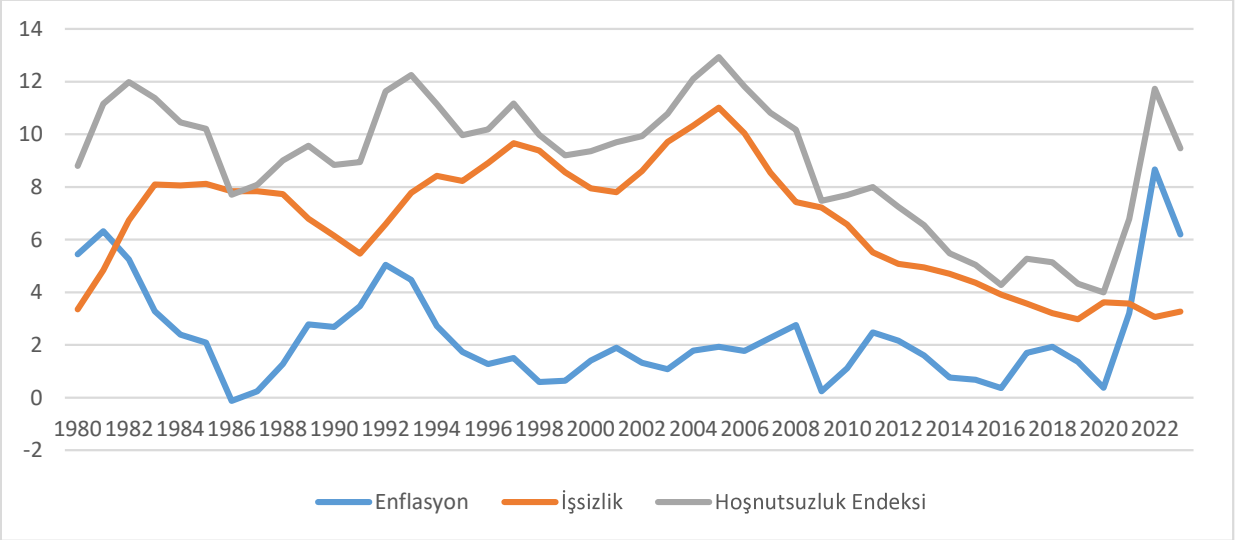
Graph 1. Data for France's inflation, unemployment, and discontent index.



Source: Country-specific data were obtained from the International Monetary Fund and organized by us.

When Graph 1 is examined, it is observed that the inflation and unemployment rates have fluctuated within a specific range from 1980 to 2023. Consequently, the discontent index also fell within this same range. Upon careful inspection of the graph, an increase in inflation from 1988 to 1989 and a decrease from 1989 to 1990 directly affected the discontent index. Similar decreases and increases in the unemployment rate clearly had an impact on the discontent index. The global economic crisis in 2008, observed worldwide, led to a decrease in the inflation rate and an increase in the unemployment rate. As a result, a fluctuating trend was observed in the following years.

