Chapter 11
Identifying Key Issues to Handle the Inflation Problem in the Healthcare Industry Caused by Energy Prices:
An Evaluation With Decision-Making Models

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ABSTRACT

This study investigated how energy inflation in the health sector can be controlled. In this context, research has been carried out using both the AHP and the DEMATEL methods. A comprehensive literature review was carried out, and four different criteria were determined. In order to determine which of these criteria is more important, an analysis was carried out using these two different methods. According to the results obtained, it has been determined that the use of renewable energy is the most important factor in eliminating the inflation caused by energy prices in the health sector. Because the best criterion is the same for both the results of AHP and DEMATEL, this situation gives information about the coherency and reliability of the study. Hence, appropriate strategies can be provided based on these results to minimize the inflation problem in the healthcare industry. The findings indicate that it would be appropriate for hospitals to give importance to the use of renewable energy. In this way, hospitals will be able to produce the energy they need themselves.

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INTRODUCTION

Inflation is accepted as one of the most critical problems for the economies. Because high inflation creates uncertainties, companies will not be willing to make new investments in these markets. Due to this situation, the main causes of the inflation can be found, and necessary actions should be taken to overcome this problem. Inflation caused by energy prices poses a serious threat to the health sector. This is because the energy consumption in hospitals is very high. Some equipment used in hospitals, such as a tomography device, consumes a very high amount of energy. On the other hand, energy consumption is high as hospitals provide services all day long. Therefore, the increase in energy prices has a significant impact on hospitals. Therefore, necessary measures should be taken to eliminate the inflation caused by energy prices in the health sector.

In this study, it was investigated how energy inflation in the health sector can be controlled. In this context, research has been carried out using both the AHP and the DEMATEL method. A comprehensive literature review was carried out and 4 different criteria were determined. Energy efficiency is very important in order to solve the energy-related inflation problem. In this context, healthcare companies need to identify and implement practices that can save energy. In this way, less energy will be used in the field, and this will contribute to less impact of inflation. Another important issue in this process is state support (Haiyun et al., 2021). The high inflation problem affects the investments of hospitals negatively. Due to the increasing uncertainty, hospitals have difficulties in determining prices (Yuan et al., 2021). This situation both leads to a decrease in investments and reveals customer dissatisfaction. In order to contribute to the solution of this problem, some support can be provided to hospitals by the state. This will help to eliminate the mentioned negative effect (Zhao et al., 2021).

The use of renewable energy allows hospitals to produce their own energy. This situation contributes to the elimination of the energy-related inflation problem. In this framework, if the hospitals are able to supply the amount of energy they need themselves, their dependence on foreign energy will be eliminated (Li et al., 2021). Therefore, rising energy prices will not affect hospitals much in this case. Hospitals that produce their own energy will be able to manage energy-based inflation more easily (Fang et al., 2021). The implementation of strict rules by the states can also be preferred in managing the inflation problem (Liu et al., 2021). In this framework, the government tries to prevent inflation by interfering with prices. However, this method has been severely criticized as it is a harsh intervention in the free market (Zhou et al., 2021).

To determine which of these criteria is more important, an analysis was carried out using these two different methods. While making calculations by using two different methods, a comparative evaluation can be conducted. This situation has a positive contribution to control the validity and coherency of the analysis results. Accordingly, because the best criterion is the same for both the results of AHP and DEMATEL, this situation gives information about the coherency and reliability of the study. Hence, appropriate strategies can be provided based on these results to minimize inflation problem in healthcare industry.

The biggest limitation of this study is that only the health sector is considered in the review process. Therefore, other sectors such as banking and automotive may also be considered in future studies. In this way, the inflation problem will be managed effectively for different sectors. This will contribute to the stability of the country's economy. In this study, AHP and DEMATEL methods were considered. In other studies, these techniques can also be used with fuzzy numbers. Thus, it will be possible to test the reliability of the findings obtained.