A MODEL TESTING "IS ALANYA'S TOURISM INCOME UNDER A THREAT OF DECLINE?"

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ABSTRACT

A MODEL TESTING "IS ALANYA'S TOURISM INCOME UNDER A THREAT OF DECLINE?"

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The aim of the thesis is to test the validity of the statement "Tourism income of Alanya is under a serious threat of decline" raised by Alanya Chamber of Commerce and Industry, considering clustering approach. During the thesis a model is proposed in order to achieve this goal.

In order to better identify Turkey and Alanya, an initial analysis aiming to gather information in the light of several economic indicators is carried out. This analysis also includes qualitative & quantitative information collection about several aspects of Alanya such as population, transportation, health, and communication. Tourism is mentioned especially.

Following, a model is built on Alanya in order to test the validity of the problem raised by Alanya Chamber of Commerce and Industry. The steps of the model includes investigation of the symptoms, SWOT analysis handling Alanya in terms of tourism, determination of the

current tourism network structure in Alanya and the comparison of this structure with the network structure proposed in 2003 by METU IE System Design Senior Students.

Main outcomes are interesting; the symptoms show that, Average Expenditure per Tourist (AEPT) value does not improve much, although number of tourists visiting Alanya has increased over the years. Mathematical analysis shows that, overall density of the current network structure of Alanya is only 0.0465 over 1.00. Its implication is that, the network is under-developed.

But when compared with the study performed in 2003, it is possible to see a trend to self-develop. From 2003 to 2005, closeness and betweenness values, which evaluate the proximity and centrality of the members within the cluster, have increased. Also the diameter of the network evaluating number and variety of the linkages within the cluster has increased from 6 to 9.

All these tell that, Alanya Chamber of Commerce and Industry may have a point to raise such a statement; however the region's self-development by the side networks from 2003 to 2005 creates value for clustering approach.

Keywords: Clusters, Regional Development, Tourism

ÖZ

"ALANYA'NIN TURİZM GELİRLERİ AZALMA TEHDİDİYLE KARŞI KARŞIYA MI?" SORUSUNU TEST EDEN BİR MODEL

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Bu tezin amacı, Türkiye'nin önemli turizm merkezlerinden biri olan Alanya'da ALTSO tarafından ortaya konan "Alanya'nın turizm gelirleri ciddi bir azalma tehdidiyle karşı karşıyadır" ifadesini kümelenme yaklaşımını göz önünde bulundurarak test edecek bir model oluşturmaktır.

Türkiye'yi ve Alanya'yı ve daha iyi tanımlamak için, önemli ekonomik göstergeler ışığında bir ön analiz yapılacaktır. Bu analizin içinde, Alanya nüfus, ulaşım, sağlık, haberleşme, ekonomik aktiviteler (turizm ayrıca ele alınarak) ve organizasyonel yapı gibi önemli yönlerden ele alınacak, önemli nitel ve nicel değerler ortaya konulacaktır.

Bu çalışmalar sona erdirildikten sonra, Alanya'nın turizm gelirleri açısından kötüye gidip gitmediğini test eden bir model ortaya konulacaktır. Modelin aşamaları; belirtilerin incelenmesini, Alanya'yı turizm açısından değerlendiren SWOT analizini, mevcut turizm ağ yapısının belirlenmesini ve bu mevcut ağ yapısının önemli parametreler bazında ODTÜ Endüstri Mühendisliği son sınıf öğrencileri tarafından 2003 yılında Sistem Tasarımı dersinde Alanya'da yapılmış olan projeyle kıyaslanmasını içermektedir.

Analiz sonucunda ortaya çıkan ana değerler ilginç sonuçlar doğurmaktadır. Belirtiler göstermektedir ki, turist başına ortalama harcama değerleri yıllar göz önüne alındığında önemli bir gelişim göstermemiştir. Matematiksel analiz sonucunda da küme yoğunluğu 1.00 üzerinden 0.0465 çıkmıştır ki bu ağ yapısının gelişmemiş olduğunu gösteren bir değerdir.

Fakat, 2003 yılında yapılmış olan çalışma ile kıyaslandığında, bir gelişim süreci olduğunu gözlemleyebiliriz. 2003'ten 2005'e geldiğimizde, ağ yapısı içindeki üyelerin birbirleriyle olan yakınlıklarını ve ne kadar merkezi olduklarını ölçen "yakınlık" ve "aradalık" değerlerinin arttığını söylenebilir. Ayrıca, ağ yapısı içindeki bağlantıların sayısı ve çeşitliliğini değerlendiren küme çapının 6'dan 9'a yükselmiştir.

Bütün bunlar, Alanya Ticaret ve Sanayi Odası'nın ortaya koymuş olduğu ifadede haklı olabileceğini anlatmaktadır. Fakat, bölgenin ağ yapısı itibariyle 2003 yılından 2005 yılına doğru kendi kendine bir gelişim içinde olması, kümelenme yaklaşımının düşünülmesi açısından değer yaratmaktadır.

Anahtar Kelimeler: Kümeler, Bölgesel Kalkınma, Turizm

To my wife Gül and parents

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TABLE OF CONTENTS

CHAPTER 1

INTRODUCTION

Global competition increases the challenge between the nations in any sector like manufacturing or service day by day. In the challenge, Turkey's aim should be obtaining a respectful global position. Turkey has a significant potential to struggle in the global challenge. This potential can be measured in terms of the size of the young population (aged btw. 18-40) and in terms of the size and variety of the natural resources, tourism income and ability of industrialization.

Between the indicators of this potential, tourism income emerges. Providing some statistics can prove this emergence. In 2003, 14,029,558 tourists visiting Turkey left 9.676 billion dollars (Ministry of Culture & Tourism, 2003). In 1991, this income was only 2.654 billion dollars with 5,517,897 tourists (Ministry of Culture & Tourism, 2003). The regarding figures show the development of average expenditure per tourist (AEPT), moving from 481 $ to 690 $.

Also the share of tourism income in Gross National Product (GNP) of Turkey is remarkable. In 2003, Turkey had a GNP of approximately 240 billion dollars and tourism income constituted 4.0 % of this GNP with 9.676 billion dollars (State Institute of Statistics, 2003).

Alanya, being an important tourism center in Turkey, benefits from all assets mentioned above and plays a considerable role in tourism globally. In 2002, Alanya generated % 10.67 of Turkey's tourism revenue with 961.4 million dollars. Average Expenditure per Tourist (AEPT) for Alanya in 2002 was 934 dollars while the Turkey's average was around 600 dollars.

So Alanya is doing better than Turkey's average in terms of AEPT. But it is important to monitor Alanya solely as well. The AEPT was 976 dollars in 1993, having the peak value. After that year the revenues started to decline, in 1998 AEPT for Alanya was 727 dollars which is the lowest value within the last decade. After that year the revenues climbed up following a slight pattern up to 2002. The 1993's AEPT value has never been realized after that year. Alanya has a potential to be improved when the tourism is the point of view. Regional development tools emphasizing the importance of location can help to improve that potential.

Since tourism draws such a portrait for Turkey's and Alanya's development, highest degree of attention should be paid and actions should be taken in order to increase the tourism revenues. This can take place by two alternatives. The number of tourists visiting Turkey and Alanya can be increased so the total revenue would increase although the average expenditure per tourist remains constant. Or the resources are efficiently utilized; both resulting in minimizing costs and increasing the average expenditure per tourist, while the number of tourists are constant.

Through utilizing clustering approach both alternatives can be set as viable targets because cluster approach having the mentality of combining cooperation and competition at the same time would foster to realize both alternatives.

Having a competitive edge due to high levels of productivity, innovation and design is very important and desirable in global economy today. According to Morosini (2004), from the earliest urban developments it can be concluded that economic agents gather together in close geographic proximity and establish relationships with one another in order to better perform certain economic activities. Recent research studies, investigations performed by many researchers and academicians suggest that the role of location is a very important parameter supporting competitive edge through productivity and innovation.

Clusters having strong bounds to historical circumstances have regained importance as they are strong tools of enhancing regional development. Clusters have their strength because of their members being together, in other words geographic proximity or location constitutes their strength. Significant researchers has pulled the global attention to clustering approach with their studies performed over the last few decades, and especially

Michael Porter has brought a totally new scientific approach and accelerated the trend concerning regional development through clustering.

In addition, Porter (1998) notes that clusters increase productivity, add value to R&D and innovation, stimulate new business formation, provide better and efficient access to suppliers of each type, public goods and institutions.

Clusters both expose vertical and horizontal integration. High levels of cooperation is achieved with different kinds of firms; customers, suppliers, complementaries and service providers. This is called vertical integration. As well as vertical integration, clusters provide horizontal integration which brings serious competition of similar firms within the cluster. Competition in and outside of the cluster is a factor enhancing quality.

Since Alanya is a specific location and the core of clustering originates from combining geographical proximity with proper powerful linkages, clustering approach should definitely be considered.

1.1. SCOPE of the THESIS:

Alanya is one of the important counties in Turkey in terms of tourism. Why tourism is important for Alanya and why Alanya is considered to be a major tourism center is discussed in details in Section 3.2.

The statement "Tourism income of Alanya is under a serious threat of decrease" raised by ALTSO has been the main concern of the thesis. Throughout the thesis a model will be proposed in order to test the validity of this situation.

1.1.1. Purpose of the Thesis:

The purpose of the thesis is to test the validity of the statement "Tourism income of Alanya is under a serious threat of decline" raised by Alanya Chamber of Commerce and

Industry. A model will be proposed in order to achieve this goal. The steps of the model will include;

- Observing qualitative and quantitative symptoms
- Performing a SWOT analysis of Alanya covering in terms of tourism
- Determination of the current network structure of Alanya
- Comparison of major cluster parameters of the current network with the System Design Project carried out in Alanya by METU IE senior students[*]

Observing the qualitative and quantitative symptoms will verify the accuracy of the problem raised by ALTSO. The quantitative symptoms are A.E.P.T., depiction of the number of tourists visited Alanya, bed capacities and utilization rates in Alanya within years. The qualitative symptoms are the symptoms arising due to insufficient quality and underutilization of the alternative tourism possibilities.

After the investigation of the symptoms, SWOT analysis, which aims to handle Alanya from different aspects, is performed. Strengths-Weaknesses of Alanya and Opportunities-Threats for Alanya are put forth.

Following SWOT analysis, current network structure (linkages between firms, governmental organizations, non governmental organizations, institutions) in Alanya is determined via selected methodology. This methodology is constituted by survey method and graph theory/network analysis. The qualitative information collected by the surveys is transformed into quantitative findings by the graph theory/network analysis. The methodology will be clarified in detail in section 4.5.

Then, major parameters giving opinion about various aspects of the current network (obtained by graph theory/network analysis) are compared with those of previous network structure proposed in 2003. This comparison gives brief ideas about the Alanya cluster.

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[*] System Design Project named "Design of an Information System and Collaboration to Increase the Competitiveness of Tourism Sector Enterprises in Alanya" by Ahmet TOHMA, Erel ZERMAN, Kıvanç YILMAZ, Nevzat Umut YARAN, Spring 2003

Determination of the current network structure of Alanya and the comparison of the current network structure with the one accomplished in 2003 will both contribute to the statement raised by ALTSO and help to see the appropriateness of cluster implementation in Alanya which can be considered in future studies.

1.1.2. Outline of the Thesis:

The thesis proceeds in the following outline; after the introduction, in Chapter 2, theoretical framework is outlined. Theoretical framework provides evidence on why clustering model can be a solution to the problem raised.

Next, in Chapter 3, in order to better recognize Alanya, information is collected about various aspects of Alanya like population, transportation, health and economic activities. Also in this chapter, in the light of several economic indicators, Turkey's and Alanya's positions in the tourism sector are evaluated.

In the 4th Chapter, the model and the methodology are represented. The initiation is given by with the system analysis (borders of the system and environment) and the problem definition. Then the model against the problem is proposed. Finally, the detailed methodology is presented.

In Chapter 5, the results are represented. The empirical study is constituted of the symptoms belonging to the problem, SWOT analysis covering Alanya in terms of tourism, determination of the current network structure of Alanya and comparison of some parameters of the current network with other tourism clusters mentioned above in section 1.1.1. The part determination of the current network structure of Alanya shall be broadened. This objective is achieved by the survey studies handled in Alanya plus the analyses of the survey results via graph theory/network analysis. Survey results, results obtained by graph theory/network analysis and the comparison of important parameters with other network structure are represented in Chapter 5. The thesis is finalized with the conclusion and further studies in the end.

CHAPTER 2

THEORETICAL FRAMEWORK

In the theoretical framework, it is aimed to cover the clusters from different aspects, i.e. the value added to regional development, the benefits that arise from clustering, their life cycles and successful cases.

2.1. SOME DEFINITIONS of CLUSTERS:

Some definitions representing clusters each approaching to the subject of clustering in a different manner and creating diversity are provided below.

Porter (1998) defines clusters as institutions and interconnected companies in a particular field in the some geography. Regarding competition, clusters include a series of linked industries and other entities such as components, machinery, services of special infrastructure. Clusters also often extend related information, experience and knowledge to customers and complementary partners. By partners, all types of suppliers such as manufacturers of raw materials, service providers are mentioned. Finally, clusters with well defined frameworks include governmental and non-profit organizations such as universities, public agencies and local governments that may provide special information, technical support and education.

Linkages and complementaries across industries and institutions critical to competition define the cluster's boundaries according to Porter (1998). Though most of the clusters' boundaries remain inside political boundaries (i.e., city borders, state borders, and national borders), some clusters may include more than one state, even they may be multinational. Porter (1998) gives pharmaceutical cluster straddling New Jersey &

Pennsylvania as a multi-state spread cluster example and similarly chemicals cluster crossing over Germany to Switzerland as a multi-national cluster.

Porter (1998) finalizes his arguments on cluster definitions as clusters represent a new kind of an organization type promoting both competition and cooperation. Without competition, a cluster will fail. And also cooperation (most being vertical) will involve companies from different industries and fields. Both competition and cooperation can exist together because "they occur on different dimensions among different players".

Carrie (2000) defines clusters with similar opinions as Porter (1998). He mentions that "a cluster is a network composed of companies, their suppliers and customers of all related components such as materials & components, equipment, training, finance and so on. Moreover, the branches of the cluster extend to educational establishments and research institutes providing technical background. All are stakeholders, influenced by globalization, commercialization, skill developments, inward investment, start-ups and trade development, in the end-market"

Baptista and Swann (1998) emphasize the importance of "geographic agglomeration of industrial activities". They define a geographical cluster as a strong collection of relevant companies located in the same geography, sometimes placed on one of a scientifically strong base of the country.

The cluster phenomenon was theoretically conceptualized by Porter (1990) as a factor in competitive advantage. He conceptualized his theory around companies and associated institutions linked by common and complementary activities within the same geographic proximity. With his famous "cluster factors diamond" represented in Figure 2.1.1, he argued the factors effecting strength of a cluster. Porter (1990) arranges those factors in four sub-groups as:

- Firms strategy, structure, rivalry
- Conditions arising from demand
- Relevant and supportive industries
- Factor conditions

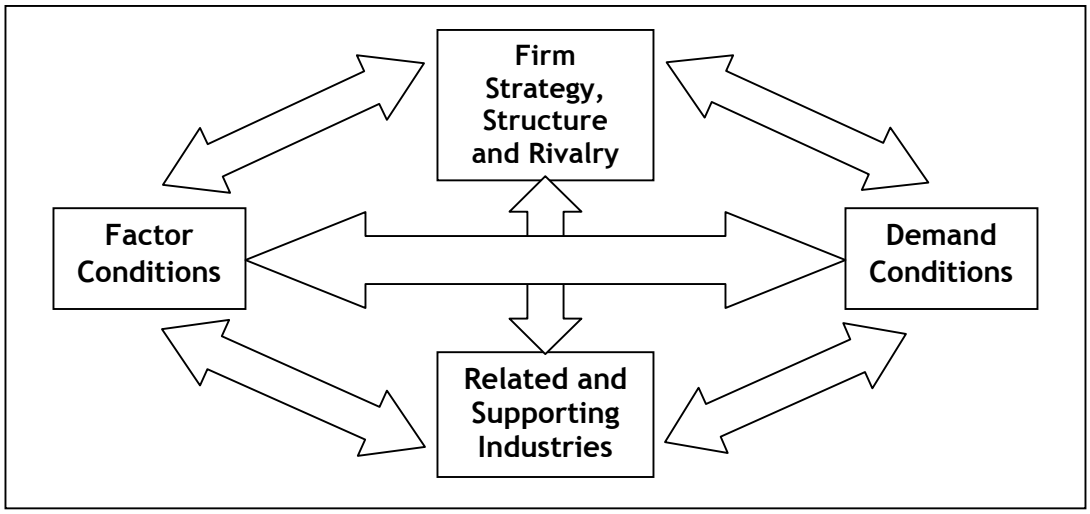

Figure 2.1.1: Cluster factors diamond (Source: Carrie, 2000)

Carrie (2000) finds 3 of these factors as "explanatory". In the other words someone looking at the diamond can imagine more or less what these 3 factors mention about. Factor conditions relate to environment such as climate, labor supply and skills availability, presence of research establishments, taxes, role of government and so on. The interaction of all those factors promotes or hinders business success and economic development in any region according to Carrie (2000).

After defining the clusters from the experts' point of views, it is important to move on to regional development fostered by clusters, because clusters are powerful tools for improving and developing locally.

2.2. REGIONAL DEVELOPMENT AND CLUSTERS:

Padmore and Gibson (1997) claim that most of the analyses performed on industrial competitiveness has been performed on national scale, due to the philosophy of collecting data at national basis. And parallel to this identification, the emphasis used to be on

"national" industrial activities, the presence of regional activities was nearly disregarded. But the success of regionally emerging groups and industries attracted organizations' and governments' attention and analyses have also started to be performed on regional scale.