Graph 2. Data for Germany's inflation, unemployment, and discontent index

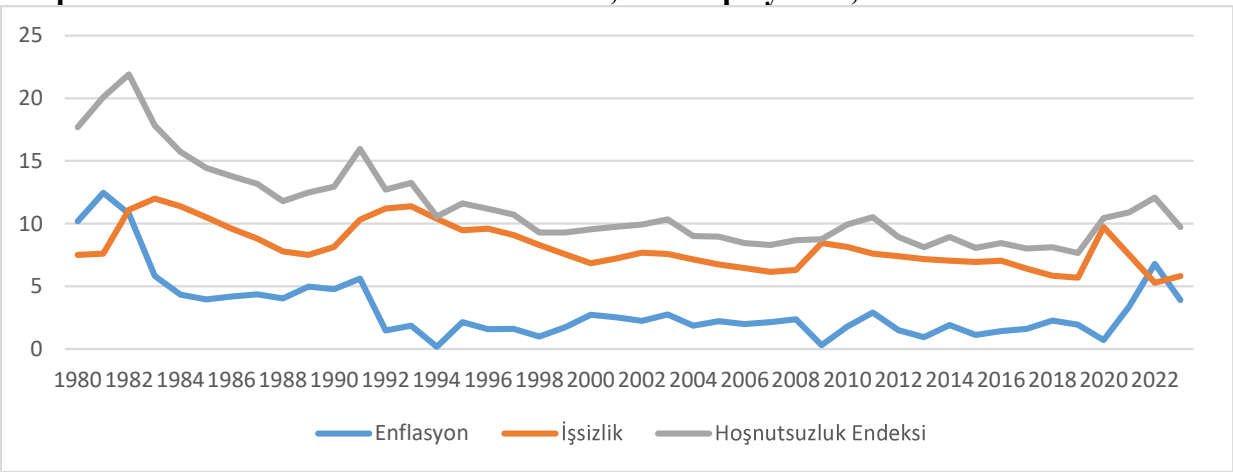


Source: Country-specific data were obtained from the International Monetary Fund and organized by us.

When examining Graph 2, it is observed that the inflation and unemployment rates fluctuated from 1980 to 2023. Consequently, the discontent index also exhibited a fluctuating pattern. Upon careful inspection of the graph, inflation experienced a significant decrease from 1981 to 1986, while the unemployment rate showed a steady increase from 1980 to 1983. This pattern became evident multiple times over the years. This fluctuating trend similarly affected

the discontent index. The global economic crisis in 2008, observed worldwide, led to a decrease in both inflation and unemployment rates, with the unemployment rate showing a sharper decline. As a result, a fluctuating trend was observed in the following years.

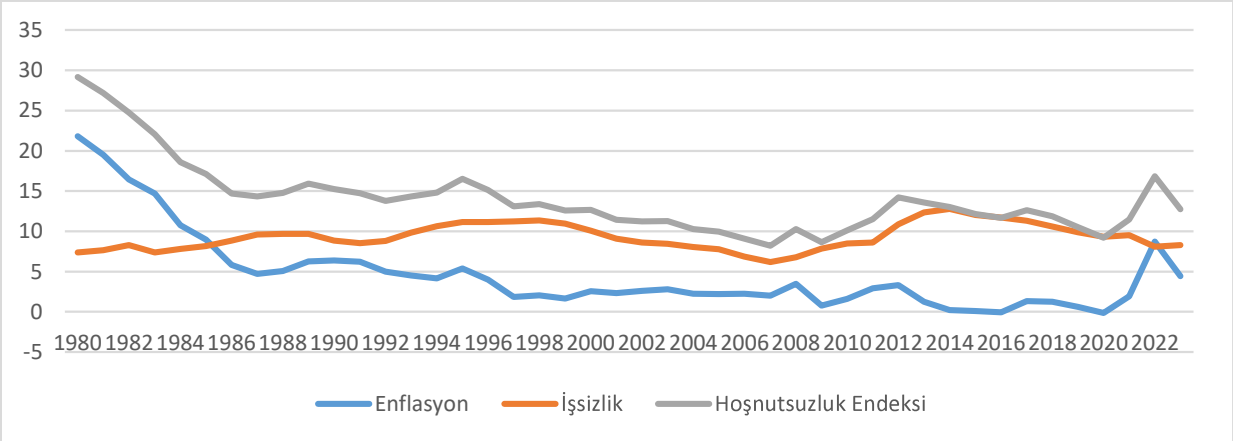
Graph 3. Data for Canada's inflation, unemployment, and discontent index



Source: Country-specific data were obtained from the International Monetary Fund and organized by us.

When examining Graph 3, it is observed that both inflation and unemployment rates fluctuated with declines from 1980 to 2023. Consequently, the discontent index also showed a similar fluctuating pattern. Upon careful inspection of the graph, inflation increased from 1980 to 1981, followed by a significant decrease thereafter, with similar patterns observed in subsequent years. The unemployment rate showed an increase from 1981 to 1983 and fluctuated within certain periods in other years. This pattern became evident multiple times over the years and similarly affected the discontent index. The discontent index showed an increase until 1982, followed by significant declines thereafter. Over the years, while experiencing increases and decreases, periodic declines were predominant.

