The Examination of Financial Performance of Companies in Tourism Sector, Which Are Being, Traded in Exchange Istanbul (EI) With Data Envelopment Analysis and Total Factor Productivity

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Extensive Summary

Introduction

The main task of the company management who undertook the business objectives is to achieve the best possible and the most successful level of duties. What it is the best or most successful, are determined by management's performance approach. Performance audit is an overall control type operation that aims to demonstrate the active and efficient operation the company's activities. Businesses must compare their situation with their competitors and must constantly update their business strategies at the increasingly globalized businesses due to forefront of competition in the world. From this standpoint businesses must perform an interactive activity control not only limits the issues in their own internal processes, but also, by taking into consideration their opponents which are operating in the same sector.

The development of the tourism industry is possible to operate effectively and efficiently of tourism businesses. Tourism businesses are able to survive, grow and develop with the financial decision which will take place properly at the right time and the right way to implement. Improving the business performance through the use of business resources optimally at financial decisions are important.

Performance evaluation determines to what organizations actively and efficiently utilise sources allocated. One of the analysis methods widely used for performance measurement is efficiency analysis. Such methods as ratio analysis, parametric and non parametric are used in efficiency analysis. The aim of this study is to research the financial efficiencies of 9 tourism companies which are processed in EI 100 between 2009 - 2013 with the help of financial statements. Data Envelopment Analysis (DEA) which is one of none parametric mathematical programming based efficiency measuring method is used to measure for organizational efficiency and Malmquist Total Factor Productivity ((MTFPC)) used in this study. According to the criteria set by the active and inactive as a result of the analysis, tourism businesses have been identified.
Method

In this study, tourism businesses have been identified which are traded at EI as a research universe. The aim of this study is to investigate the effectiveness of tourism enterprises of 9 tourism companies which is located in EI Tourism Index (XTRZM) and depending on index EI XU 100 between the years 2009 - 2013. In this context the businesses were included in the study;

1. Avrasya Oil and Touristic Facilities Corp.(AVTUR),
2. Altnyunus Çeşme Touristic Facilities Corp. (AYCES),
3. Marmaris Altnyunus Touristic Facilities Corp. (MAALT),
4. Martı Hotel Enterprises Corp. (MARTI),
5. Metemtur Hospitality and Tourism Management Corp. (METUR),
6. Net Tourism, Trade and Industry Corp. (NTTUR),
7. Tek-Art Construction, Trade, Tourism Industry and Investment Corp. (TEKTU),
8. Utopya Tourism, Construction, Management, Trade Corp. (UTPYA),
9. Ulaşlar Tourism Investment and Trade Durable Goods Marketing Corp. (ULAS) were analyzed in a total of 9 companies.

DEA method was used to calculate the efficiency value by using financial statements between the years 2009-2013 in the analysis. Data, which was used for activity measurements were obtained from the Finnet 2000 and the Public Disclosure Platform website. The data used in this study are presented in Table 1.

The most important point while DEA performing is the process of identifying the input and output. Although the method get to meet allow the use of multiple input and output, DEA variables is extremely sensitive to selection and data errors. Therefore, input and output variables should be determined measurement of business which must have the best representation of the variable nature of calculation. In this study, 3 input variables and 4 output variables was analyzed that variables was used Gülcü and Cenger's (2013) study. These variables are shown in Table 1.

Table 1. Input and Output Variables Used in the Study

<table>
<thead>
<tr>
<th>INPUTS</th>
<th>OUTPUTS</th>
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<tbody>
<tr>
<td>X1: Current Rate</td>
<td>Y1:Capital Profit</td>
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<tr>
<td>X2: Financial Leverage Ratio(Total Debt / Total Assets)</td>
<td>Y2:Return on Assets</td>
</tr>
<tr>
<td>X3: Real Assets/Constant</td>
<td>Y3:Sales Profitability</td>
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<tr>
<td></td>
<td>Y4:Activity expenses + Cost of goods sold / Sales</td>
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Data envelopment analysis (DEA) and Malmquist TFP index is used. DEA analysis was performed, and then an output oriented DEA-Malmquist method was analyzed by inputting all input and output variables to the Frontier Approach package programme. DEAP 2.1 computer program was used for the calculation this index which was developed by Coelli 1996.
Conclusion and Discussion

The aim of this study is to investigate the effectiveness of tourism enterprises of 9 tourism companies which is located in EI Tourism Index (XTRZM) and depending on index EI XU 100 between the years 2009 - 2013. Value data envelopment analysis (DEA) and Malmquist Total Factor Productivity Change (MTFPC) was performed for the calculation of the efficiency.

According to the Model CCR scores effectiveness was determined that in 2009, four companies, in 2010, five companies in 2011, four companies, in 2012 four companies and in 2013 five companies from nine tourism businesses which dependent EI, was fully effective. In the years 2009-2013, from nine tourism businesses which dependent EIAVTUR, MAALT and NTTUR have achieved full efficiency scores in all years. In contrast, during same period UTPYA and ULAS has failed to show full efficiency score.

According to the analysis of technical efficiency change value only MAALT company was observed any change of absence in the period 2009-2013 from nine tourism companies. In the period 2009-2013, a decrease was detected average 1.4% of in the technical efficiency of company. technical inefficiency is due to a rate of 0.7% pure technical and scale inefficiencies. In terms of businesses AVTUR and TEKTU companies have shown improvement in technical efficiency. It was determined that increase in technical efficiency due to the increase in the scale of efficiency.

Technological efficiency of firms was observed an average of 9% technological regression in the years 2009-2013. Decrease in technological efficiency can be said result from businesses located between the input and output components of the change in production processes that occurring in the negative direction. From the perspective companies, NNTUR, AVTUR and AYCES companies have made progress in technological activity.

Based on Changes in the Malmquist Total Factor Productivity (MTFPC) there is decrease average 10.3% in MTFPC. The technological efficiency change of 9% and decrease the effectiveness of this technique 1.4% were found to provide a negative contribution to the decrease. The examining the values in MTFPC firms, have been identified that first three companies are NNTUR, AVTUR and AYCES, the last three companies are UTPYA, METUR and ULAS.

According to the average value in MTFPC most progress during the period 2010-2011, the greatest regression, during the 2009-2010 period has been realized. The reason for this change was due to unchanged before the technological efficiency then in technical efficiency.

From the perspective the results of the analysis, variables are selected and specified of period are the limitations of this analysis. The results may lead to change and interpretation with different variable, or variables, or subjecting analysis of changes in the number of businesses.