According to Porter (1998), theoretically, the role of location in competition should be lowered by more open global markets, faster transportation and new communication alternatives as mobile phones and internet. Porter (1998) continues his discussion that through widespread open global markets anything can be sourced by any company from any distance. Then he asks; "Why is location important?" He notices the collapse of theory mentioned above with high-performance auto companies in southern Germany, fashion shoe companies in Northern Italy and so on.

Porter (1998) describes clusters as critical masses (in one place) of unusual competitive success in particular fields and introduces them as structures enhancing the importance of location.

According to Padmore and Gibson (1997), the regional perspective is rising as a better alternative of reflecting modern economic patterns and trends. "Cluster Analysis" is a powerful basis for regional perspective. Emphasizing the importance of location by clusters; Padmore and Gibson (1997) propose a definition; "Regionally, a cluster is a concentration of firms that prosper because of their interaction whether that is though competition of cooperation or by serving as suppliers or customers in the value chain."

Clusters are typical in structure according to Porter (1998). All are struggling to take the advantage in a global economy through local tools such as knowledge, relationships, motivation that distant companies can not match. Porter (1998) points out the underlying paradox, global competition can be achieved by local advantages.

A local "buzz" has been expressed by Bathelt, Malmberg and Maskell (2004) as; " Buzz refers to the information and communication ecology created by face-to-face contacts, co-presence and co-location of people and firms within the same industry and place or region. This buzz consists of specific information and continuous updates of this information, intended and unanticipated learning processes in organized and accidental meetings, the application of the same interpretative schemes and mutual understandings

of new knowledge and technologies, as well as shared cultural traditions and habits within a particular technology field, which stimulate the establishment of conventions and other institutional arrangements." According to Bathelt, Malmberg and Maskell (2004), this local "buzz" is an important advantage specific to the clusters agglomerated in a geographic proximity.

Porter (1998) defines the role of geographic characteristics, or simply location as fundamental to competition. But today the advantages that a specific location brings are different from the past. In an era when competition was strongly effected by input costs, locations with important advantages such as a national harbor, suitable climate conditions or a supply of plenty raw material and cheap labor created important advantages, which are called as "comparative" advantage according to Porter (1998).

On the other hand, Porter (1998) believes that today's conditions are more dynamic. Input cost disadvantages can be avoided through global sourcing. Today competition is swept by competitive advantage which rests on making productive and effective use of inputs. Companies untangling the paradox of location with globalization will catch key insights about creating competitive advantage.

The relevant region where the cluster is active differs; it can be one corner of a city (New York Garment district), span several cities (North American Auto Industry) or straddle on international border. The nature of the cluster may be tied to comparative advantage creating factors such as distribution of natural resources, climate zone and etc. Also clusters are fed by social and historical events depending on trust, cooperating and competition (Padmore and Gibson, 1997).

Also, since economic activities and industries are going global, large multi-nationals can relocate operations to any part of the world, with significant impact on the regions into and out of which they move. Competition is a multi-dimensional phenomenon, which is between multi-national companies as well as regional firms. The competition between regional firms can contribute to the competition between multi-national companies. Thus, the competitiveness of an industry in any region of the world will depend on the region's total business infrastructure, which will attract companies to the region and retain them. The agility of individual manufacturers depends to some extent on the strength of these

regional infrastructures. This shift in the basis of competition requires managers to re-examine their assumptions about competitive strategy, or maybe create new competitive strategies, which will include the inter-dependency of all the stakeholders (like government, academia, research establishments, financial institutions, public organizations and etc.) in their economic infrastructure (Carrie, 2000).

According to the paper published in 2 April 2002 named "Cluster-based Policies" (Cluster Competitiveness Group, 2002) competitive advantage of local elements can trigger global competition. In addition, geographic proximity brings;

- Easy access to specialized suppliers, services and human resources
- Efficient information transfers
- Flexibility due to extreme specialization
- Innovation adoption

Clusters, which are fostered by regional characteristics (geographic proximity), allow SMEs to compete globally thanks to better access to information, specialized resources, flexibility and rapid adoption resources.

2.2.1. Regional Development Organizations:

The organizations supporting regional development worldwide like Council of European Municipalities and Regions or United Cities and Local Governments are remarkable advantages for clustering attitude, because clusters mainly enhance regional development. Below, their short definitions, objectives, member profiles adapted from their official web sites are presented.

Council of European Municipalities and Regions (CEMR) is the largest organization of local and regional government in Europe; composed of national associations of towns, municipalities and regions from over 30 countries.

In the official web site of Council of European Municipalities of and Regions (CEMR), the needs for the existence of such an organization, the goals to be achieved are put forward.

A united Europe based on local and regional self-development triggered by an effective democracy is their issue. To achieve this goal, local and regional policies are promoted within Europe to influence the policies, laws and legislations of national governments across Europe. Also major activities of CEMR include exchanging experience at local and regional level and cooperating with partners globally. CEMR organizes seminars, conferences and programmes on different issues concerning local and regional development.

United Cities and Local Governments (UCLG) is an organization dealing with regional development worldwide. Different from Council of European Municipalities of and Regions, United Cities and Local Governments is the largest local government organization in the world developing policies to enhance regional development globally. In the official website of United Cities and Local Governments, it is clarified that, adding value to local governments in any part of the world is their main concern.

United Cities and Local Governments is the main local government partner of the United Nations. Therefore a direct contact between exists and they work in cooperation, develop policies together. United Nations promote the policies and experiences of local governments in key areas such as poverty, sustainable development and social inclusion.

Local governments with different features in over 100 countries across 5 continents are brought together by the United Cities and Local Governments. They are all united around common interests, challenges and goals.

2.2.2. Industrial Clusters Serving Regional Development:

Industrial clusters have some unique features. Bringing some specific players together within a geographic proximity is one of those unique features. Also the linkages taking place between those players are essentially important.

The types of the players within a typical successful cluster serving a specific industry include;

- Firms serving primarily to the specific industry

- Customers of the firms
- Suppliers serving the firms
- Local (E.g. municipalities) and Central (E.g. agencies of ministries) Governmental organizations
- Universities
- Public agencies

As the members of an effective cluster are mentioned above, one of the members which hold the authority is very essential for the remaining participants, since the laws, legislations and restrictions deeply affect the policies of the whole cluster. Porter (1998) lights some tips below on how governments should act upon clustering.

According to Porter (1998) productivity is the most important fact for a nation. Recognizing this, governments should strive to create an environment that supports rising productivity. They –both national and local- must ensure the supply of high-quality inputs such as educated citizens and physical infrastructure. Also the rules of competition should be clearly set in order to protect intellectual property and enforce antitrust laws. These can foster productivity and innovation governing success in the economy. Governments should promote cluster formation that may have significant impact on many linked businesses. In order to do that, governments should consider a policy different than an industrial policy. They should cooperate with the private sector, reduce the effects of bureaucracy as much as they can for the sake of cluster's success and invest in the geographies potentially promising cluster development.

Also the linkages between the mentioned actors include; knowledge interactions, information flows transferring tacit knowledge, special infrastructure within the cluster, labor & equipment exchanges, promotion activities and etc. Nordin (2003) proposes that the linkages between members occurring in different forms are specific to clusters. She additionally provides some linkage forms as "buyer – supplier relations, training or research initiatives, joint marketing and lobbying."

It was essential to mention the members, of an ideal industrial cluster, especially governments, and the variety of linkages between them. Now, it is proper to pass on to some qualifications which are vital for the sustainability of an industrial cluster.

2.2.2.1. Porter's Strategic Bookmarks for Industrial Clusters:

Porter (1998) defines four issues strategically important to industrial cluster formation. Those are; choosing the location properly, engaging locally, upgrading the cluster and working collectively. Let's look at one by one;

a. Choosing Locations:

The "proper" location's meaning has shifted from its previous position. What clusters suggest for "proper" location is different. The "illusory" advantages such as low wages & taxes, plenty of raw materials, utility costs often turn out to be lacking in infrastructure, sophisticated suppliers and other cluster benefits. In those cases, the inefficiency in productivity remains hidden and usually unanticipated.

Today, clusters choose locations adding value to innovation, competitiveness and productivity. Of course, they have to globally lower the input costs and access to higher number of markets regarding the importance of location due to productivity, competitiveness and innovation.

b. Engaging Locally:

Successful clusters engage locally. They develop personal relationships, face to face contact, and have "insider" status. In order to maximize the benefits, clusters must establish a significant local presence. That local presence can be built up by having a substantial amount of local investment and having strong relations within the environment with "insider" status.

c. Upgrading the Cluster:

Because the health of the local business environment is important to the health of the company, upgrading the cluster should be part of management's agenda. Companies upgrade their clusters in a variety of ways.

d. Working Collectively:

Collective action in the private sector is an important opportunity for removing obstacles to productivity and growth. Trade organizations can be assigned or such a role because they can provide a neutral forum for the exchange of ideas, organize collective activities such as training & education programmes and so on. Also, there is a need for such a medium in every cluster, which would equally consider the cluster's benefit.

2.2.3. Tourism (Service) Clusters Serving Regional Development:

Although manufacturing sector comes into minds primarily when clustering approach is considered, it can serve as a significant development tool for tourism sector also. Tourism sector can be considered as a part of service sector.

There are differences existing between the manufacturing and service sector, they should be carefully examined. But key issues regarding cluster development are the same. Key players such as primary firms, customers, suppliers serving the firms, governmental agencies, non-governmental agencies and academia also exist for the tourism sector. Primary firms are composed of firms directly serving the tourists such as hotels, motels, restaurants, cafes, bars, tour agencies, car rental services and etc. Customers are the tourists. Suppliers provide service and maintenance for the firms as in the manufacturing sector. Governmental agencies can be divided into two; local governments such as municipalities and central governments such as ministry of tourism and regional development agencies. Non-governmental agencies include trade organizations, chambers of industry and commerce. Academia can serve as a medium for training qualified and educated personnel for the tourism sector.

Also linkages between the members defined above exist including knowledge interactions, information, money, labor and equipment flows and informal networking.

Nordin (2003) has investigated this issue and has found cluster application on the tourism sector as "interesting" due to some features specific to the service sector. These specific features include that the customer becomes the part of the process and becomes the end product, no final quality inspection of the "product" is possible before delivering it to the customer.

Nordin (2003) also mentions the synergy created as follows; (1) Primary attraction concerning the tourists + (1) Complementary services = 3. The interpretation of this summation is easy; the tourists both satisfied with the primary attraction and complementary services leave the tourism district more pleased than they experience these two items separately.

Clusters in either manufacturing or service sector, intensely enhance regional development, and local development in all aspects helps clusters to spread. After having mentioned this mutual relation, the next point of analysis is significance of clustering.

2.3. SIGNIFICANCE of CLUSTERING:

European Commission Community Research states in one of its briefing papers[†] that, although European small and medium enterprises account for 71% of European employment, individually, they are often unable to formulate detailed training strategies that will enable their employees to be better qualified to cope with increased competition.

According to Porter (1998), competitiveness is both affected within and across national borders by the clusters. So clusters lead to new agendas for the companies who can not globally compete. Porter thinks more broadly, clusters represent a new way of thinking

[†], "Organizational Learning: The Role of SME Clusters", New Perspectives for Learning- Briefing Paper 19, The European Commission Community Research, May 2002.

about location, the act of government on economic development, and the contribution of academically support to competition.

Porter (1998) emphasizes that modern competition goes on productivity, not on "illusory" advantages as easy access to inputs or natural resources. Productivity rests on how companies compete, not on the particular field they are in. Companies can be highly productive in any sector or field as long as they employ sophisticated methods, use advanced technology, and offer superior product and services.

Porter (1998) highlights that clusters affect competition in 3 broad ways:
1. By increasing the productivity of companies in the cluster
2. By driving the direction and pace of innovation that triggers future development.
3. By stimulating formation of new businesses expanding and strengthening the cluster.

In addition to Porter (1998), in the same paper footnoted below, co-operation between organizations within markets has long been identified as a factor in economic success and networking between organizations can contribute to stability and reduce uncertainty. Today the evolution from those Networks has resulted in cluster formations and development of business and science parks.

Swann (1993) divides the benefits of clustering into demand and supply sides.

On the demand side, firms may cluster in order to attract strong local demand. The advantages in consumer search costs might be important; companies selling differentiated goods in close industries tend to be together because they are more likely to be found by customers. In addition, being located near to key customers may open the vessels for information flow leading innovation and superior quality from customers to companies. Of course this flow can be considered bi-dimensional, since high-tech innovative products with superior quality will be appreciated by the customers.

On the supply side, the primarily mentioned clustering externality is labor market pooling. A pool of labors with some and as well as complementary skills would be a powerful support for the firms coping with uncertainties in demand, unemployment and business environment. Another advantage is, location in an industrial cluster allows firms to source

all kinds of inputs in a greater variety at a lower cost. Knowledge spillovers across the firms in the same geographic proximity constitute another advantage. All the firms in a cluster can generate positive externalities from information and knowledge exchange across the other firms in the cluster. Knowledge spillovers can be vital for innovative activity. A technological infrastructure supported by knowledge inputs provided by competitors, customers, firms in related industries, suppliers and other entities such as governments, universities and organizations may tend the cluster to be innovative. Finally being in an advantageous location such as being close to major highways, harbors or natural resources may cause a competitive edge for clusters.

Hoen (2002) implies that more healthy and powerful linkages may be established in clusters. Moreover, in most of the clusters where suppliers and customers are located in a close proximity, on time delivery, adaptation to flexible demand and supply conditions are guaranteed with a higher percentage.

Feldman (1994) puts the emphasis on the role of clusters in the innovation process. According to Feldman (1994), R&D studies performed both in the universities and in the industry in conjunction with a network of firms builds up highest level of technological infrastructure leading innovation.

Porter (1998) emphasizes the significance of clustering in a more detailed and sophisticated manner in his study. He defines eight streams that feed the advantages rise from clustering approach;

- clusters and productivity
- better access to employees and suppliers
- access to specialized information
- complementaries
- access to institutions and public goods
- better motivation and measurement
- clusters and innovation
- clusters and new business formation

Clusters display some unique features different than classical cooperating networks. Horizontal and vertical integration, vide variety of linkages are some of the major differences. A study performed by OECD[‡] describes these differences as; " The cluster concept focuses on the linkages and interdependencies among actors in the value chain in producing products and services innovating. Clusters differ from other forms of cooperation and networks in that the actors involved in a cluster are linked in a value chain. The cluster concept goes beyond "simple" horizontal networks in which firms, operating on the same end-product market and belonging to the same industry group, cooperate on aspect such as R&D, demonstration programmes, collective marketing or purchasing policy. Clusters are often cross-sectional (Vertical and/or lateral) networks, made up of dissimilar and complementary firms specializing around a specific link or knowledge base in the value chain."

Bathelt, Malmberg and Maskell (2004) define horizontal and vertical dimensions of a cluster. Horizontal dimensions include competing firms who are producing similar products. Vertical dimensions include complementary firms having supplier,customer and/or service provider relations.

Nordin (2003) additionally provides a feature specific to clusters. It is, cluster formation can not be forced, in other words clusters can not be created. However, some networks other than clusters can be created.

As all "living" structures, clusters originate their roots to some events, factors and circumstances, grow, develop and finally end up. Simply they experience different phases as we can clarify; birth, evolution and decline.

2.4. LIFECYCLE PHASES of CLUSTERS:

In detail, Porter (1998) characterizes the phases as follows;

[‡] OECD Proceedings, "Boosting Innovation, The Cluster Approach", 1999, p.12

2.4.1. Birth Phase:

Birth phase can be based on the following listed events;

- Most frequently, a cluster's roots can be traced to historical circumstances.
- Clusters may also initiate from sophisticated, unusual or challenging local demand. New business formations due to prior existence of supplier and/or customer industries and related industries give birth to new clusters.
- Innovation may lead to emergence of new clusters.
- The effect of chance is also significant (as in all cases), although rarely efficient in the success of new businesses.

2.4.2. Evolution Phase:

Once a cluster starts growing by the help of factors explained above; it's fed by a "self-reinforcing cycle" continuously especially when local structures are supportive and competition is challenging.

A growing cluster means opportunity, once the fame is spread to the environment, entrepreneurs are attracted, skilled people and firms migrate or spread from other locations. So growing is more active. Specialized suppliers and service providers emerge, the accumulation of related information starts, specialized training & research is provided by universities and institutions. From that time on, cluster is attractive both nationally and internationally.

The main point of cluster evolution is broadening the borders to encompass related industries. This can take time; studies suggest that a time more than a decade is required to develop depth and competitive advantage for a cluster.

The intersection of clusters is more vibrant for cluster development because insights, technologies, experiences, structures and skills from different industries combine and merge.

2.4.3. Decline Phase:

Clusters can lose their competitive edge due to both internal and external factors. Perhaps, the most significant external factor is the technological discontinuities. A cluster's assets such as market information & relations, employees, skills, experiences, supplier and service providers may all become irrelevant.

A shift in buyer's needs is also an important external factor. If the cluster can not react to that shift, it'll lose many of its customers.

Clusters are affected by internal factors as well as external ones. Feuds, cartels, lack of a strong management team, local support, groupthink and other restraints to enhance competitiveness put barriers to cluster development. A cluster suffering from one of the above factors experiences the decline phase if an immediate approach to fix the restraint is not developed. The quality of institutions and academia providing educational & research support is an important parameter also. Such rigidities tend to grow in an environment where government does not support competitive advantages or companies persist in old behaviors and relations which don't worth for competitive advantage.

As long as rivalry remains vigorously at a level, it is possible to compensate the decline. Outsourcing to distant suppliers, moving production partially or completely elsewhere that offers more alternatives, technology transfers and etc. can be listed in the solutions list. But over time, a location will certainly decline if it fails to develop new products, services and concepts based on major new technologies and sustain local rivalry.

