Chapter 37
Comparison of the European Union Countries and Turkey's Macroeconomic Indicators with Best Worst Method

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ABSTRACT

Macroeconomic indicators are used to evaluate the current performance and forecast the future state of the economy. Within the scope of the chapter; macroeconomic indicators such as GDP per capita, unemployment, inflation, real interest rates, and growth rates constitute the criteria of Multi-Criteria Decision Making (MCDM) model. The European Union (EU) countries and Turkey are the alternatives of the MCDM problem. Best Worst Method (BWM) is an MCDM method developed by Jafar Rezaei in 2015. In this method, the decision-maker identifies only the best and worst criteria and compares them with the remaining criteria. In this chapter, the macroeconomic indicators of Turkey and EU countries analyzed by BWM. As a result of the study, Luxembourg ranks first, Denmark second, and Sweden third. The last three countries are Portugal, Croatia, and Greece. Turkey ranks 24th.

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INTRODUCTION

The European Union was established because they thought that diversity would give them power. The European Union made the biggest wave of enlargement in its history in 2004. In the latest wave of enlargement, ten new countries (Cyprus, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Slovakia and Slovenia) joined the European Union. In 2007, the number of European Union members rose to 27 with the participation of Bulgaria and Romania. With the participation of Croatia in 2013, the number of European Union Member countries reached to 28. Turkey was accepted as a full member candidate of the European Union in 1999. It has been requested to provide the conditions in many areas including economy and politics from Turkey for European Union membership. The economy is one of the most important conditions for European Union membership.

In the EU countries, significant deterioration occurred in economic indicators especially in 2009 due to the impact of the European debt crisis. While economic growth rates decreased significantly, unemployment also increased. After the deterioration that continued until 2013, while the growth increased, inflation rates started to decline and unemployment rates showed a downward trend (Ulusoy and Ela, 2015; Eser and Ela, 2015). The current account deficits before the European debt crisis started to be reduced in many countries in 2012 and 2013 (Eurostat, 2018). In 2016, partial economic recovery continued in EU economies. As a result of the monetary policy imposed by the European Central Bank (ECB) together with the falling oil prices and the exchange rate, the decreasing funding cost and the pro-growth fiscal policy have supported growth in the EU. On the other hand, the current account balance continued its positive development in recent years. Germany and the Netherlands contributed positively to the current account balance of the European Union. Inflation rates in the European Union remained low due to the decrease in energy prices. Similarly, labour market conditions in EU countries continued to improve and unemployment decreased in 2016 (European Union, 2016, pp.22-47).

Macroeconomics data are the main indicators of the changes in the national economies. Economic performance of countries can be compared with macroeconomics indicators. Moreover, comments can be made about the countries' economic situation with the help of these indicators. Multi-Criteria Decision-Making methods are used to determine the performance of alternatives or to compare alternatives with each other in the case of two or more conflicting criteria. In this study, it is expected to find out Turkey's macroeconomics position among European Union countries according to macroeconomics indicators by using Multi-Criteria Decision-Making methods.

There are studies that compare the economic performances of Turkey and European Union countries with macroeconomics indicators by using Multi Criteria Decision Making methods. In the six studies examined, commonly used MCDM methods were used, such as AHP, ELECTRE, MOORA, PROMETHEE and TOPSIS. Criterion weights were usually taken as equal and only one year period was studied excluding Ekren and Fındıkci (2016). As a result, it is obvious that new studies should be conducted in this area. Criteria weights should be calculated by using experts' opinion, more period should be covered and newly developed MCDM methods should be used. Therefore, Best Worst Method (BWM), a newly developed Multi Criteria Decision Making method based on linear and non-linear programming, will be used in our study and the data for nine-year period covering 2009-2017 years will be used. Expert opinions will be utilized in determining the criteria weights. Long-term bond interest rates, GDP per capita, unemployment rate, inflation rate and growth rate which are the criteria of this study were chosen from the most frequently used variables in the studies using macroeconomics indicators.

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