Graph 4. Data for Italy's inflation, unemployment, and discontent index

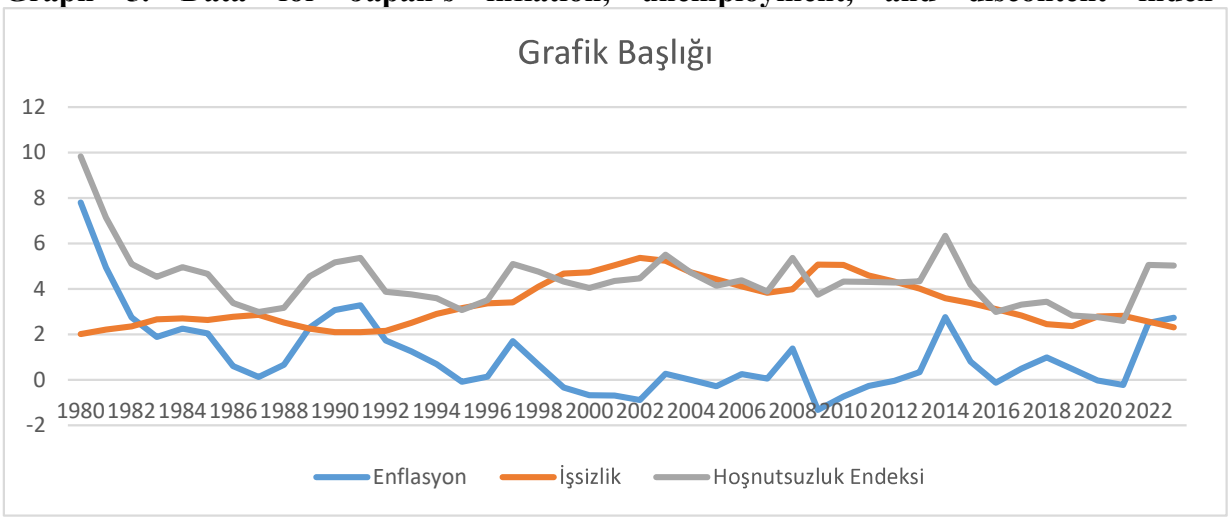


Source: Country-specific data were obtained from the International Monetary Fund and organized by us.

When examining Graph 4, it is observed that both inflation and unemployment rates fluctuated with declines from 1980 to 2023. Consequently, the discontent index also showed a similar fluctuating pattern. Upon careful inspection of the graph, the inflation rate experienced significant declines from 1980 to 1987, while the unemployment rate fluctuated with

increases and decreases within the same period. This pattern became evident multiple times over the years and similarly affected the discontent index. The discontent index showed a decline from 1980 to 1987, followed by fluctuations in specific periods after 1988.

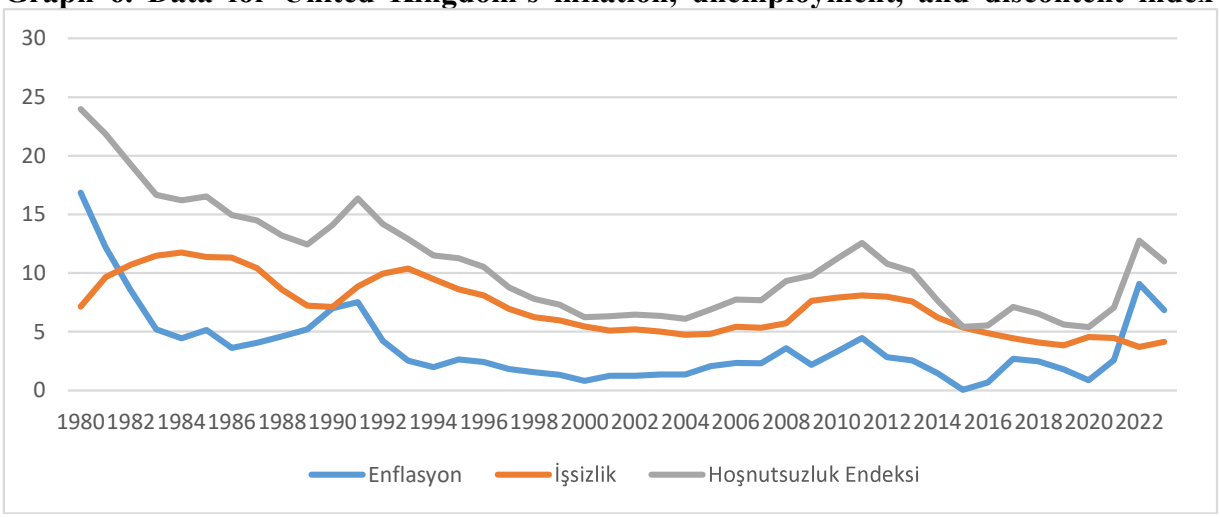
Graph 5. Data for Japan's inflation, unemployment, and discontent index



Source: Country-specific data were obtained from the International Monetary Fund and organized by us.