2.5. SUCCESSFUL CASES of CLUSTERING:

Porter (1998), gives two very successful examples of clusters namely; California Wine Cluster and Italian Leather Fashion Cluster. Below some specific aspects Porter mentioned about those examples will be investigated. In Appendix B, Networks representing both California Wine Cluster and Italian Leather Fashion Cluster are provided.

2.5.1. The California Wine Cluster:

The California Wine Cluster includes 680 commercial wineries in addition many independent wine grape growers. And the industries both supporting wine production and grape growing exist including grape stock, irrigation, harvesting, equipment, barrels & labels suppliers, specialized public relation firms, advertising and marketing companies including numerous wine publications and magazines. Also, support from local institutions including government and universities is available such as Viticulture and Enology program at the University of California at David, the Wine Institute and special committees of the Californian senate. The cluster has also relations with other Californian clusters in agriculture, food & restaurants and wine-country tourism. Flowchart regarding the Californian Wine Cluster can be seen in Appendix B.

2.5.2. The Italian Leather Fashion Cluster:

The Italian Leather Fashion cluster hosts specialized suppliers of footwear components, machinery, molds, design services and tanned leather. Also it contains famous shoe companies as Ferragamo and Gucci. Several chains of related industries producing different kinds of leather and footwear goods with advanced major Technologies such as Computer-Aided Design (CAD). All these related industries are bound together with common market and PR activities and they compete globally with similar products, in similar customer segments. The extraordinary strength of the Italian Leather Fashion cluster can be related to the multiple linkages and synergies formed with other Italian business clusters. Flowchart regarding the Italian Leather Fashion Cluster can be seen in Appendix B.

2.6. SUMMARY:

In this chapter, it is aimed to cover the clustering attitude from different perspectives. For the sake of diversity, different experts' opinions and approaches are utilized. The value added to regional development, clustering both in manufacturing and tourism sector

(as a part of service sector), significance of clustering, phases that clusters experience and successful cases of clustering are all investigated throughout this chapter.

The roots of modern clustering attitude belong to historical circumstances. Although his theories are criticized (Nordin, 2003), modern clustering studies has been initiated by Michael E. Porter and his study "Competitive Advantage of Nations", published in 1990. After that time, researchers and scientists have started to show interest on the subject. Although clustering itself is a spontaneous phenomenon, it should be supported continuously with modern technological tools. The regarding support has given a boost and cluster development has spread worldwide.

Generally clusters' range cover geographic proximities, but there are rare samples operating in more than one cities, even multinational clusters are available. But, clusters mainly enhance regional development. Interpretation of Padmore and Gibson (1997); "Regionally, a cluster is a concentration of firms that prosper because of their interaction whether that is though competition of cooperation or by serving as suppliers or customers in the value chain." supports the claim above.

Typical clusters are maintained by various types of linkages as knowledge interactions, technical and social information flows and labor – equipment changes. These linkages occur between different types of members as firms, their suppliers, customers, organizations (governmental and non-governmental) academia and etc. The member profile can be extended to financial institutions, trade organizations, chambers of industry and commerce, representatives of other clusters and so on.

Clusters increasing productivity of the firms within, facilitating innovation, leading in new business formations experience birth, evolution and decline phases as all living structures. It is important to prevent the formation of the facts that start the decline in order a cluster to continue functioning. Californian Wine Cluster or Italian Leather Fashion Cluster are good examples of successful clusters being active over long time periods.

As a final remark, Porter (1998) draws a route for all the members of clusters in order to take an important role in the new economics of competition as;

“Leaders of businesses, government, and institutions all have a stake - and a role to play - in the new economics of competition. Clusters reveal the mutual dependence and collective responsibility of all these entities for creating the conditions for productive competition. This task will require fresh thinking on the part of leaders and the willingness to abandon the traditional categories that drive our thinking about who does what in the economy. The lines between public and private investment blur. Companies, no less than governments and universities, have a stake in education. Universities have a stake in the competitiveness of local businesses. By revealing the process by which wealth is actually created in an economy, clusters open new public-private avenues for constructive action.”

CHAPTER 3

A CLUSTER PROSPECT FOR ALANYA

In this chapter, first the impact of tourism on the world, Turkey and Alanya will be mentioned by some economic indicators such as tourism revenues, Gross National Product, etc. This analysis will be followed by a qualitative and quantitative information collection about several aspects of Alanya such as population, transportation, communication and health. All detailed figures in this section are presented in the Appendix A. Alanya Map can be seen in the Appendix E.

Alanya has been selected as the specific region because, in 2003, a project devoted to reveal the existing network structure in Alanya had been implemented by the METU IE System Design Students. So, by choosing Alanya, we had the chance of comparing the network structures on the same basis and observing what has changed from 2003 to 2005. In addition, the support given by Alanya Chamber of Commerce and Industry to perform such a study in the county was determinant.

3.1. GENERAL:

Within 15 districts of Antalya, Alanya is the largest in terms of its population. Alanya is 135 kms far away from Antalya city center and it spreads on a wide area of 157,643 hectares. With its natural beauties, historical inheritances, summer almost lasting for 8 months and having a coast of 60 kms, Alanya has become an important tourism center of Antalya and Turkey over the years.

In addition, because of being a natural harbor itself, Alanya had been used as a harbor by pirates of the Mediterranean Sea and almost all of the civilizations like Roman Empire, Byzantines, and Anatolian Seljukians. Especially Aladdin Keykubat, one of the most famous sultans of Anatolian Seljukians, had ordered his engineers, architects and workers to build up a shipyard by the harbor (Alanya Chamber of Commerce and Industry, 2002). Today this feature brings many advantages to the county.

Moreover, the county lies on the mountains at the north, which means that winter tourism can also be utilized.

3.2. ECONOMICS AND TOURISM SECTOR:

With the utilization of tourism alternatives, countries generate considerable revenues. In Table Ap.A.1 and 2 of Appendix A world top twenty among tourism revenues number of tourists hosted and average expenditure per tourist (AEPT) values are listed. Also in Figure 3.2.1 , 3.2.2 and 3.2.3 top twenty countries in the world in terms of revenues gathered, number of tourists visited for year 2002 and average expenditure per tourist (AEPT) values are presented regarding. AEPT ranking has been performed over the top eighteen because two countries in each list did not match (Australia and Belgium in Figure 3.2.1, Hungary and Poland in Figure 3.2.2).

It is quite exciting that USA is in the first place in the ranking of tourism revenues with $ 66.5 billion and with an AEPT of $ 1587, while being third in the ranking of number of tourists visited with 41.9 million. Turkey also has a significant place in both top 20 rankings with $ 8.5 billion tourism revenue (ranked 13^{th}), an AEPT of $ 664 (ranked 9^{th}) and 12.8 million tourists visited (ranked 16^{th}). We believe that Turkey has the potential to improve and deserves higher rankings in both lists. The situation of France is very interesting being first in number of tourists hosted and last in AEPT Ranking.

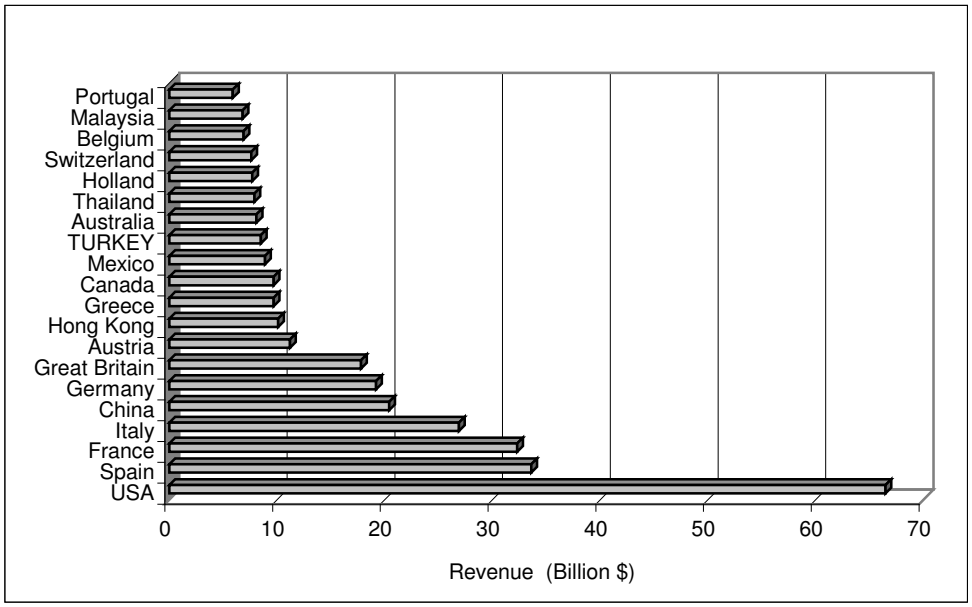

Figure 3.2.1: World Top Twenty among tourism revenues for 2002 (Source: World Tourism Organization, 2002)

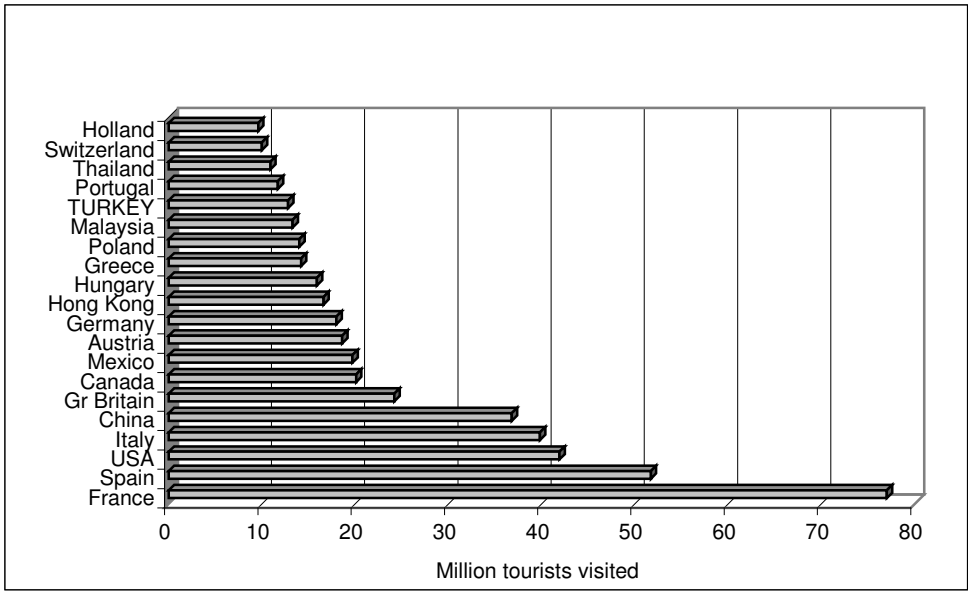

Figure 3.2.2: World Top Twenty among the number of tourist being hosted for 2002 (Source: World Tourism Organization, 2002)

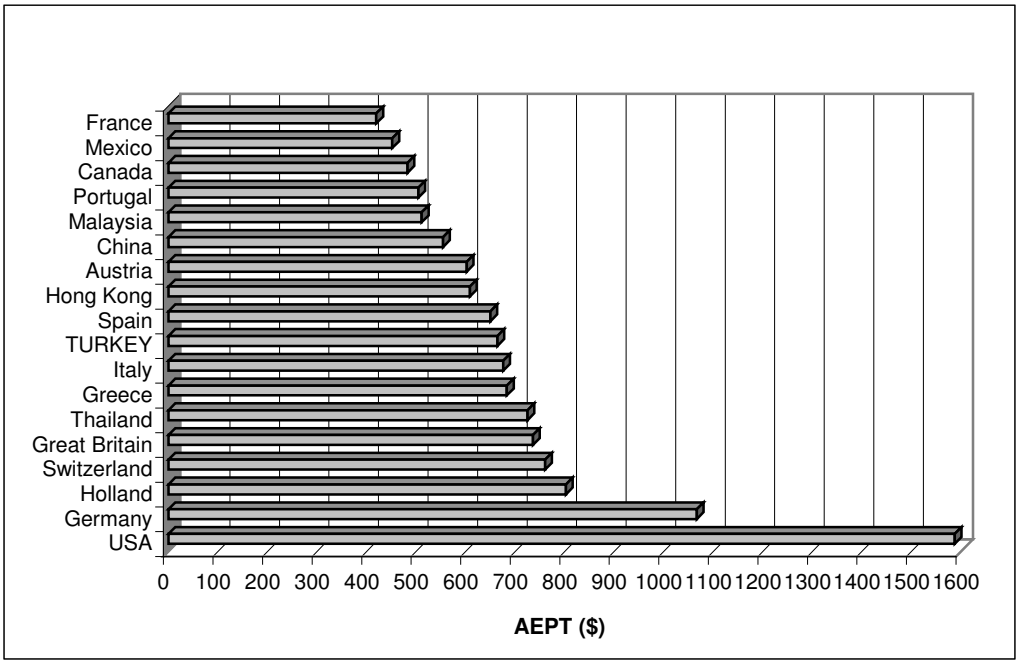

Figure 3.2.3: World Top Eighteen among average expenditure per tourists (AEPT) for 2002 (Source: World Tourism Organization, 2002)

The importance of tourism for Turkey's economy has been already mentioned in the introduction section. To prove this, it is necessary to give some figures. In Table Ap.A.3 of Appendix A, the number of tourists visiting Turkey and revenues gained by Turkey with respect to years are presented. Below, in Figure 3.2.4, Turkey's tourism profile within years is depicted.

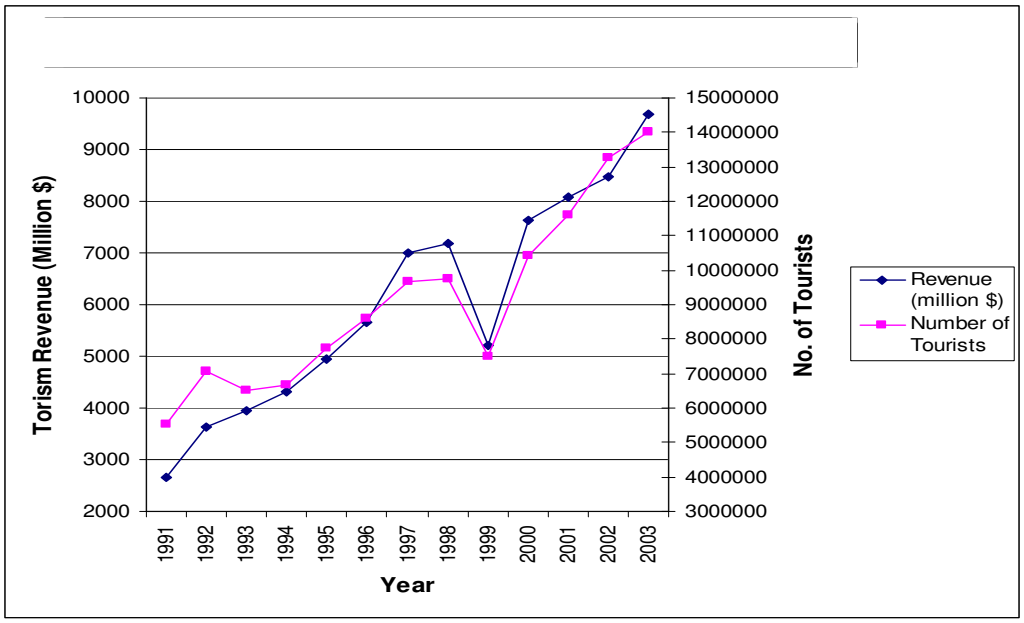

Figure 3.2.4 Number of tourists visiting Turkey and tourism revenue from 1991 to 2003 (Source: Ministry of Tourism, 2003)

Although there are some exceptions (in 1999 number of tourists and tourism revenue decreased tremendously mainly due to the sudden earthquakes in Gölcük and Düzce) number of tourists visiting Turkey and tourism revenue have been increasing over the years. In 2003, 14,029,558 tourists visiting Turkey left $ 9.676 billion. Only this figure explains the importance of tourism to Turkey.

Another indicator set that implies the effect of tourism will be presented now. Let's look at to Gross National Product (GNP), foreign currency income (FCI), export revenues (ER) of Turkey and the percentage of tourism revenue (TR) in those with respect to years in Table Ap.A.4. As it can clearly be seen, the percentage of tourism revenues in gross national Product (GNP), foreign currency income and export revenues have increased over the years. For 2002, Turkey's 4.7 % GNP comes from tourism revenues. The percentages of tourism revenues (4) in FCI (2) and ER (3) are even higher (13.6 % and 24.6 %) respectively.

After implying the impact of tourism for the world and Turkey, it is possible to continue with the distribution of number of tourists with respect to major tourism centers of Turkey. In Table Ap.A.5 some figures about this distribution is represented.

Antalya takes the lead with 36.3 %, 35.8 % and 33.4 % for years 2001, 2002 and 2003 respectively. This is important due to the fact that Alanya belongs to the city of Antalya. Alanya has a major role over the Antalya's leadership in the corresponding above distribution.

Now, specific statistics will be interpreted in Tables Ap.A.6, Ap.A.7 and Ap.A.8 to depict the profile of Alanya within the tourism sector of Turkey.

Except 2001, the maximum number of foreign tourists occurred in 1997. If the fact that the bed size of the county has increased 20 % from that date has been taken into consideration, it can be said that a lower season in terms of efficiency was experienced in 2001. And it is worth to tell that Alanya has first crossed the level of 1,000,000 tourists in 2002.

The position of Alanya in Turkey's tourism mosaic is depicted in Table Ap.A.8. It is disappointing but, Alanya's share in the tourism pie of Turkey had followed a decreasing trend until the year 2000 and first passed 1996's level in 2001 with a little distinction.

