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I. INTRODUCTION

Being a developing country in the world, Turkey has an economy consisting of main sectors as industry, agriculture and tourism. Among these sectors, tourism has significant contributions to Turkey's GNP and export revenue. Tourism sector first gained importance in the 80s and it has followed a continuous improvement over the years. Antalya, also known as the Turkish Riviera, is one of the most essential elements of this sector. It has many destinations to its visitors, one of which is Alanya. Alanya is an old city that acted as the host for civilizations over the ages. Its sources of income are mainly agriculture and tourism. Like Turkey, tourism constitutes most of the revenues of Alanya. Therefore, it is a sector that more attention should be paid and actions should be taken in order to increase the number of tourists and total profit. To increase the number of tourists one may come up with the idea of total quality. On the other hand, increasing the profit, while keeping the number of tourists constant, can be achieved by efficient use of resources (minimize costs), and increasing the average expenditure per tourist (maximize revenues). Assuming that most of the expenditures are kept inside the city, the idea leads one to conclude to a new concept of competition: "cluster". The main idea behind cluster is to combine competition and cooperation –and use them simultaneously to reach a specified objective, generally, maximizing the revenue.

Our project is offered to METU Industrial Engineering Department by Alanya Chamber of Commerce and Industry (ALTSO) and our team of four senior students has worked on it. At the beginning of the studies, the team had a meeting with the sponsoring organization in order to discuss in detail what they are expecting from the project. At that time an initial analysis is made in order to understand the existing system. Next, a literature survey is conducted in order to learn more about the subject "cluster". Finally, a quantitative approach is searched and applied, and then findings are evaluated in order to generate alternative scenarios as proposed methods for solving the problem.

Throughout the following sections of this report, the three key concepts will be discussed in detail; they are tourism, cluster and Alanya. First of them is the tourism; the importance of tourism sector for Turkish economy is highlighted by the help of various statistics. Secondly, the cluster concept is discussed. Its historical development, some definitions and examples are presented. Finally, the current situation of Alanya is evaluated in terms of economic activities, transportation, education, health and communication in the city. A quantitative approach for analyzing the cluster structure in Alanya from an ongoing Ph.D. study is introduced and applied. Its results and findings are discussed. Finally, the recommendations for the proposed method are provided.

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