When examining Graph 5, it is observed that both inflation and unemployment rates fluctuated from 1980 to 2023. Consequently, the discontent index also exhibited a similar fluctuating pattern. Upon careful inspection of the graph, inflation experienced noticeable declines until 1983, followed by fluctuating increases and decreases in subsequent years. The unemployment rate similarly fluctuated with periods of increase and decrease over the years. This fluctuating trend similarly impacted the discontent index. As a result, a fluctuating trend was observed in the following years due to these fluctuations.

Graph 6. Data for United Kingdom's inflation, unemployment, and discontent index

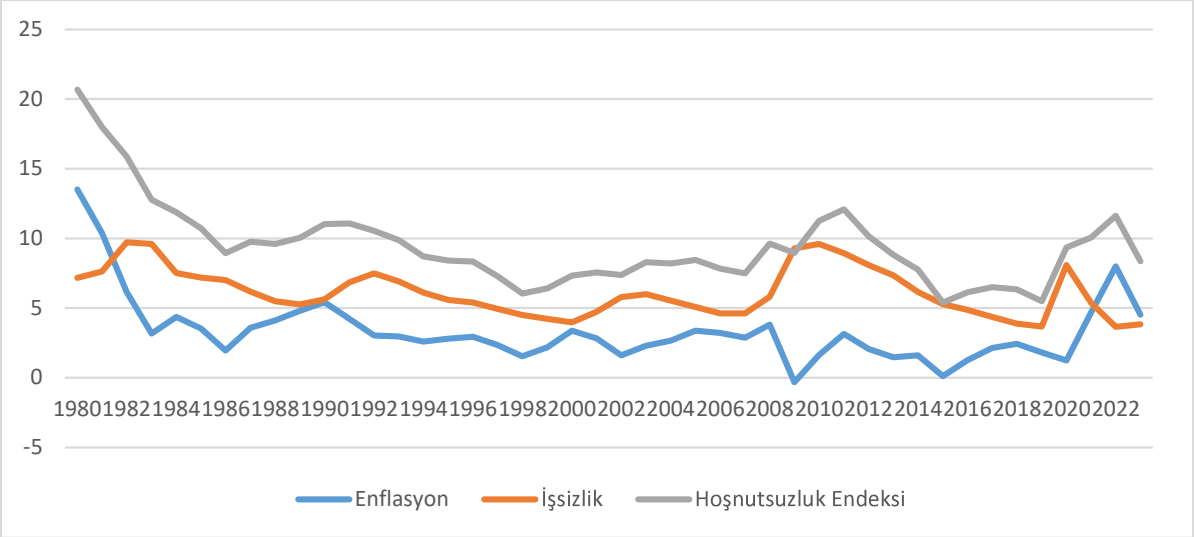


Source: Country-specific data were obtained from the International Monetary Fund and organized by us.

When examining Graph 6, it is observed that both inflation and unemployment rates fluctuated from 1980 to 2023. Consequently, the discontent index also showed a similar fluctuating pattern. Upon careful inspection of the graph, inflation experienced noticeable declines until around 1984, with some slight increases in subsequent years but generally

continuing to decrease overall. The unemployment rate similarly fluctuated with periods of increase and decrease over the years. This fluctuating trend affected the discontent index in the same manner. Overall, a decline was prominent in the variables when viewed in general terms.

Graph 7. Data for USA's inflation, unemployment, and discontent index



Source: Country-specific data were obtained from the International Monetary Fund and organized by us.