3.3. POPULATION:

According to the last census conducted in 2000, the total population of Alanya and Antalya are 257,671 and 1,719,751 respectively. So, Alanya constitutes % 15 of Antalya in population (Population Census, State Institute of Statistics, 2000).

With this population, Alanya is ranked 58th among 923 counties in Turkey. It is important to remember that the population of Alanya goes up to 500,000 in summer. If this shift in population is considered, it is certain that Alanya will be classified higher among those 923 counties. Some features of Alanya's population are given below in Table 3.3.1.

Table 3.3.1: Total Alanya population distributed to center and sub-districts & villages (Source: Alanya Chamber of Commerce and Industry, 2002)

YEAR	POPULATION		
	County Center	Sub-districts and Villages	Total
1985	28,733	58,347	87,080
1990	52,460	76,936	129,396
1997	110,181	111,927	222,108
2000	88,346	169,325	257,671

3.4. TRANSPORTATION:

Alanya is one of the tourism centers that benefit from highway, maritime and airway transportation. The domestic tourists prefer mostly highway transportation, while foreign tourists prefer airway transportation. Also maritime transportation is promising after the privatization of Alanya Harbor. Trips between Cyprus – Alanya, big passenger ships coming from worldwide and various yachts anchored make maritime transportation an important fact. Also feasibility studies are carried on to realize seabus trips between Antalya and Alanya.

The opportunity of railway transportation is not available for Alanya. The closest railway system is found in Burdur and Konya. The railway project between Alanya and Kemer, which had started in 1994, could not be realized due to use of old location sketches. Although, frequently some railway projects are considered and put onto calendar by some governmental and non- governmental organizations, no substantial improvement has taken place (Alanya Chamber of Commerce and Industry, 2002).

3.4.1. Highway Transportation:

Alanya, which is 135 kms away from Antalya, is on D-400 Highway completed in 1958. Some improvement and enlargement processes are still carried on in order to enhance the quality of the highway section in Alanya.

The connection within Central Anatolia can be provided via Manavgat-Cevizli Road and also Akseki-Seydişehir Road.

3.4.2. Airway Transportation:

Alanya's airway transportation is maintained by Antalya airport that is 125 kms away from Alanya. As also mentioned above, foreign tourists coming to Alanya as well as other counties of Antalya, prefer airway transportation. But in the summer months, the increasing charters as well as scheduled flights result in chaos and insufficiency. In order to overcome this situation, Gazipaşa Airport project has been started. When completed, it is planned for this airport to serve Alanya, Gazipaşa and Anamur. Although majority of the physical investment has been completed, there is a complete ambiguity about the future of this project due to some geographic limitations (Alanya Chamber of Commerce and Industry, 2002).

However, this airport should be put onto service at any expense, because the tourists coming to Alanya and other eastern counties can reach to the locations where they will accommodate (hotels, holiday villages, camps and etc.) spend 2 hours or more after landing in. If such an investment had been completed, the competitive power of Alanya would be dominating and Alanya would be such a tourism center that serves for the tourists four seasons, twelve months.

3.4.3. Maritime Transportation:

Alanya being a coast county and naturally consisting a harbor near the fortress makes sea transportation important and preferable. This natural harbor provides a fishing port and a wharf. Various kinds of ships can utilize this wharf. Especially tourists coming from Cyprus prefer mostly this harbor. But with the effect of changing technology, larger ships are constructed. Alanya Harbor sometimes could not meet the demands of such ships. Some improvement and enlargement processes should be carried in order the tourists to utilize a modern harbor (Alanya Chamber of Commerce and Industry, 2002).

3.5. COMMUNICATION:

The most important indicator of a modern world is quick, safe and continuous communication. Nowadays, the means of such communication are television, radio, e-mailing, Internet and printed media. In Alanya, plenty of those are available. This is crucial for a tourism-dominated county because especially foreign tourists would need to sustain contact both with the world and their countries. There is a list of communication alternatives for Alanya in Table 3.5.1.

Table 3.5.1: List of local media active in Alanya (Source: Alanya Chamber of Commerce and Industry, 2002)

Radio Stations	TV Channels	Newspapers & Magazines	News Agencies & Bureaus
Alanya FM	Alanya TV	Yeni Alanya	Doğan
Mega FM	Channel A	Memleketim Alanya	İhlas
Radio Flash		Haber Alanya	Sabah
Radio Maraton		Alanya Express	Zaman
Radio Time		Gazete Alanya	Star
		Yankı Magazine	

3.6. HEALTH:

In Alanya there are four hospitals, two of them being private. The bed capacities of each hospital and the total bed capacity with respect to years 1999, 2000, 2001, 2002 are provided in Table 3.6.1.

Table 3.6.1: Bed capacities with respect to each hospital in Alanya (Source: Alanya Chamber of Commerce and Industry, 2002)

BED CAPACITY	YEAR							
	1999		2000		2001		2002	
Number of Beds	State	148	State	148	State	200	State	200
	Can	40	Can	40	Can	40	Can	40
	Hayat	90	Hayat	90	Hayat	90	Hayat	90
	-		Başkent	100	Başkent	116	Başkent	116
	Total	278	Total	378	Total	446	Total	446

In 2000, Başkent University Hospital was introduced at Alanya. As it can clearly be seen in Table 3.6.1, the total number of beds has been increasing with respect to years. It is a great chance for a county to have four hospitals having almost all bed capacities higher than 100, besides if tourism is the case.

3.7. SUMMARY:

In this chapter, a joint profile of Alanya and Turkey has been depicted in terms of tourism. In addition, in the light of some economic parameters, Turkey has been evaluated. So, the chance of comparing both Alanya's and Turkey's situation has emerged.

Alanya is a central and relative crowded county in Turkey (58^{th} among 923 counties). Seasonally (in spring and summer), the population is increased to higher levels by the domestic and foreign tourists. Highway and maritime transportation is widely utilized by tourists. Also it is possible to travel to Alanya by airway, but the situation is a little bit complex. The airway tourists (mostly foreign) first come to Antalya Airport, then they are transported to Alanya by highway, which is quite not pleasant.

When the active radio stations, TV channels, newspapers, magazines and news agencies are considered, it emerges that Alanya is an important media center. This is particularly

important because information flow into the county from any part of the world makes the tourists confident, satisfied and happy.

Also the available health facilities both in content and quantity are sufficient enough to cover general health problems, injuries and accidents within the county.

The issues mentioned above are the evidences of a strong settled daily life within the county through all year. Especially, health and communication facilities constitute an important advantage of the county when the increased population in spring/summer times is considered.

CHAPTER 4

MODEL PROPOSED AND METHODOLOGY

The symptoms and SWOT analysis will give some important insights about the position of Alanya in terms of tourism. Also, current tourism network structure in Alanya will contribute to the statement raised by ALTSO and will prepare a basis for cluster implementation for future studies. In this section, the model in order to determine the current network structure is represented.

4.1. ANALYSIS of the SYSTEM:

The emphasis of the thesis is on the tourism sector in Alanya, but this does not strictly mean that the tourism cluster will only be constituted by the firms operating in the tourism sector. Firms operating in other sectors but having close relationships with the tourism sector are candidates for being a cluster member.

As mentioned above the system is not only tourism sector in Alanya. The system is the whole Alanya, i.e. all the firms, institutions, organizations operating within the geographical borders of Alanya, even there mşight be supply chain relations outside Alanya.

4.1.1. System Boundaries:

As Porter (1998) mentioned, the clusters are defined to be geographic concentrations of interconnected companies and institutions in a particular field. Since the 'geographic

proximity' is the touchstone of clustering, the system boundary is selected to be the county borders of Alanya. In order to depict the system boundary, a map of Alanya is presented in the Appendix E.

4.1.2. Environment:

Since the system is defined, it is necessary to define its environment. Most generally, environment is the surroundings that surround the defined system (surrounding events, firms, organizations, institutions or other systems). There are two dimensions of the environment in terms of this case; the competitors and the customers.

a. Competitors:

Other firms, organizations, institutions or systems (foreign and domestic), operating in the tourism regions having similar tourism characteristics with Alanya are all considered to be competitors of Alanya. It is important for our system to recover a high competitive advantage among its competitors.

b. Customers:

Customers are the entities flowing in and out of the system. A customer is a major source of interaction between the system and the environment. The customers are considered to be dynamic phenomenon (entities flowing), because when they are in Alanya, they are a part of the system. When they return to their cities/countries, they represent a surrounding.

Figure 4.1.1, the black box diagram of Alanya represents the system and the environment;

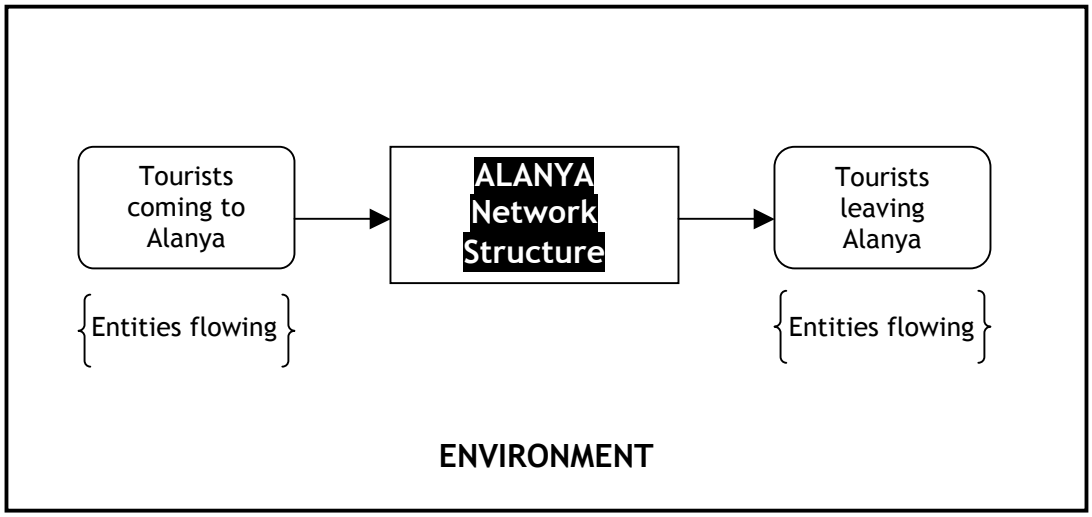

Figure 4.1.1: The Black-box Diagram of Alanya Network Structure System (Source: System Design Project by Ahmet TOHMA, Erel ZERMAN, Kıvanç YILMAZ, Nevzat Umut YARAN, Spring 2003)

The black-box represents Alanya Network Structure System as a whole. Inside the black-box;

- All the firms directly serving to the tourism sector such as hotels, restaurants, travel agencies, tour operating companies, gift & souvenir shops,
- Firms not directly acting on tourism but having close relationships with the firms listed above,
- Non-profit organizations such as ALTSO, ALTID and ALTAV and governmental organizations such as Alanya Municipality,
- Tourists to be served

are present.

4.2. PROBLEM DEFINITION:

The statement **"The tourism income of Alanya is under a serious threat of decline"** was raised by the Alanya Chamber of Industry and Commerce (ALTSO).

A model will be proposed in order to evaluate the validity of the statement raised by ALTSO.

4.3. THE MODEL:

Our aim is to propose a model testing the validity of the statement **"The tourism income of Alanya is under a serious threat of decline"** raised by ALTSO. The phases will include**;**

- Observing qualitative and quantitative symptoms
- Performing a SWOT analysis of Alanya covering in terms of tourism
- Determination of the current network structure of Alanya
- Comparison of major cluster parameters of the current network with the System Design Project carried out in Alanya by METU IE senior students[§]

With the determination of the current network structure, existing relations under the current structure of the cluster will be studied.

Before going on to the empirical study and results, tourism income will be mathematically handled**.**

4.4. MATHEMATICAL EXPRESSION OF TOURISM INCOME:

The tourism income is the point of start for the model. By this proposed model, the tourism income of Alanya will be evaluated. In order to investigate the behaviors of the tourism income, it is proper to decompose the tourism income into its parameters. The mathematical expression representing the tourism income is;

Tourism Income = Number of Tourists * Average Expenditure per Tourist (AEPT)

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§ System Design Project named "Design of an Information System and Collaboration to Increase the Competitiveness of Tourism Sector Enterprises in Alanya" by Ahmet TOHMA, Erel ZERMAN, Kıvanç YILMAZ, Nevzat Umut YARAN, Spring 2003

Now it is clear that, if there is a decrease in tourism income this may be due to a decrease either in the number of tourists or average expenditure per tourist (AEPT). There may be decrease in both parameters too.

4.5. METHODOLOGY:

4.5.1. Symptoms and SWOT Analysis:

Observations made in the county and interviews held with the ALTSO experts led to bring out the symptoms and SWOT analysis. For the SWOT analysis, SWOT analysis of Turkish tourism taking place in the report prepared by State Planning Organization Tourism Special Ad-Hoc Committee belonging to the 8th 5 year National Development Plan (2001) is also utilized. The SWOT analysis performed by Tourism Special Ad-Hoc Committee belonging to the 8th 5 year National Development Plan (2001) is represented in Appendix C.

4.5.2. Determination of the Current Network Structure of Alanya:

In order to acquire data from the potential members of the current network, surveying method has been selected. The survey distributed to the firms in Alanya (potential members of the cluster) is represented in Appendix D. While the answers to some of the questions give qualitative information regarding many aspects of Alanya, some answers are extracted in order to be used as "feed information" for graph theory/network analysis.

The target audience of the survey contains nearly 2500 firms. It is impossible to reach all of them so sampling is performed. The sampling method is very crucial for the survey study because, the sample should represent the population's behaviors especially when it is impossible to cover the whole population. We are analyzing a social network structure and the core of the survey study is to determine the relations and linkages between the firms. So, snowball sampling matching completely to the case is selected.

4.5.2.1. Snowball Sampling:

Singleton and Straits (1999) define snowball sampling as a referral technique which uses a process of chain referral. When members of the target population are located and known, they are asked to provide names and addresses of other members of the target population, who are then contacted and asked to name others, and so on. In the snowball sampling, a significant assumption is that the members of the target population often know each other. Most applications involve **nonprobability** methods of selection. Singleton and Straits (1999) point out that snowball sampling is particularly applicable to deviant and unexpected behavior. In the studies where snowball sampling is applicable, members of the target population are often socially invisible somehow. Their characteristics, therefore, are unknown, and drawing a probability sample is virtually impossible. Often the best that one can do is to use all available means to find eligible respondents and start referral chains and that's what snowball sampling does. Singleton and Straits (1999) stress that; "the quality of the sample ultimately depends on the researcher's ability to develop initial contacts and referral chains that represent a range of characteristics in the target population". Therefore the population should be well analyzed and a very suitable point must be selected in order to initiate the snowball.

4.5.2.2. Model Application:

In order to "initiate the snowball" Hotel Riviera is selected as the starting point of sampling. This choice became apparent after the interview held with the ALTSO experts who know the whole population very well. In order to initiate the snowball, a serious firm (a node) with many connections should be should be selected, so this firm (node) can direct the survey to many other firms (nodes) successfully. Hotel Riviera is a respected firm in Alanya having many connections with other firms.

23rd Question (in Part 1) of the survey, "Please name the 5 firms that you have the highest level of commercial relations" is the core of the survey study. Because, then the survey is applied to those 5 firms. Each of those 5 firms will name 5 new firms (which makes 25), and the survey is applied to those firms then. The survey study continues in this fashion. There are two constraints which end up the survey;

- Survey continues until no new firms (nodes) are defined,
- Survey continues until all new firms defined are outside the system (Alanya) border.

To clarify, when all the firms named are surveyed (no new firms are defined), and/or all new the firms named are outside the system border, the survey study finishes. The interesting part is that, there are no time constraints for the survey study to end up.

It is important to underline one major assumption about the model application. Some firms are divisions of other group of firms. Each of the division firms are not interviewed, instead, the major member is interviewed. But survey results are accepted valid for all. This basic assumption provided the appearance of ownership relations of this type in the survey results.

CHAPTER 5

EMPIRICAL STUDY AND RESULTS

5.1. SYMPTOMS:

In the light of the interviews held with the experts of Alanya Chamber of Industry and Commerce and observations made in the district, the actual depiction of Alanya in terms of tourism has become obvious. The symptoms verifying the decline in terms of tourism income can be listed as follows;

- Average Expenditure per Tourist (AEPT)
- Share of Alanya in Number of Tourists Visiting Antalya and Turkey
- Bed Capacity of Accommodation Facilities
- Occupancy Rates (Utilization of Accommodation Facilities)
- Quality
- Underutilization of Alternative Tourism Possibilities

5.1.1. Average Expenditure per Tourist (AEPT):

In Tables Ap.A.7 and Table Ap.A.9 of Appendix A, the AEPT values for Alanya and Turkey respectively throughout years are presented. Below, it is possible to see the AEPT scatter of Alanya and Turkey over the years in Figure 5.1.1.