When examining Graph 7, it is observed that both inflation and unemployment rates fluctuated from 1980 to 2023. Consequently, the discontent index also showed a similar fluctuating pattern. Upon careful inspection of the graph, inflation experienced noticeable declines until around 1983, but subsequent years showed fluctuating increases without reaching the rates seen in 1980. The unemployment rate remained within the same range over the span of 43 years, showing stability in comparison. This fluctuating and stable pattern affected the discontent index. The global economic crisis, particularly in the United States in 2008, was directly recognized as a global economic crisis observed worldwide. Increases in inflation from 2007 to 2008, followed by significant increases in the unemployment rate, were observed. As a result, a fluctuating trend was observed in the following years.

Literature Review

In their study titled "Macroeconomic Performance Measurement with ÇKKV Methods: The Case of D8 Countries in 2021-2022" (ÇKKV YÖNTEMLERİYLE MAKROEKONOMİK PERFORMANS ÖLÇÜMÜ: 2021-2022 DÖNEMİ D8 ÜLKELERİ ÖRNEĞİ), Hokka and BEKTAŞ (2024) analyzed the macroeconomic indicators of D8 countries (Bangladesh, Indonesia, Iran, Malaysia, Egypt, Nigeria, Pakistan, Turkey) during the period 2021-2022. The study focused on key indicators such as GDP, unemployment, inflation, the poverty index, and GDP per capita. The authors employed the Entropy and ARAS (Additive Ratio Assessment) methods as weighted criteria in their analysis. Upon evaluating the findings, the study identified inflation, the poverty index, and GDP per capita as the three most significant criteria. In terms of performance, Malaysia, Bangladesh, and Indonesia emerged as the top three countries.

In Kaya's thesis titled "High-quality growth in developed and developing countries" (Gelişmiş

ve Gelişmekte Olan Ülkelerde Yüksek Kaliteli Büyüme), the dynamics of growth among 43 developed countries and 57 developing countries between 2002 and 2019 were analyzed. The thesis constructed a high-quality growth index from these growth dynamics and conducted analyses using variables such as the share of gross fixed capital formation in GDP, the economic discontent index, the financial development index, and the institutional quality index. These variables were analyzed using panel robust least squares regression methods. According to the analysis results, the human discontent index had a negative effect on high-quality growth in developed countries but a positive effect in developing country groups. Additionally, in both developed and developing countries, the financial development index and institutional quality index positively affected the share of gross fixed capital formation in GDP.

In Akçayır's study titled "The Effects of Exchange Rates and Loan Interest Rates on the Okun Misery Index" (Döviz Kurlarının ve Kredi Faiz Oranlarının Okun Sefalet Endeksi Üzerindeki Etkileri), the sensitivity of the Okun misery index to exchange rates and consumer loan interest rates in Turkey from 2005Q1 to 2020Q4 was examined. The study employed unit root tests including ADF, PP, KPSS, and Kapetanios, as well as Maki's Structural Break Cointegration test, the DOLS method for error correction, and the Vector Error Correction Model (VECM) to explore causality relationships. Upon analyzing the results, it was observed that all series exhibited stationarity in first differences, indicating cointegration, and a causal relationship was identified between the series in both the long and short terms.

In Albayrak's study titled "HAPPINESS ECONOMY AND TURKEY" (Mutluluk Ekonomisi Ve Türkiye), economic factors such as income, inflation, and unemployment, which influence happiness in Turkey, were generally examined. Data extracted from TÜİK (Turkish Statistical Institute) over the years were analyzed using tables and graphs. According to the findings, it was observed that income and happiness were positively correlated, and that an increase in economic growth led to higher income levels, which in turn enhanced the happiness levels of individuals residing in the country. Governments were noted to implement necessary incentives aimed at enhancing the well-being of citizens, thereby establishing a direct connection between happiness and the economy.

In Tunali and Akdag's study titled "THE IMPACT OF ECONOMIC DISCONTENT ON INCOME DISTRIBUTION: THE CASE OF SELECTED FRAGILE ECONOMIES" (İktisadi Hoşnutsuzluğun Gelir Dağılımı Üzerindeki Etkisi: Seçili Kırılgan Ekonomiler Örneği), the impact of economic discontent, total factor productivity, and human capital on income distribution was analyzed for Turkey, Brazil, Argentina, and Indonesia, which had fragile economies between 1985 and 2019. The analysis employed panel cointegration tests. The results suggested that a long-term relationship between economic discontent, total factor productivity, human capital, and income distribution could not be established.