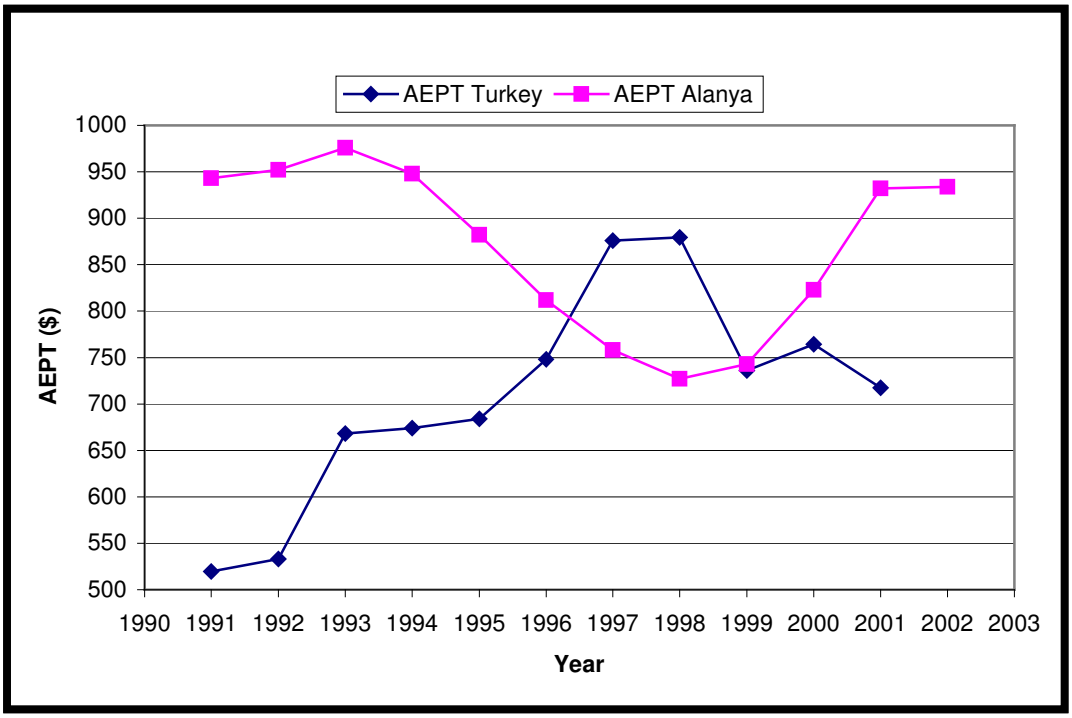


Figure 5.1.1: Average Expenditure per Tourist comparison of Alanya and Turkey (Source: Alanya Chamber of Commerce and Industry, 2002)

From year 1991 through 1998, AEPT for Turkey had a sharp trend of increase. It is surprising that, for the same time interval, AEPT of Alanya experienced a trend of decrease. If the positive atmosphere for the Turkish tourism could be reflected to Alanya for that interval, everything would be different.

But after 1998, the roles changed. While Alanya experienced the AEPT increase up to 1991's AEPT level (~930 $), Turkey's AEPT decreased to 700 $ barrier for the year 2001.

Although it seems to be that Alanya has an AEPT value better than Turkey for the last few years, the value of 1993 could never be exceeded. After 1993, in terms of AEPT, Alanya did worse and worse.

It is not enough to compare Alanya with only Turkey because Turkey consists of many places having different kinds of tourism characteristics. It is also necessary to look into

some real competitors, like Antalya. In Table Ap.A.10 of Appendix A, some descriptive statistics about Antalya are provided (number tourists that visited, tourism revenue and AEPT gathered throughout years). In addition, in Figure 5.1.2, from 1998 to 2002, a comparison of Alanya and Antalya in terms of AEPT is provided.

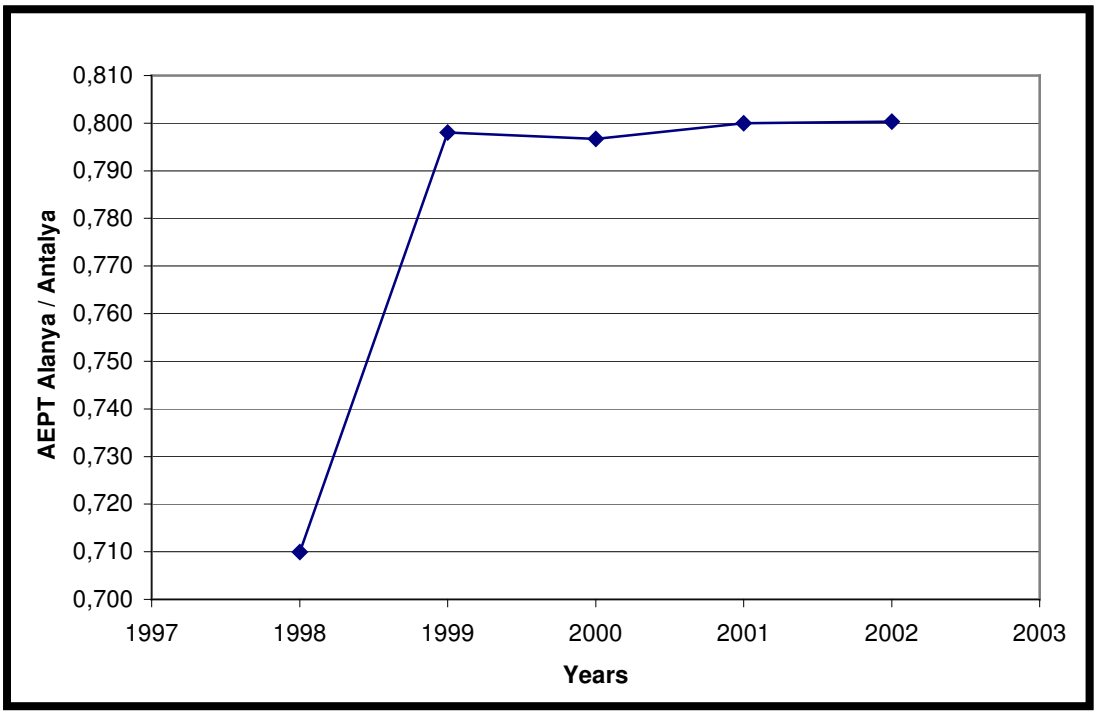


Figure 5.1.2: Average Expenditure per Tourist Alanya over Antalya from years 1998 to 2002 (Source: Antalya Chamber of Commerce and Industry, 2002)

As it can be clearly seen, the strongest competitor of Alanya always acquired greater share of average expenditure per tourist; the proportion has never exceeded 1.000 level. This implies that Antalya is one step ahead of Alanya. The exact comparison of AEPT values of Antalya and Alanya can be seen in Table Ap.A.11 of Appendix A.

5.1.2. Share of Alanya in Number of Tourists Visiting Antalya and Turkey:

With respect to years, number of tourists who visited Alanya is steadily increasing as well as number of tourists visiting Antalya & Turkey (Table Ap.A.12 of Appendix A).

But the critical point is that, what happens to the share of Alanya in terms of number of tourists within years. In Figure 5.1.3, which is depicted form the data acquired from Table Ap.A.12 of Appendix A, the share of Alanya in Turkey and Antalya in terms of visiting tourists from 1996 to 2003 can be observed.

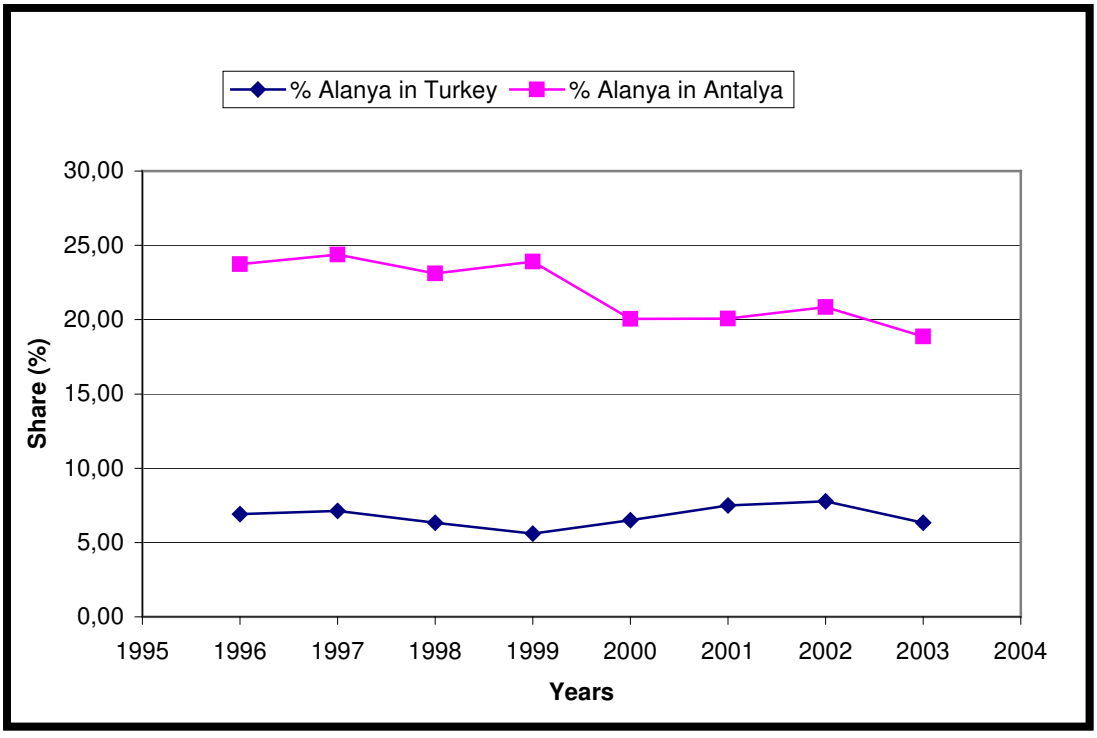


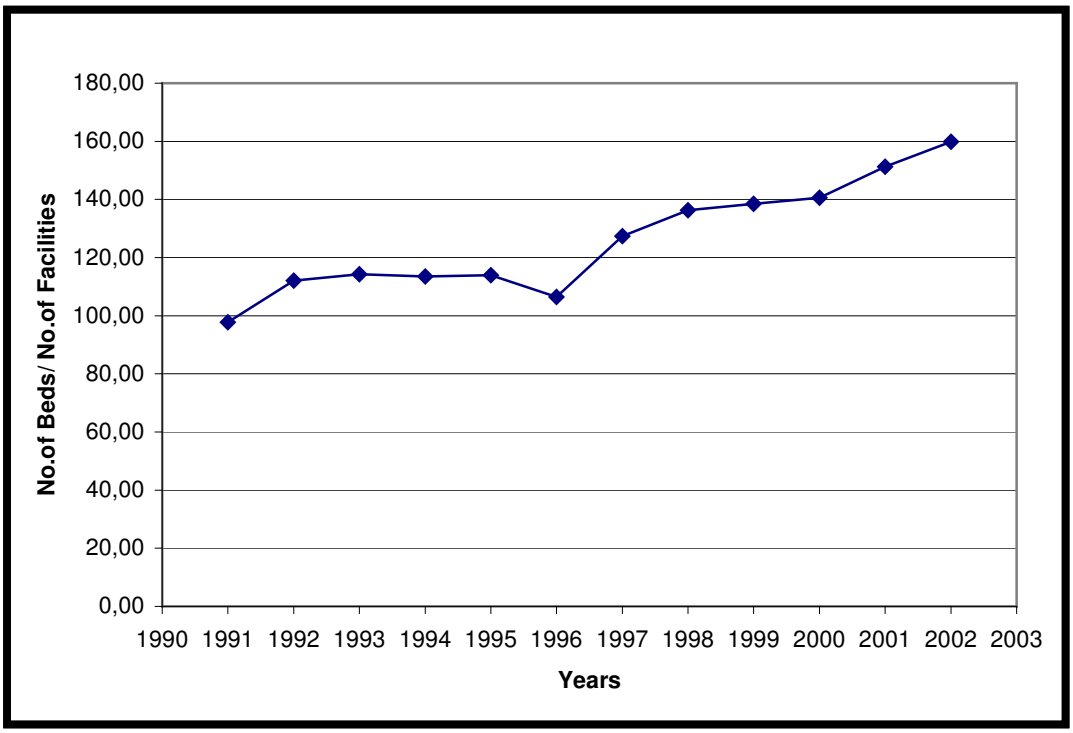
Figure 5.1.3: Share of Alanya in Turkey and Antalya in terms of number of tourists visited from 1996 to 2003 (Source: Alanya Chamber of Commerce and Industry, 2002)

It can clearly be seen that, the share of Alanya in Antalya in terms of number of tourists is steadily declining. This is an indicator of alert for Alanya tourism. When somebody looks up to share of Alanya in Turkey, the situation is not promising. The share of Alanya in Turkey fluctuates approximately around 6-7 %, while Alanya is expected to increase its tourism shares.

5.1.3. Bed Capacity of Accommodation Facilities:

Bed capacity is one of the most crucial measures of tourism accommodation capacity. Number of facilities being high for a tourism oriented district does not mean anything without knowing the bed size of each facility. Bed capacity is somehow a kind of resource.

Since it is a resource, it should be checked that it is well utilized or not. Below, in Figure 5.1.4, from 1991 to 2002, bed size over number of facilities in Alanya is drawn. It is clear that, within years this ratio has increased from 100 to 160. This means that, bed size of Alanya grows faster than the number of facilities in Alanya. But it is disappointing to see that when compared with Antalya, despite this resource growth average expenditure per tourist ratio and tourist share of Alanya have decreased within years (Sections 5.1.1 and 5.1.2).



F

Figure 5.1.4: Number of beds over number of facilities in Alanya from 1991 to 2002 (Source: Alanya Chamber of Commerce and Industry, 2002)

In Table Ap.A.6 of Appendix A, it is possible to see the number of facilities and bed size of Alanya with respect to years.

5.1.4. Occupancy Rates (Utilization of Accommodation Facilities):

Now, it is important to move on to the occupancy rates or utilization of accommodation facilities, since this parameter represents a resource.

In Tables Ap.A.13, Ap.A.14 and Ap.A.15 of Appendix A, occupancy rates of Alanya, Turkey and Antalya are presented respectively. Most recent data about occupancy rates are for the year 2002. With that information, annual average occupancy rate for Alanya was 38.3

in 2002, while annual average occupancy rates for Turkey and Antalya were 48.7 and 63.4 respectively.

This has a meaning that, the accommodation facilities in Alanya are not utilized as well as Turkey and Antalya. Antalya as being the most significant competitor of Alanya, has reached a higher value than Turkey on the average in terms of occupancy rates for 2002. Note that Alanya has a level below the Turkey's average for 2002.

When Tables Ap.A.13, Ap.A.14 and Ap.A.15 of Appendix A are examined carefully, it is possible to see that the capacities are almost idle in winter months. Although this a common problem for destinations that benefit from summer tourism, by adapting winter tourism opportunity in Akdağ, Alanya can move one step forward in the competition. This will be clarified in the following sections.

The findings reached by this symptom resemble a parallel behavior to the findings reached by other symptoms. By numerical indicators, Alanya can not take the lead in tourism revenue generating against its competitors. Also, Alanya can not utilize its resources as well as its competitors.

5.1.5. Quality:

As well as in every sector, in tourism, quality is a must. All the countries seriously dealing with tourism and generating considerable amounts of revenues from tourism bring quality into life by legislations, established standards and education.

But as well as in Alanya, in Turkey there exist some serious problems especially valid for the tourism sector about bringing quality into life. Due to the meetings held with the ALTSO experts and observations performed, it is possible to collect the problems in three groups:

- There are no established standards valid for the tourism sector. There should be established standards assuring quality supported by the legislations.

- Current legislations tend the facilities being either ministry or municipality certified. This brings great chaos into the tourism. Being certified at one hand would be a trigger for establishing legislatively supported standards.
- Also insufficiency of education and well trained personnel is a major handicap in the tourism sector lowering quality especially in Alanya compared with competitors.

5.1.6. Underutilization of Alternative Tourism Possibilities:

In addition to summer tourism, Alanya can generate additional revenues from alternative tourism possibilities. But, no significant tourism alternative to summer tourism has taken place in the district.

Due to the feasibility studies performed, in Akdağ there is a great potential for winter tourism. But, although this potential has called the attention of the authorities, no significant study has been performed. If Akdağ can be promoted as a winter tourism opportunity, it is highly possible that, accommodation facilities nearly idle in winter will be utilized and Alanya will generate significant amount of tourism income.

5.1.7. Results:

All the symptoms show that the problem raised by ALTSO is seriously accurate. AEPT Alanya / AEPT Antalya ratio has always been less than 1 (Figure 5.1.2). This ratio is important since most important rivals of Alanya are Antalya and its districts (Manavgat, Side, Belek, Kemer and etc...). Also in terms of AEPT, Alanya could never exceed the 1993's AEPT value (Figure 5.1.1).

Alanya's share in number of tourists visited Antalya has been steadily declining over the years, in addition Alanya's share in Turkey in terms of number of tourists has been showing a fluctuating behavior over the years. In other words, no significant increase could be observed (Figure 5.1.3).

Although number of beds per facility ratio has been increasing, the average annual occupancy rate for Alanya (38.3 %) is lower than the Turkey's (48.7 %) and Antalya's (63.4 %) average occupancy rates for 2002 (Tables Ap.A.13, Ap.A.14 and Ap.A.15 of Appendix A). This means that the increasing resources are not well utilized.

Also both with the addition of low quality (due to lack of any established standards and low education) and underutilization of alternative tourism possibilities (like Akdağ) the symptoms causing the decreasing tourism income are completed.

As mentioned above tourism income has two components; AEPT and number of tourists. The first two symptoms address the direct decrease in these components, while the remaining four symptoms (bed capacity, occupancy rates of accommodation facilities, quality and underutilization of alternative tourism possibilities) affect these components indirectly.

5.2. SWOT ANALYSIS of ALANYA:

In order to reveal the current situation of Alanya in terms of tourism, SWOT analysis conducted in the light of observations performed, interviews held with the experts of Alanya Chamber of Commerce and Industry and also with the help of SWOT analysis of Turkish tourism taking place in the report prepared by Tourism Special Ad-Hoc Committee belonging to the 8th 5 year National Development Plan (2001) will be brought up. The complete analysis is represented in Appendix C.

5.2.1. Strengths:

Main strength of Alanya comes from its settled city life. Alanya had been selected as the capital city by Anatolian Seljukians for being center of culture, commerce, religion and transportation 800 years ago. What I mean is that, Alanya is not only a tourism promoted district. So, many features of having a settled active civilized life exist in Alanya.

Agriculture was intensively utilized by the citizens of Alanya before tourism in the district was promoted in the 1970s. Also today, agriculture is one of the most important economic activities taking place in the district.

Due to the settled city life, strong institutional framework providing the existence of necessary activities within the elements of Alanya, and local media (TV's, radios, newspapers and magazines) conserving information flow constitute another strengths of the district.

68 % of the entrepreneurs in the district are habitants of Alanya (stated by the experts of Alanya Chamber of Industry and Commerce). Having 68 % of the entrepreneurs "insider status" provides building relationships easier, which is a great advantage for cluster formation.

ALTSO is an important strength of the county. With the well-qualified staff, ALTSO organizes major tourism activities, seminars, conferences within the county, supervises all the member firms, joins international fairs, festivals in order to introduce and promote Alanya as a tourism destination and working together with the academia in order to improve tourism in the county.

Finally, as in many tourism districts in Turkey, following items can be regarded as strengths;

- Mild climate
- natural resources and non polluted environment
- historical and cultural assets

5.2.2. Weaknesses:

The most important weakness for Alanya is the low tourism service quality mentioned in the symptoms (Section 5.1.5). The low tourism quality is due to the lack of any established

standards, different kinds of tourism facility certification, and insufficiency of education and well trained personnel.

Inadequate transportation in Alanya is also handicap/weakness. The different types of transportation vehicles (buses of municipality, private buses and minibuses) and their stations constitute disconnectedness. Also, there is no source of information to find out how to get to a destination near the bus stations. Even the bus drivers do not know how to get to someplace if not included on their route.

Finally, valid for the whole country, following items can be regarded as weaknesses;

- The shortages regarding tourist health and safety
- Unorganized and unsupervised commercial activities (including cheating and making sales by forcing) lowering service quality and durability
- Low capacity utilization rates
- Insufficient tourism consciousness in the society
- Lack of interest towards tourism first by the local governments, then by other governmental institutions and finally by Turkish media.
- Insufficient foreign investment
- Unorganized construction activities and crooked structuring consuming natural resources, polluting environment and destroying natural beauties
- Traffic handicaps and high rates of traffic accidents
- Inflation problem of the Turkish economy
- Insufficient resource allocation to advertising and marketing activities of the Turkish tourism
- The disconnectedness and communication insufficiencies between the institutions relevant to tourism
- Low number of facilities serving superior quality
- Deviations arising due to the pricing policy

5.2.3. Opportunities:

Most important opportunity valid for Alanya is Akdağ. Akdağ has a great potential for winter/ski tourism. And if this potential can be utilized, Alanya can go one step further when compared with its competitors. Akdağ's potential to be handled has taken place in the tourism report prepared by Tourism Special Ad-Hoc Committee belonging to the 8th 5 Year National Development Plan.

Turkey is proceeding on the way to European Union (EU). This is the main opportunity for Turkey, as well as for Alanya. Being an EU member will improve the economic and social profile of the country.

Also the pollution of the West Mediterranean Sea creates a great opportunity for the East Mediterranean Countries like Turkey.

Finally increasing tourism demand world wide and developing transportation possibilities create opportunities for Alanya visited by more tourists.

5.2.4. Threats:

Serious competitors of Alanya like Side, Manavgat, Belek, Kemer and Antalya are much closer to the Antalya Airport than Alanya. The Gazipaşa Airport which is very close to Alanya has not been activated yet. When these two are combined a serious threat occurs. The 135 kms of distance to Antalya Airport causes a major decrease in Alanya's number of tourists.

The effects economic crisis which took place in 2001 have started to weaken a year ago, but the damage left can still be considered as a threat.

As in the world, terrorist activities sometimes taking place within the country blocks and threatens the demand for Turkey and as well as for Alanya. Also those activities sabotage the positive image of Turkey.

Also the war in Iraq, conflict between Israel and Palestine, Russia and Chechnya and the chaotic situation of Afghanistan are major items threatening the tourism demand for Turkey and Alanya.

Tourism activities promoted inside the European Union also constitute a threat for Alanya and Turkey because EU citizens are the target audience for Alanya and Turkey.

5.2.5. Results:

The SWOT analysis conducted shows that Alanya has a tourism potential to be improved. The threats and weaknesses should be immediately removed, and the opportunities should be utilized for this potential to be more active. A summary of this analysis shall include;

First and most important, Alanya has a settled city life meaning that; necessary institutional framework in the county exists. The authority and safety provided by the government, health, transportation and communication services provided by governmental and non-governmental organizations and the dense media services providing information flow through the county can be counted as the most important elements of this institutional framework. The institutional framework is a major branch enhancing tourism.

68 % of the entrepreneurs in the district are habitants of Alanya meaning that they are insiders. The insiders have all informal network structures between themselves assuring information flow for more successful tourism organizations, better motivation to promote the county, also sophisticated inter-assistance in the county.

A non-profit organization should be at the top for the coordination and supervision of all activities in order tourism to be effectively transferred within the entire county. ALTSO is the organization which can satisfy the above conditions successfully.

Shortages regarding health and safety, unpleasant sales activities (such as cheating or forcing the tourist to buy something), uneducated tourism personnel within the county and problems related with quality are the shortages and factors that prevent this potential to

become effective. Once the tourists visiting the county are not satisfied, the tourism income is deducted.

Winter tourism opportunity in Akdağ should be well utilized and promoted to attract the attention of both domestic and foreign tourists. This may yield in significant tourism income.

The absence of an airport within the county and the situation of Gazipaşa Airport are important factors threatening the tourism in Alanya. Many tourists choose to travel other locations because no direct aerial transportation is possible.

5.3. MATHEMATICAL ANALYSIS and COMPARISON:

Mathematical analysis for the determination of the current network structure is performed by utilizing graph theory/network analysis. The analysis is carried out by using UCINET 6.0, Pajek and Netdraw software. Before proceeding, the comments of Charchra, Ghare and More (1979) on graph theory are represented; "Graphs are simple diagrams consisting of points (vertices) and lines (edges). These diagrams or graphs are used extensively to represent the form of a system. Graphs are simple abstract of reality. In this sense, graphs are diagrammatical models of systems. Because they are models, graphs are useful in enhancing the understanding of complex systems. As a general rule, any system involving binary relationships can be represented in the form of a graph".

The analysis is first initiated with forming the adjacency matrix that reveals the relations between the members of the cluster. By using the data, following operations on the adjacency matrix are carried under following headings;

- Overall Structure of Alanya Tourism Cluster
  - Cluster Size
  - Cluster Density
  - Geodesic Distances & Longest Shortest Path (Diameter)
  - Cluster Map

- Centrality and Prestige
  - Degrees of Cluster Members
  - Closeness Values of Cluster Members
  - Betweenness Values of Cluster Members

- Subgroups in Clusters
  - Cliques
  - Core-periphery analysis

- Rivalry Data
  - Competitor Matrix

The results acquired are compared with the ones in Alanya System Design Project in order to evaluate the current situation with past.

Before moving on the details of the analysis, adjacency matrix, which is the starting point of the analysis, will be investigated.

5.3.1. Adjacency Matrix:

The information in a graph (who is connected to whom) can be represented by a matrix known as the *adjacency matrix*, in which a given cell X(i,j) contains a value of 1 if nodes *i* and *j* are connected, and 0 otherwise. In more precise language, a graph G = (V,E) with vertex set V and edge set E can be represented as a square symmetric 1-mode matrix *X*, known as the *adjacency matrix*, in which X(i,j) = X(j,i) = 1 if (i,j) belongs to E and X(i,j) = X(j,i) = 0 otherwise. Thus, the rows and columns of the adjacency matrix correspond to the nodes of the graph, and the cells in the matrix correspond to pairs of nodes or *dyads*. A matrix value X(i,j) = 1 indicates the presence of a link between node *i* and node *j*, and X(i,j) = 0 indicates the absence of a link (Ucinet 6.0 User Guide, 2002).

Here is an example of a matrix representing a network:

	A	B	C	D	E
A	0	1	0	1	1
B	1	0	1	0	0
C	0	1	0	0	1
D	1	0	0	0	0
E	1	0	1	0	0

In this network, actor A has a tie with actors B , D and E, but not with C and not with him/her self. Actor B has a tie with A and with C, actor C has a tie with B and E, actor D has a tie only with A, and actor E has a tie with A and C (Ucinet 6.0 User Guide, 2002).

Alanya Tourism Cluster adjacency matrix is represented in Table F.1 of Appendix F. In this matrix, the cells with entry 1 show that the firm on that row is connected to the firm on that column, or more general, they are connected. The names of the firms are not given explicitly, instead each member firm is coded by a number from 1 to 89. As well as numbers, letters corresponding to the firms that do not belong to the current network structure are given.

5.3.2. Overall Structure of Alanya Tourism Cluster:

5.3.2.1. Cluster Size:

There are 89 members in the Alanya Tourism Cluster composed of hotels (three star or more), tour operators, service suppliers and complementaries such as bars, restaurants. There were no isolated nodes, so no revision is applied on the data.

Alanya Tourism Cluster (by the System Design Project, 2003) had 102 members. The number of members has decreased by 13 %. This decrease may be due to the reflection of the dynamic conditions of the tourism sector.

5.3.2.2. Cluster Density:

The density of a directed graph is calculated as the number of arcs, L, divided by the possible number of arcs. The density Δ is:

$$\Delta = \frac{L}{g(g-1)}$$

Where, g is the number of nodes in the graph. The maximum density can be 1.00, if all the possible paths exist (Bulu, 2003). The overall density of Alanya Tourism Cluster is 0.0465 which is very low indeed. The UCINET output for calculating the overall density can be seen in Table F.2 of Appendix F.

Alanya Tourism Cluster (by the System Design Project, 2003) had a density of 0.0278. The density has increased twice, that means number of linkages between members has increased, therefore utilization and efficiency of the cluster have increased. Both densities imply that both network structures are underdeveloped and have enough rooms to improve.

5.3.2.3. Geodesic Distances & Longest Shortest Path (Diameter):

Bulu (2003) defines geodesic distance between a pair of nodes in a graph as "the length of a shortest path between the two nodes, and the basis for defining the diameter of the graph". Further he defines diameter of a graph as "the largest geodesic distance in the (connected) network between any pair of nodes."

Number of geodesic paths between pairs of points is calculated by UCINET and the largest geodesic path (diameter) is calculated using PAJEK, which has used the geodesic path calculations as basis. The longest shortest path is from Member (12) to Member (88), and the diameter is 9 for Alanya Tourism Cluster. Geodesic distances and longest shortest path outputs of UCINET and PAJEK can be seen in Table F.3 and F.4 of Appendix F respectively.

The diameter is 6 for Alanya Tourism Cluster (by the System Design Project, 2003). Although not valid for all cases, bigger diameters can create more flow generation as well as possibilities for new linkages.

5.3.2.4. Cluster Map:

The network map of Alanya Tourism Cluster drawn by NetDraw is given in Figure F.1 of Appendix F. The map provides some opinions about the denseness of the linkages. Also we have zoomed on the network map and observed the more dense sections in a detailed manner. In Figures F.2, F.3 and F.4 of Appendix F, we have zoomed on the down-left, upper-left and core sections of the network respectively.

5.3.3. Centrality and Prestige:

5.3.3.1. Degrees of Cluster Members:

Before starting with the in and out degrees of members, it is necessary to provide some explanations from Bulu (2003). In the model proposed by Bulu (2003), cluster members are classified into three types. These are supplier, customer and medium members. A member is a supplier if indegree=0 and outdegree>0, medium (Supplier and Customer) if indegree>0 and outdegree>0 and customer if indegree>0 and outdegree=0.

When the in and out degrees are higher in value, it indicates that the relations are stronger and the flow on arcs in the network is more frequent. Below in Table 5.3.1 and 5.3.2, you can see top ten members of Alanya Tourism Cluster and top-five members of Alanya Tourism Cluster (by the System Design Project, 2003) with respect to normalized in & out degrees respectively. Normalization is a way of standardization somehow. According to Bulu (2003), normalized values are very useful for cluster comparisons in statistical analysis.

Table 5.3.1: Top ten members of Alanya Tourism Cluster with respect to normalized in and out degrees

Cluster Member Number	Normal Out Degree	Normal In Degree
44	6.818	3.409
35	6.818	21.591
47	6.818	1.136
36	6.818	15.909
5	5.682	3.409
1	5.682	1.136
7	5.682	4.545
8	5.682	5.682
4	5.682	13.636
10	5.682	9.091

Table 5.3.2: Top five members of Alanya Tourism Cluster (by the System Design Project, 2003) with respect to normalized in and out degrees

Cluster Member (Letter)	Normal Out Degree	Normal In Degree
O	19.608	4.902
P	13.725	0.000
R	11.765	0.000
S	11.765	0.000
T	10.784	0.000

Alanya Tourism Cluster (by the System Design Project, 2003) mostly has supplier type of members in the top-five with respect to in and out degrees. As it can be seen below, the situation has changed considerably from supplier type to customer and medium types of members. And currently the normalized out degree ranks are lower.

In the current network, no members are present with indegree zero. This means that there are no supplier type members. Members listed in Table 5.3.3 are the customer type members. The rest are members of medium type. Also, normalized in and out degrees of members of Alanya Tourism Cluster calculated by UCINET are provided in Table F.5 of Appendix F.

Table 5.3.3: Customer type of members of Alanya Tourism Cluster

Cluster Member (Number)	Normal Out Degree	Normal In Degree
51	0.000	1.136
58	0.000	1.136
73	0.000	5.682
43	0.000	5.682
50	0.000	4.545
45	0.000	4.545
46	0.000	1.136
48	0.000	1.136
70	0.000	1.136
38	0.000	4.545
39	0.000	1.136
40	0.000	2.273
80	0.000	1.136
75	0.000	2.273
87	0.000	1.136
88	0.000	1.136
89	0.000	1.136

5.3.3.2. Closeness Values of Cluster Members:

Bulu (2003) mentions closeness as the inverse of distance. If a node has shorter distances the other nodes in the network, then that node is "closer" to the other nodes. Also Hanneman (2001) suggests that, the geodesic distances between pairs of actors are the most commonly used measure of closeness.

So closeness is an essential factor, since it's a kind of measurement that evaluates the proximity of any node in that network and gives an opinion about if the network is well-developed or not.

Closeness values of members of Alanya Tourism Cluster calculated by UCINET are provided in Table F.6 of Appendix F. Below, in Table 5.3.4 and 5.3.5, it is possible to see the top-ten ranking of Alanya Tourism Cluster and top-five ranking Alanya Tourism Cluster (by the System Design Project, 2003) in terms of closeness. Outcloseness value for a node is responding to ease of reaching that node and incloseness value for a node is responding to the ease of reaching other nodes from that node.

Table 5.3.4: Top ten members of Alanya Tourism Cluster with respect to in & outcloseness

Cluster Member (Number)	Incloseness	Outcloseness
50	5.366	1.124
40	5.363	1.142
6	5.317	29.333
73	5.301	1.124
38	5.263	1.124
26	5.263	30.034
23	5.263	25.731
35	5.257	29.333
33	5.254	28.664
24	5.226	1.124

Table 5.3.5: Top five members of Alanya Tourism Cluster (by the System Design Project, 2003) with respect to in & outcloseness

Cluster Member (Letter)	Incloseness	Outcloseness
U	2.394	0.980
V	1.881	0.980
X	1.777	0.980
Y	1.777	0.980
Z	1.777	0.980

Current network structure has higher in & out closeness values, which means that reachabilty of the nodes are higher therefore utilization is higher. This may also be verified by looking at the cluster densities.

5.3.3.3. Betweenness Values of Cluster Members:

Betweenness responds to the "centrality" of a member in the network (Bulu, 2003). If node b is on the path going from node a to node c, then node b is "between" nodes a and c. If the betweenness value of a node is high, it lies on more paths and it is more central.

Betweenness values of Alanya Tourism Cluster calculated by UCINET can be seen in Table F.7 of Appendix F. Below, normalized betweenness values of top ten members of Alanya Tourism Cluster are listed in Table 5.3.6. Normalized betweenness values of top-five members of Alanya Tourism Cluster (by the System Design Project, 2003) can be viewed in Table 5.3.7. Normalized values provide a basis suitable for comparing the parameters with other networks' parameters (Bulu, 2003).

Table 5.3.6: Top ten members of Alanya Tourism Cluster with respect to betweenness values

Cluster Member (Number)	Betweenness	nBetweenness
26	755.415	9.867
4	752.806	9.833
10	742.510	9.698
6	712.821	9.311
35	663.641	8.668
74	661.109	8.635
32	481.625	6.291
36	461.037	6.022
67	457.933	5.981
27	400.876	5.236

Table 5.3.7: Top five members of Alanya Tourism Cluster (by the System Design Project, 2003) with respect to betweenness values

Cluster Member (Letter)	Betweenness	nBetweenness
AA	258.000	2.554
AB	225.000	2.272
AC	226.500	2.243
AD	150.333	1.488
O	115.500	1.114

The betweenness values of the current network structure are higher due to more number of linkages, higher rate of utilization therefore more developed network structure.

5.3.4. Subgroups in Cluster:

5.3.4.1. Cliques:

Hanneman (2001) points that, one of the most common interests of structural analysts is in the "sub-structures" that may be present in a network. Many of the approaches to understanding the structure of a network emphasize how dense connections are compounded and extended to develop larger "cliques" or sub-groupings. Network analysts have developed a number of useful definitions an algorithms that identify how larger structures are compounded from smaller ones: cliques, n-cliques, n-clans, and k-plexes all look at networks this way.