In Tunçay's study titled "The Relationship Between the Economic Discomfort Index and Non-Performing Loan Ratios: An Empirical Analysis for the Turkish Economy" (Hoşnutsuzluk Endeksi ve Takipteki Kredi Oranları İlişkisi: Türkiye Ekonomisi Üzerine Ampirik Bir Analiz), the mutual interaction between the economic discomfort index and the ratio of non-performing loans in Turkey was examined. To conduct the analysis, the Breakpoint Extended Dickey-Fuller unit root test and VAR analysis were utilized. The results indicated that changes in the economic discomfort index and changes in the ratio of non-performing loans mutually influenced each other in Turkey. However, it was concluded that changes in the

economic discomfort index had a longer-term impact on changes in the ratio of non-performing loans.

In the study by Acar and Topdağ (2021) titled "Determinants of Health Expenditures on the Axis of the Misery Index and Economic Development in OECD Countries: A Non-Additive Fixed Effects Panel Quantile Regression Approach" (OECD Ülkelerinde Sefalet Endeksi ve Ekonomik Kalkınma Ekseninde Sağlık Harcamalarının Belirleyicileri: Toplamsal Olmayan Sabit Etkili Panel Kantil Regresyon Yaklaşımı), the determinants of health expenditures in 34 OECD countries between 2001 and 2019 were analyzed within the framework of the misery index and economic development. In addition to the real GDP per capita and the misery index, variables such as urban population, life expectancy at birth, household expenditures, and political stability as a state-institutional factor were included in the analysis. The analysis method used was the fixed effects panel quantile regression method. The results indicated that the misery index and GDP had a positive impact on health expenditures at every quantile level. Based on these findings, the study suggested that improving health expenditures should be prioritized over macroeconomic conditions for more effective outcomes.

In Salihoğlu's thesis (2019) titled "The Effect of Economic and Political Factors on Human Development" (Ekonomik Ve Politik Faktörlerin İnsani Gelişmişlik Üzerindeki Etkileri), the relationships between the discontent index, political stability, economic freedom, global peace, and life satisfaction with human development were explored. The analysis was conducted by considering the connection between economic and political factors and human development. Classical regression analysis and robust regression tests were employed. The results indicated that while economic freedom and political stability yielded the expected positive outcomes, the discontent index had a positive relationship, and that the dependent variable, the human development index, had a negative relationship with the global peace and life satisfaction indices. Theoretically, it was observed that political stability and economic freedom positively influenced human development.

In Özcan's study (2016) titled "DISCONTENT INDEX AS A POVERTY INDICATOR, AN ESSAY FOR TURKEY" (Yoksulluk Göstergesi Olarak Hoşnutsuzluk Endeksi, Türkiye İçin Bir Deneme), the research questions whether the "discontent index" can be used as an indicator of poverty, amidst political claims that misery is decreasing while prosperity is increasing. To address this question, the study analyzes the impact of the poverty gap, Okun's discontent index, and Barro's discontent index on Turkey and EU countries between 2003 and 2013. After conducting a stationarity test on the panel data and performing a cointegration test, the study finds evidence of a long-term relationship between Okun's discontent index and the poverty gap, as well as between Barro's discontent index and the poverty gap.

METHODS AND MATERIALS

In the study, the G7 countries including France, Germany, Japan, Canada, Italy, the United Kingdom, and the United States are considered. The study focuses on one of the most significant macroeconomic indicators of the economy, the gross domestic product (GDP), which is taken as the dependent variable. The independent variables are the discontent index (DI), gross fixed capital formation (K), and total labor force (L). The data, spanning from 1991 to 2022, were obtained from the World Bank (2024) and IMF (2024) databases.