According to Hanneman (2001), divisions of actors into cliques or "sub-groups" can be a very important aspect of social structure. It can be important in understanding how the network as a whole is likely to behave. He tells that, for example, suppose the actors in one network form two non-overlapping cliques; and, suppose that the actors in another network also form two cliques, but that the memberships overlap (some people are members of both cliques). Where the groups overlap, we might expect that conflict between them is less likely than when the groups don't overlap. Where the groups overlap, mobilization and diffusion may spread rapidly across the entire network; where the groups don't overlap, traits may occur in one group and not diffuse to the other.

The idea of sub-structures or groups or cliques within a network is a powerful tool for understanding social structure and the embeddedness of individuals. The general definition of a clique is pretty straight-forward: a clique is simply a sub-set of actors who are more closely tied to each other than they are to actors who are not part of the group (Hanneman, 2001).

In Alanya Tourism Cluster there are 9 cliques computed by UCINET, all the cliques have 3 members. The list of cliques can be seen in Table 5.3.8. The cliques of Alanya Tourism Cluster with the addition of Clique Co-membership Matrix can be seen in Table F.8 of Appendix F.

Table 5.3.8: Cliques of Alanya Tourism Cluster

Clique Number	Clique Members	Clique Number	Clique Members
1	6 – 7 - 27	**5**	11 – 33 - 40
2	6 – 8 – 27	**6**	11 – 33 – 41
3	6 – 27 - 53	**7**	19 – 27 – 29
4	11 – 27 - 65	**8**	19 – 27 – 30
		9	7 – 27 – 29

As it is clearly seen, different cliques have members in common or in other words the cliques overlap. It is good for the cluster to have overlapping cliques since mobilization and diffusion may spread rapidly across the entire network (Hanneman, 2001).

Alanya Tourism Cluster (by the System Design Project, 2003) had 48 different cliques, biggest clique had 4 members (only 2 cliques had 4 members, remaining 46 had 3 members). Current network structure only has 9 cliques of size 3. This is interesting since current network structure has higher density, betweenness and closeness values. In the current structure, members do not tend to perform "group work". This may be due to discreet attitudes of the firms. In the surveys, many of the firms have not provided enough data on their competitors. In order not to reveal their commercial secrets, they may have chosen to work without forming group relations.

5.3.4.2. Core – Periphery Analysis:

UCINET performs an analysis that divides the cluster into two; core and periphery. The aim here is to find the core members (members that are strategically important) and the members surrounding (periphery). A matrix called "density matrix" is defined by UCINET, this matrix is used to visualize the densities of the core and periphery members' separately. (1,1) is the density of the core and (2,2) is the density of the periphery. Below it is possible to see the density matrix. Also, the density matrix is provided in Table F.9 of Appendix F.

	1	2
1	0.116	0.022
2	0.060	0.027

Figure 5.3.1: Core-Periphery Density Matrix of Alanya Tourism Cluster

Below, in Table 5.3.9, the core members of Alanya Tourism Cluster are listed.

Table 5.3.9: Core members of Alanya Tourism Cluster

Number	Member Number	Number	Member Number
1	**4**	**18**	35
2	6	**19**	**36**
3	**8**	**20**	37
4	10	**21**	**41**
5	**14**	**22**	49
6	17	**23**	**52**
7	**21**	**24**	54
8	23	**25**	**56**
9	**24**	**26**	57
10	25	**27**	**60**
11	**26**	**28**	61
12	27	**29**	**62**
13	**29**	**30**	63
14	30	**31**	**65**
15	**31**	**32**	71
16	33	**33**	**74**
17	**34**	**34**	76

Also, Simple Core – Periphery Model of Alanya Tourism Cluster is presented in Table F.9 of Appendix F.

Alanya Tourism Cluster (by the System Design Project, 2003) had 102 members and the number of the core members was 31. Current network structure in Alanya has 89 members and has 34 core members. If someone looks at the core membership ratio which is number of core members over total number of members, it can be seen that 31/102= 0.304 is much lower than 34/89= 0.382. Core membership ratio of the current network structure is higher. In the core part of the cluster, more intense and variant type of linkages take place between the members. This implies that, higher percent of members compared to previous study are performing significant activities within the current network structure. In other words, the share of "core" in the current network structure (38 percent) is higher than the "core" in the previous network structure (30 percent).

5.3.5. Competition Analysis:

5.3.5.1. Competitor Matrix:

It is important to emphasize the competition data because competing seriously promotes and facilitates the challenge that leads to increased productivity. Also, high levels of competition can improve the total quality. Bulu (2003) notes; "In competitor matrix, nodes that have rivalry relation among them are presented with 1. Competitor matrix considers only nodes. It does not give information about linkages". We used R instead of 1.

In Tables 5.3.10 and 5.3.11, the competitor matrices of the Alanya Tourism Cluster and Alanya Tourism Cluster (by the System Design Project, 2003) are presented. The firms which are absent in the matrix did not find 24th question of Survey Part 1 suitable for their organizational structure. As described above the coding can be expressed as follows; the letters correspond to the firms outside the current network structure while the numbers correspond to the firms belonging to the current network structure.

Table 5.3.10: Competitor Matrix for Alanya Tourism Cluster

	A	15	63	65	B	C	D	E	49	71	F	G	H	1	I	J	K	L	2	33	35	74	36	M	28	N
1	R	R	R	R	R																					
2						R	R	R	R	R																
74						R	R	R	R	R																
28						R	R	R	R	R																
8											R	R	R													
15	R													R	R											
29																R	R	R								
31																			R	R	R					
77																			R	R	R					
33																					R	R	R			
32																								R	R	
68																								R	R	
69																								R	R	
34																				R		R				
49																				R		R				
55											R															R

In Alanya Tourism Cluster, firms have totally 50 competitors (number of Rs). The number of members is 89. Total competitor link / Number of members ratio (Bulu, 2003) is equal to 50 / 89 = 0.56.

Table 5.3.11: Competitor Matrix for Alanya Tourism Cluster (by the System Design Project, 2003)

	AE	AF	AG	AH	AI	AJ	AK	AL	AM	AN	AO	AP	AQ	AR	AS	AT	AU	BA	AV	AX	AY	AZ
AE				R	R	R																
AF			R																			
AG		R																				
AH	R																					
AI	R																					
AJ	R																					
AK											R											
AL														R								
AM														R								
AN														R								
AO							R															
AP								R	R					R				R	R			
AQ																R						
AR								R	R	R						R						
AS																	R					
AT													R									R
AU															R							
AV												R										
AW																						
AX																						
AY																					R	
AZ																R						

In Alanya Tourism Cluster by the System Design Project (2003), firms have totally 30 competitors (number of Rs). The number of members is 102. Total competitor link / Number of members ratio (Bulu, 2003) is equal to 30 / 102 = 0.29.

It is important to note that the competitors of the firms are not necessarily members of the relevant cluster. That means, some competitors of the firms are outside the clusters.

When the two ratios are compared, it is obvious that the competitiveness therefore the challenge to do business has increased considerably. But in order the actual situation to be revealed correctly, each member should have participated to the competition analysis.

5.3.6. Results:

It is possible to see that the network structure has evolved from 2003 to 2005. The whole comparison on the parameters basis emphasizes that there is a tendency in the network structure to develop from 2003 to 2005. If someone goes into details;

Overall density of current network structure is 0.0465. Maximum value for the density is 1.00 (that is if all possible paths between members exist, Bulu (2003)). That means the number of linkages between members are significantly low. But it is hopeful to see that density has increased from 0.0278 to 0.0465 from 2003 to 2005, which is an evidence of the self evolution of the network.

The diameter (longest shortest path) has increased from 6 to 9 from 2003 to 2005. This result is convincing since higher diameters can create opportunities for more flow generation and new linkages within the network.

In 2003, top-five mean normalized out degree was 13.529. But unfortunately this value is 6.591 for the current network structure (2005). It is important to mention that, higher in & out degrees provide stronger linkages and relationships. Again, it is convincing to see that in 2003, members were only supplier type mostly, but in 2005, it is possible to come across all types of members (supplier, supplier & customer, customer). Having all types of members can create diversity among the network.

The closeness values are also encouraging. Top-five mean incloseness value was 1.921 in 2003. Current network structure has a Top-five mean incloseness value of 5.322. Higher closeness values may indicate that nodes are closer to the other nodes in the network.

Betweenness responds to the “centrality” of a member in the network (Bulu, 2003). Top-five mean betweenness value was 195.066 in 2003, currently it is 725.439. Some the members are more “central” currently compared to 2003.

Cliques are subgroups within a cluster. The existence and abundance of them indicate cooperation and assistance within a cluster. It is discouraging to see that 48 cliques in 2003 (biggest clique had 4 members) have dropped to 9 cliques in 2005 (biggest clique has 3 members). This is a sign of disappearing cooperation between the members.

Core / Periphery Analysis also provide some insights. Currently 34 of the 89 members are in the core of the network. In 2003, 31 of the 102 members were in the core of the network. Core membership ratio of the current network structure (34/89=0.382) is higher compared to 2003 (31/102=0.304). Members in the core are more active and generate more linkages.

CHAPTER 6

CONCLUSION

During the thesis, a model is proposed in order to test the validity of statement "The tourism income of Alanya is under a serious threat of decline". This model included the investigation of the symptoms, a SWOT analysis covering Alanya in terms of tourism, reveal of the current network structure in Alanya focused on companies, organizations and institutions serving tourism. A comparison is performed with the network structure proposed in 2003. Current network structure can provide a basis for clustering approach that would improve the tourism potential of Alanya in future studies. In order to determine the current network structure, questionnaires are applied to the firms chosen by the snowball sampling criteria. Since it best fits social network structures, snowball sampling is chosen as the sampling methodology. A crucial point was to start the snowball from an appropriate position to grow. In the light of interviews held with Alanya Chamber of Commerce and Industry experts, Riviera Hotel is selected as the snowball to initiate.

After the questionnaires have been completed, the results are analyzed with Ucinet 6.0. First adjacency matrix, which is the source of data for Ucinet 6.0, is formed. Then the analysis is performed leading to several parameters indicating important features of the network such as;

- Density
- Diameter
- Geodesic Paths
- Cliques
- Core / Periphery Model

of the current network structure in Alanya and;

- In and Out Degrees
- Closeness
- Betweenness

values of the members of the current network structure in Alanya. Also these parameters are compared with the ones acquired in the System Design Project by senior students of METU IE Dept. They performed the same analysis by the same methods in 2003. The results of the comparison are convincing.

Although the number of members has decreased from 102 (in 2003) to 89 (currently), the relations have become more tight, denser and stronger. First signal of that is the overall network density. It was 0.0278 in 2003, while it is 0.0465 currently.

Another parameter supporting this inference is the network diameter. In 2003, the diameter was 6. Currently the diameter is 9. A larger diameter symbols more coverage of the cluster members.

In addition, the members have started to make connections more intensely. The higher in & out closeness and betweenness values of the current network structure in Alanya proved this (Tables 5.3.4 – 5.3.7). Also, in & out degrees of the members belonging to current network structure obviously tell that the situation has changed considerably from supplier type to customer and medium types of members (Tables 5.3.1-5.3.3).

Number of cliques – subgroups within a cluster – has seriously declined from 48 (in 2003) to 9. In 2003, 2 of the cliques had 4 members, remaining 46 had 3 members. Currently, all the cliques have 3 members. Currently, members of the network do not tend to work in groups much. In spite of this demoralizing case, the cliques are highly overlapping, which means rapid mobilization and diffusion through members take place.

One last inference is about Core / Periphery Analysis. Currently more members are “in the core” of the cluster. According to the analysis, the core membership ratio is 0.382. In

2003, the network structure had a core membership ratio of 0.304. The higher the core membership ratio the more interactions through the cluster take place.

After all those, symptoms, SWOT analysis, parameters of the current network structure signal that ALTSO has a point to raise the statement "Tourism income of Alanya is under a serious threat of decline". Referring to the comparison performed, although a development from 2003 to 2005 is valid, the overall density (0.0465 / 1.00) and the number of cliques are too low.

The self development from 2003 to 2005 in the network structure creates value and opportunity for clustering approach to be performed in the future studies. By serious clustering activity, the low overall density may be increased to higher levels, clique formation may become widespread.

Related future studies may concentrate on the details of model design, building-application and preparing the infrastructure for clustering approach in Alanya.

6.1. FURTHER RESEARCH:

In this study we have mainly utilized social network analysis by graph method in order to determine the current tourism network structure in Alanya. While shaping the structure of the network, boundary constraints were binding. We did not interview the firms outside the county borders of Alanya, since geographical proximity is a major issue for clustering. Though most of the clusters' boundaries remain inside political boundaries (i.e., city borders, state borders, and national borders), some clusters may include more than one state, even they may be multinational (Porter, 1998). So, changing the system borders surely would result in different outcomes. Further research on determining system boundaries would be interesting.

By the end of this study, current network structure in Alanya is determined. Due to the comparison performed, although it is possible to talk about a self-development, the overall cluster density is too low. This network structure should be developed. For the sake of network development, a governmental regional development agency should be

established in Alanya. Also, a clustering development office should be set up in the structure of Alanya Chamber of Commerce and Industry. These two organizations should work as a team in cooperation and coordination.

The agenda of these organizations should include many activities such as;

- Organizing seminars, training programmes in the supervision of local, national and global advisors
- Cooperation with academia devoted to train educated personnel serving tourism
- Introducing the cluster locally, nationally and globally for better promotion by successful PR activities
- Supporting the cluster economically during initiation. After the initiation period, the members shall voluntarily pay monthly/annually fees in order to keep the cluster alive. The initiation period length may vary due to the efficiency of the organization teams.
- Working in coordination with other local agencies such as police and municipality in order to warrant a safe and comfortable environment for the tourists

Such a procedure is reproducible. It would be very useful to apply such a procedure in order to reveal potential clusters throughout Turkey. Bulu (2003) states that “we believe that all potential microclusters in Turkey should be identified urgently for Turkey”.

As a final expression, we believe that this study creates value for service clustering especially in the tourism sector and drivers a route for regional development.

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APPENDIX A

TOURISM STATISTICS OF ALANYA, ANTALYA AND TURKEY

Table Ap.A.1: World Top 20 among tourism revenues and Average Expenditure Per Tourist (AEPT) for 2002 (Source: World Tourism Organization, 2002)

Rank	Country	Revenue (Billion $)	Percentage (%)	AEPT ($)
1	USA	66.5	14.0	1587
2	Spain	33.6	7.1	650
3	France	32.3	6.9	419
4	Italy	26.9	5.7	676
5	China	20.4	4.3	554
6	Germany	19.2	4.0	1067
7	Gr. Britain	17.8	3.8	736
8	Austria	11.2	2.4	602
9	Hong Kong	10.1	2.1	608
10	Greece	9.7	2.0	683
11	Canada	9.7	2.0	483
12	Mexico	8.9	1.9	452
13	TURKEY	8.5	1.8	664
14	Australia	8.1	1.7	Absent in Table Ap.A.2
15	Thailand	7.9	1.7	725
16	Holland	7.7	1.6	802
17	Switzerland	7.6	1.6	760
18	Belgium	6.9	1.5	Absent in Table Ap.A.2
19	Malaysia	6.8	1.4	511
20	Portugal	5.9	1.2	504
World total		**474.2**	100	675

Table Ap.A.2: World Top 20 among the number of tourist being hosted and Average Expenditure Per Tourist (AEPT) for 2002 (Source: World Tourism Organization, 2002)

Rank	Country	Million Tourists visited	Percentage (%)	AEPT ($)
1	France	77.0	11.0	419
2	Spain	51.7	7.4	650
3	USA	41.9	6.0	1587
4	Italy	39.8	5.7	676
5	China	36.8	5.2	554
6	Gr. Britain	24.2	3.4	736
7	Canada	20.1	2.9	483
8	Mexico	19.7	2.8	452
9	Austria	18.6	2.6	602
10	Germany	18.0	2.6	1067
11	Hong Kong	16.6	2.4	608
12	Hungary	15.9	2.3	Absent in Table Ap.A.1
13	Greece	14.2	2.0	683
14	Poland	14.0	2.0	Absent in Table Ap.A.1
15	Malaysia	13.3	1.9	511
16	TURKEY	12.8	1.8	664
17	Portugal	11.7	1.7	504
18	Thailand	10.9	1.6	725
19	Switzerland	10.0	1.4	760
20	Holland	9.6	1.4	802
World Total		**702.6**	100	675

Table Ap.A.3: Number of tourists visiting Turkey and tourism revenue from 1991 to 2003 (Source: Ministry of Tourism, 2003)

Year	Number of Tourists	Annual Change (%)	Revenue (million $)	Annual Change (%)
1991	5,517,897	2.4	2,654	-17.7
1992	7,076,096	28.2	3,639	37.1
1993	6,500,638	-8.1	3,959	8.8
1994	6,670,618	2.6	4,321	9.1
1995	7,726,886	15.8	4,957	14.7
1996	8,614,085	11.5	5,650	14.0
1997	9,689,004	12.5	7,002	23.9
1998	9,752,697	0.7	7,177	2.5
1999	7,487,285	-23.2	5,203	-33.4
2000	10,428,153	39.3	7,636	46.8
2001	11,618,969	11.4	8,090	5.9
2002	13,256,028	14.1	8,473	4.7
2003	14,029,558	5.8	9,676	14.2

Table Ap.A.4: Gross National Product (GNP), foreign currency income, export revenues of Turkey and the percentage of tourism revenue from 1991 to 2002 (Source: State Institute of Statistics, Central Bank of Republic of Turkey, 2003)