Table1. Variables

Variables	GDP	Source	Time Interval
Gross Domestic Product	GDP	WB (2024)	1991-2022
gross fixed capital formation	K	WB (2024)	1991-2022
Discontent Index[1]	DI	IMF (2024)	1991-2022
Labour Force	L	WB (2024)	1991-2022

[1] Inflation rate + Unemployment rate

For the analysis, all variables except for the discontent index (DI) were used in their natural logarithm forms (ln). The panel data model to be estimated for the G7 countries, which consist of France, Germany, Japan, Canada, Italy, the United Kingdom, and the United States, includes the dependent variable lnGDP and the independent variables DI, lnK, and lnL. The specified model is as follows:

$$\ln GDP_{it} = \beta_0 + \beta_1 DI_{it} + \beta_2 \ln K_{it} + \beta_3 \ln L_{it} + e_{it}$$

In this model, ln represents the natural logarithm, i represents the country, and t represents the time period. The βs are the coefficients to be estimated, and e is the random error term. Descriptive statistics for the variables are presented in Table 2.

Table 2. Descriptive statistics

Variables	Observation Number	Mean	Standard deviation	Min	Max
lnGDP	224	28.71481	0.7617642	27.47958	30.67205
DI	224	9.035223	3.101324	2.582	16.828
lnL	224	17.50583	0. .6702689	16.50893	18.94061
lnK	224	27.1824	0.7824708	25.84172	29.15886
GDP	224	4.28e+12	4.81e+12	8.59e+11	2.09e+13
DI	224	9.035223	3.101324	2.582	16.828
L	224	5.18e+07	4.37e+07	1.48e+07	1.68e+08
K	224	9.24e+11	9.95e+11	27.47958	30.67205

The table includes observation number, mean, standard deviation, maximum, and minimum statistics. The number of observations for each variable was determined as 224. GDP, representing gross domestic product, had a mean of 4.28%, DI, representing the discontent index, had a mean of 9.03%, L, representing total labor force, had a mean of 5.18%, and K, representing gross fixed capital formation, had a mean of 9.24%. Considering the standard deviation data, it can be stated that K exhibited the highest variability among the variables.

RESULTS

To apply panel data analysis and obtain accurate results from the data, it is essential for variables to be stationary, meaning they should not contain unit roots. The stationarity of variables is tested using Levin, Lin, and Chu (LLC) (Levin, Lin Chu 2002) and Im, Pesaran, and Shin (IPS) (Im, Pesaran, Shin 2003) unit root tests. After confirming stationarity, the correlation structure among independent variables is examined to test for relationships between them.

Table 3 presents the results obtained from the LLC and IPS unit root tests.

Table 3. Unit root test results

	LLC		IPS	
	Test statistics	P-value	Test statistics	P-value
lnGDP	-4,2288	0,0000*	-0,5591	0,2880
dlnGDP	-6,6816	0,0000*	-8,3451	0,0000*
d2lnGDP	-8,8023	0,0000*	-10,6098	0,0000*
lnK	-2,0612	0,0196*	1,0172	0,8455
dlnK	-6,1964	0,0000*	-6,5638	0,0000*
d2lnK	-8,9605	0,0000*	-9,7298	0,0000*
DI	-0,9972	0,1593	-2,8092	0,0025*
dDI	1,0423	0,8514	-5,6004	0,0000*
d2DI	-5,0364	0,0000*	-9,5521	0,0000*
lnL	-1,7063	0,0440*	2,1527	0,9843
dlnL	-3,4790	0,0003*	-6,1973	0,0000*
d2lnL	-7,5524	0,0000*	-9,6977	0,0000*

Note: * Indicates significance at 1% level.

In Table 3, the results of stationarity tests for variables are presented. It is observed that gross fixed capital formation (K) is stationary at levels in LLC but not stationary in IPS. Therefore, the first differences of gross fixed capital formation are taken to achieve stationarity in IPS. Similarly, the labor force variable (L) is stationary at levels in LLC but not in IPS, necessitating the use of first differences to achieve stationarity. Likewise, gross domestic product (GDP) is found to be stationary at levels in LLC but not in IPS, requiring the use of first differences for stationarity. In contrast, for the discontent index (DI), the situation is reversed. The DI variable is found to be non-stationary in LLC but stationary in IPS. Despite taking the first difference in LLC, the DI variable remains non-stationary, but becomes stationary when the second difference is taken.

Table 4. Correlation matrix

	lnGDP	**DI**	**lnK**	**lnL**
lnGDP	1,000			
DI	0,1123	1,000		
lnK	0,7176	0,1039	1,000	
lnL	0,3761	-0,0339	0,2793	1,000

In Table 4, the findings of the correlation matrix are presented to determine the relationships between gross domestic product (GDP), discontent index (DI), gross fixed capital formation (K), and labor force values. There is a positive correlation of 11% between lnGDP and DI, 71% between lnGDP and lnK, and 37% between lnGDP and lnL. It is observed that the highest correlation exists between lnGDP and lnK values.

Table 5. VIF analysis results

Variable	VIF Value	1/VIF
lnK	6,41	0,1561
lnL	6,24	0,1603
DI	1,38	0,7240
Mean VIF	4,67	

In addition to correlation analysis, Variance Inflation Factor (VIF) analysis can be conducted to examine multicollinearity among variables. In this context, a VIF value less than 10 indicates no significant multicollinearity issues among the variables. The test results show that the values are less than 10.

Table 6. Hausman Test

	(b) **se**	**(B)** **te**	**Difference**	sqrt
lnK	0.3719592	0.3708865	0.0010727	0.0042138
lnL	0.674142	0.6580637	0.0160783	0.0456826
DI	0.0009064	0.0008914	0.0000149	0.0000849
Chi2(3) 0,18 Prob>chi2 = 0.9807				

The hypotheses for the Hausman Test are as follows:
Ho: The random effects model is valid.
H1: The fixed effects model is valid.

Based on the test result, the probability value of 0.9807 is greater than 0.05; thus, the null hypothesis is accepted. Therefore, it is concluded that the assumptions of the random effects model are valid, and that there is systematic difference among the parameters.

Table 7. Pooled Ordinary Least Squares (OLS), Fixed Effects, and Random Effects Estimator Results

lnGDP	Pooled OLS	Random Effects (RE)	Fixed Effects (FE)
DI	-0.0067763	0.0009064	0.0008914
	(0.0349011)	(0.000794)	(0.0007894)
lnK	0.9902294***	0.3719592***	0.3708865***
	(1.191712)	(0.0275147)	(.0271901)
lnL	-2.467292***	0.674142***	0.6580637***
	(6.772081)	(0.1668053)	(0.1604279)
Constant Term	28.73318***	0.0065347	0.0066472
	(0.0653855)	(0.0015448)	(0.0021293)
R^2	0.0035	0.5572	0.5572

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

In the first columns of Table 6, the effects of the discontent index, gross fixed capital formation, and total labor force variables – added as control variables in the model – on GDP are presented. The variables are statistically significant at the 1% level according to the Pooled OLS, FE, and RE methods, except for the discontent index in the RE method. The coefficients of the variables other than lnL and DI were found to be positive. According to the findings of the RE model, the explanatory power of the model is 55.72%. The coefficient of

lnK is positive and significant at the 1% level. Therefore, a 1% increase in K will increase GDP by 0.3719592%. The coefficient of lnL is positive and significant at the 1% level. A 1% increase in L will increase GDP by 0.674142%.

DISCUSSION AND CONCLUSION

The G7 countries are classified as an advanced group of countries based on their economic structure. In this context, a study covering the years 1991-2022 was conducted focusing on 7 countries and 4 key criteria. Panel data analysis was employed to examine the relationship among gross domestic product (GDP), gross fixed capital formation (lnK), total labor force (lnL), and the discontent index derived from unemployment and inflation rates, two fundamental macroeconomic indicators. The analysis aimed to interpret the results using the selected tests in the findings section. To conduct performance analysis for the relevant years, Pooled Ordinary Least Squares (OLS), Random Effects (RE), and Fixed Effects (FE) methods were utilized. Following the analysis, due to issues related to correlation and varying variances across all models, the Random Effects method was determined as appropriate for the model.

Based on the methodological findings, it was observed that gross domestic product (GDP) had a significant positive effect on the variables of the discontent index, gross fixed capital formation (lnK), and total labor force (lnL), excluding the discontent index itself. This indicates that GDP directly influences total labor force and gross fixed capital formation in economies. As GDP increases, these variables also show positive trends. However, it can be argued that despite an increase in GDP, if the populace remains discontented, it may reduce overall quality of life.

In planning economic growth scenarios, it is crucial for countries to consider not only quantitative elements but also qualitative aspects to ensure that households lead happier lives. While it can be stated that a group of advanced countries grows economically, it cannot always be asserted that a growing group of countries simultaneously develop in all aspects.

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