Year	GNP (Billion $) (1)	FCI (Billion $) (2)	ER (Billion $) (3)	TR (Billion $) (4)	(4) / (1) (%)	(4) / (2) (%)	(4) / (3) (%)
1991	150	29.4	13.6	2.7	1.8	9.2	19.8
1992	158	30.7	14.7	3.6	2.3	11.7	24.5
1993	179	32.9	15.3	4.0	2.2	12.2	26.1
1994	132	34.6	18.1	4.3	3.3	12.4	23.8
1995	170	44.7	21.6	5.0	2.9	11.2	23.1
1996	184	54.1	23.2	5.6	3.0	10.4	24.1
1997	192	61.7	26.3	7.0	3.6	11.3	26.6
1998	207	65.5	27.0	7.2	3.5	11.0	26.7
1999	185	55.7	26.6	5.2	2.8	9.3	19.5
2000	201	62,5	27.8	7.6	3.8	12.2	27.3
2001	148	59.4	31.3	8.1	5.5	13.6	25.9
2002	180	62.5	34.6	8.5	4.7	13.6	24.6

Table Ap.A.5: The distribution of number of tourists with respect to major tourism centers of Turkey for 2001, 2002 and 2003 (Source: Antalya Chamber of Commerce and Industry, 2003)

City	2001	Percent	2002	Percent	2003	Percent
Antalya	4,211,930	36.3	4,747,581	35.8	4,682,104	33.4
İstanbul	2,517,139	21.7	2,705,848	20.4	3,148,266	22.4
Muğla	1,327,128	11.4	1,938,156	14.6	1,998,559	14.3
İzmir	621,589	5.4	650,554	4.9	534,880	3.8
Aydın	448,599	3.9	200,137	1.5	275,336	2.0
Other	2,492,584	21.4	3,013,752	22.7	3,390,413	24.2
Total	**11,618,969**	**100.0**	**13,256,028**	**100.0**	**14,029,558**	**100.0**

Table Ap.A.6: Number of facilities, total number of beds, foreign tourists visited Alanya and total nights spent from 1991 to 2002 (Source: Alanya Chamber of Commerce and Industry, 2002)

Year	No.of Facilities	Total No.of Beds	Foreign Tourists Visited	Nights Spent
1991	339	33,125	212,593	2,277,234
1992	395	44,284	386,261	4,003,179
1993	438	50,033	371,137	3,319,789
1994	473	53,668	345,294	3,276,600
1995	476	54,232	479,953	4,897,440
1996	631	67,168	592,870	5,731,600
1997	691	88,024	698,628	6,678,880
1998	715	97,453	617,312	5,778,041
1999	768	106,355	418,537	4,009,585
2000	745	104,711	677,340	6,658,252
2001	747	112,957	866,130	8,540,012
2002	766	122,433	1,029,350	9,844,710

Table Ap.A.7: Number of foreign tourists, average expenditure per tourist (A.E.P.T.) and tourism revenue for Alanya from 1991 to 2002 (Source: Alanya Chamber of Commerce and Industry, 2002)

Year	A.E.P.T.* ($)	Foreign Tourists Visited	Total Tourism Revenue ($)
1991	943	212,593	200,475,190
1992	952	386,261	367,720,470
1993	976	371,137	362,229,710
1994	948	345,294	327,338,710
1995	882	479,953	423,318,546
1996	812	592,870	481,410,440
1997	758	698,628	529,560,024
1998	727	617,312	448,785,824
1999	743	418,537	310,972,991
2000	823	677,340	557,450,820
2001	932	866,130	807,233,160
2002	934	1,029,350	961,412,900

* **A.E.P.T.:** Average expenditure per tourist

Table Ap.A.8: Alanya vs. Turkey in terms of tourism revenues from 1996 to 2001 (Source: Alanya Chamber of Commerce and Industry, 2002)

Year	Turkey (million $)	Alanya (million $)	Percent of Alanya
1996	5,660.0	481.4	8.51
1997	7,001.6	529.6	7.56
1998	7,177.0	448.8	6.25
1999	5,203.0	310.9	5.98
2000	7,636.0	557.5	7.30
2001	8,090.0	807.2	9.97
2002	9,009.6	961.4	10.67

Table Ap.A.9: No. of tourists visited Turkey, T. R. gathered and AEPT for Turkey from 1980 to 2001 (Source:Çımat , Bahar, 2003)

Years	Number of Tourists	Tourism Revenue(Billion $)	AEPT ($)
1980	1,288,060	0.327	253.6
1981	1,405,311	0.381	217.3
1982	1,391,717	0.370	266.1
1983	1,625,099	0.411	253.0
1984	2,117,094	0.840	396.8
1985	2,614,924	1.482	566.7
1986	2,391,085	1.215	508.1
1987	2,855,546	1.721	562.7
1988	4,172,727	2.355	567.5
1989	4,459,151	2.556	570.3
1990	5,389,308	3.225	621.3
1991	5,517,897	2.654	519.7
1992	7,076,096	3.639	533.0
1993	6,500,638	3.959	668.1
1994	6,670,618	4.325	674.0
1995	7,726,886	4.957	684.0
1996	8,614,085	5.962	748.0
1997	9,689,004	8.089	876. 0
1998	9,752,697	7.809	879.5
1999	7,485,308	5.203	736.0
2000	10,428,153	7.636	764.3
2001	11,618,969	8.932	717.5

Table Ap.A.10: No. of tourists visited Antalya, T. R. gathered and AEPT for Antalya from 1998 to 2003 (Source: Antalya Chamber of Commerce and Industry, 2003)

Years	Number of Tourists	Tourism Revenue(Billion $)	AEPT ($)
1998	2,539,342	2.600	1024
1999	1,758,732	1.637	931
2000	3,230,837	3.336	1033
2001	4,167,699	4.855	1165
2002	4,747,328	5.540	1167
2003	4,681,951	5.384	1150

Table Ap.A.11: Comparison of AEPT of Alanya and Antalya from 1998 to 2003

Years	AEPT Alanya	AEPT Antalya	AEPT Alanya / AEPT Antalya
1998	727	1024	0.710
1999	743	931	0.798
2000	823	1033	0.797
2001	932	1165	0.800
2002	934	1167	0.800

Table Ap.A.12: Number of tourists visited Turkey, Antalya, Alanya and percentage of Alanya in Antalya and Turkey in terms of number of tourists visited (Source: Alanya Chamber of Commerce and Industry, 2002)

YEARS	NO. of TOURISTS VISITED			SHARE of ANTALYA (%)	SHARE of ALANYA(%)	
	TURKEY	ANTALYA	ALANYA		TURKEY	ANTALYA
1996	8,582,000	2,498,402	592,870	29.11	6.91	23.73
1997	9,789,000	2,865,068	698,628	29.27	7.14	24.38
1998	9,752,000	2,671,198	617,312	27.39	6.33	23.11
1999	7,464,000	1,750,678	418,537	23.45	5.61	23.91
2000	10,412,000	3,380,008	677,340	32.46	6.51	20.04
2001	11,569,000	4,317,064	866,130	37.32	7.49	20.06
2002	13,247,000	4,938,404	1,029,350	37.28	7.77	20.84
2003	13,958,000	4,681,948	883,000	33.54	6.33	18.86

Table Ap.A.13: Rounded monthly occupancy rates for Alanya for year 2002 (Abbreviations; A.H: Apart Hotel, Ann: Annual, H.V: Holiday Village, Pens: Pension, Stars represent 5, 4, 3, 2, 1 star hotels respectively) (Source: Alanya Chamber of Comm. and Ind., 2002)

2002	Ministry of Tourism Certified Facilities (% Rounded Occupancy)							Alanya Municipality Certified Facilities (% Rounded Occupancy)			Total
	*****	****	***	**	*	A.H	H.V	Hotel	Pens	A.H	
Jan	12	4	2	2	2	0	0	1	0	0	2.0
Feb	25	5	5	3	3	0	0	4	0	0	4.5
Mar	33	6	6	3	2	0	0	6	0	1	5.8
Apr	64	57	39	18	15	33	38	26	0	14	32.8
May	85	74	63	44	33	56	64	52	10	30	53.8
Jun	93	93	75	63	73	73	75	54	32	40	66.4
Jul	99	99	96	97	62	87	86	72	53	68	84.5
Aug	97	98	90	90	73	80	92	73	49	56	80.2
Sep	97	97	93	91	41	87	80	58	24	49	75.5
Oct	78	64	41	25	17	16	64	23	4	11	35.7
Nov	41	20	10	8	2	7	0	7	0	2	9.8
Dec	42	15	9	3	2	4	0	3	0	2	8.1
Ann	**64**	**52**	**44**	**37**	**21**	**37**	**42**	**32**	**14**	**23**	**38**

Table Ap.A.14: The occupancy rates of accommodation facilities for Turkey from 1995 to 2002 (Source: Antalya Chamber of Commerce and Industry, 2002)

Years	Occupancy Rate (%)		
	Citizen	Foreigner	Total
1995	16,1	30,8	46,9
1996	15,9	35,3	51,2
1997	16	38,6	54,6
1998	15,6	30,6	46,1
1999	16,7	20,4	37,1
2000	13,5	23,3	36,8
2001	12,8	32,8	45,6
2002	12,6	36,0	48,7

Table Ap.A.15: The occupancy rates of accommodation facilities for Antalya for 2002 (Source: Antalya Chamber of Commerce and Industry, 2002)

Type of Facility	Occupancy Rate %		
	Citizen	Foreigner	Total
*****	7.25	56.12	63.37
****	5.89	58.31	64.20
***	4.98	55.96	60.94
**	7.37	37.18	44.55
*	4.72	23.34	28.06
Special License	6.54	44.44	50.99
Apart Hotel	3.37	63.85	67.22
Motel	5.39	11.96	17.35
Pension	13.16	24.02	37.19
Holiday Village	6.28	63.78	70.06
Camping	11.37	31.11	42.48
Golf Establishment	3.13	66.85	69.98
Tourism Complex	0.0	0.0	0.0
TOTAL	**6.39**	**57.00**	**63.39**

APPENDIX B

CALIFORNIAN WINE AND ITALIAN LEATHER FASHION CLUSTERS

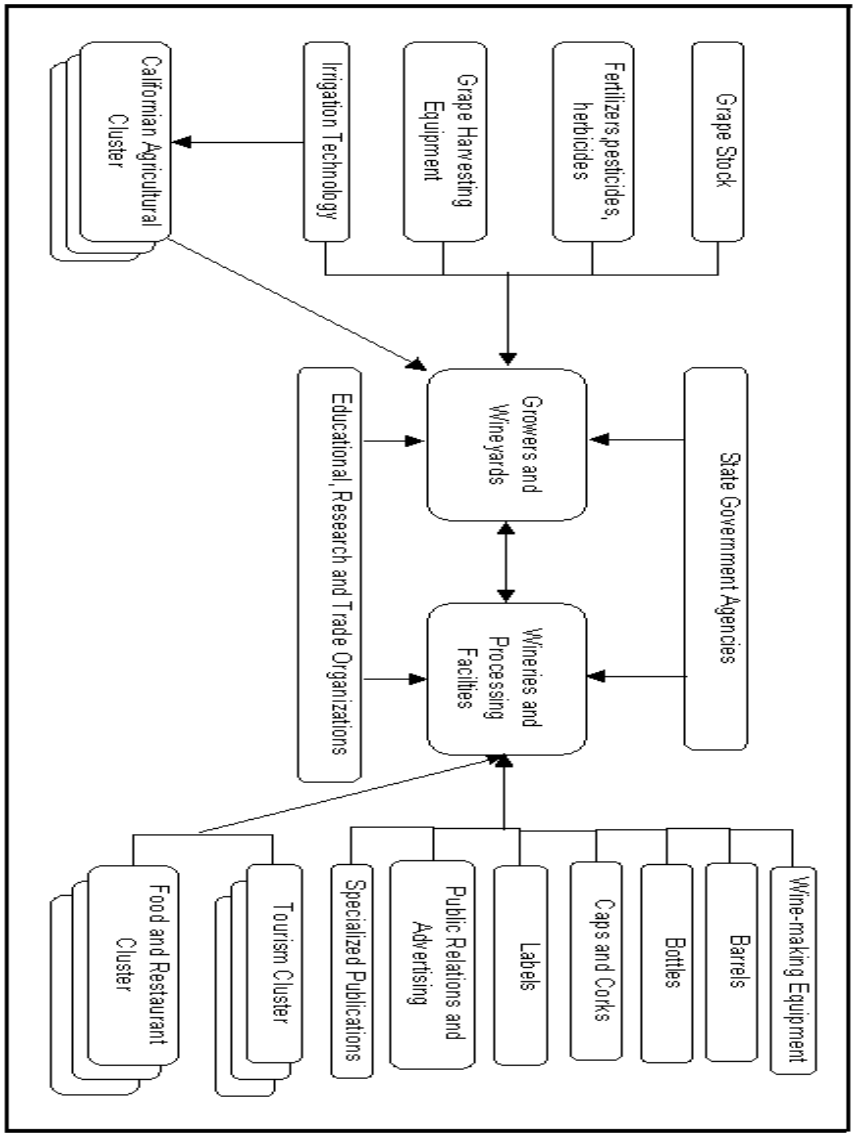

Figure Ap.B.1: California Wine Cluster (Source: Porter (1998))

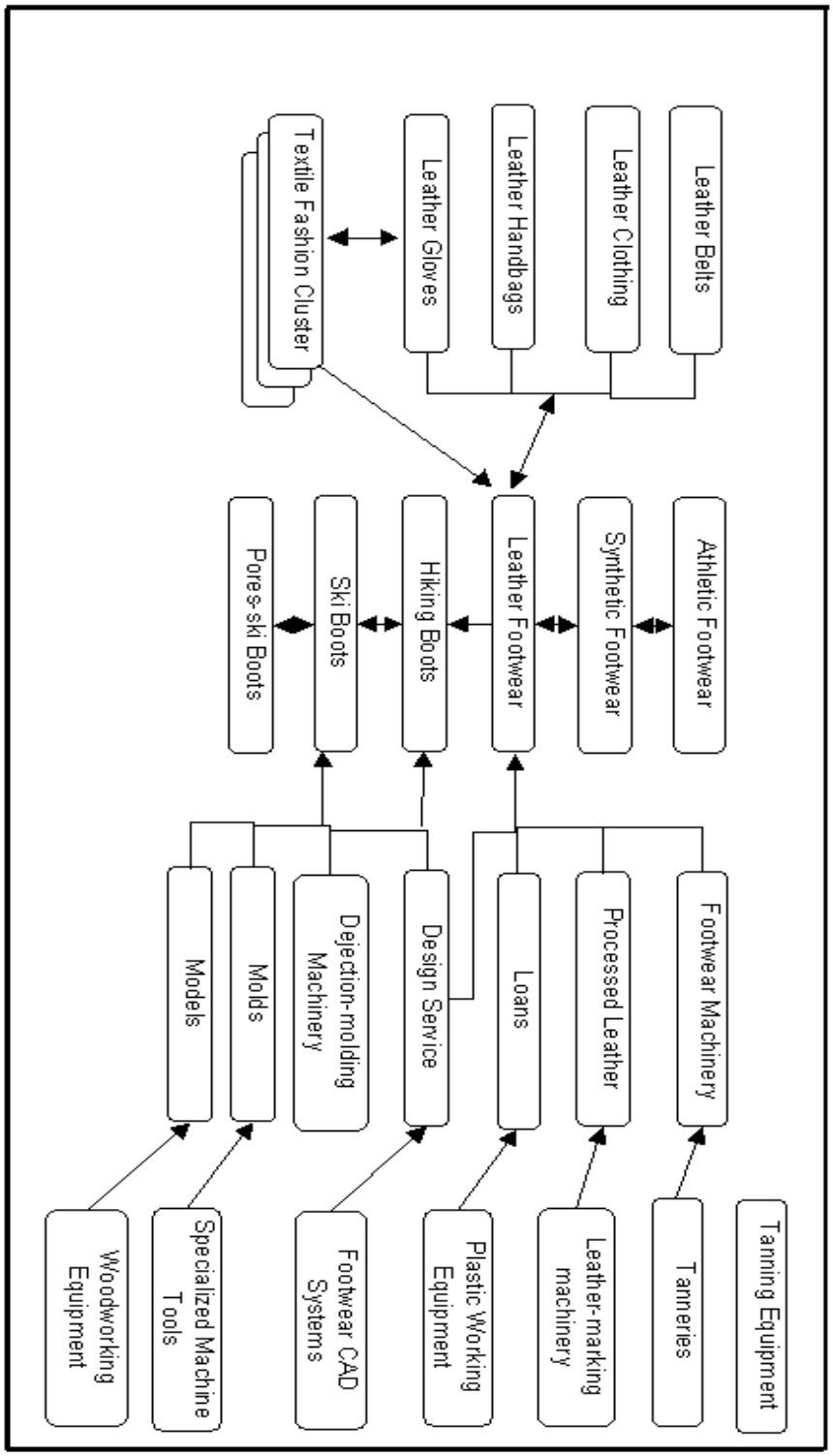

Figure Ap.B.2: Italian Leather Fashion Cluster (Source: Porter (1998))

APPENDIX C

TÜRK TURİZMİ SWOT ANALİZİ

Dünya'daki ve Türkiye'deki turizm trendleri dikkate alındığında, turizm destinasyonu olarak Türkiye'nin karşı karşıya bulunduğu fırsat ve tehditler ile güçlü ve zayıf yönler aşağıdaki gibi sıralanabilir.

V.1.Türkiye'nin güçlü yanları

- İklim, doğal kaynaklar, bozulmamış çevre,
- Zengin tarih ve kültür, örf ve adet, Türk insanının misafirperverliği,
- Turizm olgusuna çabuk adapte olabilecek genç ve dinamik nüfus potansiyeli,
- Özgün sosyo-kültürel özellikler ve doğu ile batının egzotik bir bileşimini sunması,
- Coğrafi konum nedeniyle ana pazarlara olan yakınlık,
- Rakip ülkelere göre daha yeni ve daha nitelikli tesisler,
- Genç ve kıta ötesi pazarlar için henüz keşfedilmemiş bir destinasyon olması,
- İç turizmdeki hareketlenme,
- Halı, deri, konfeksiyon ve mücevher başta olmak üzere alışveriş olanakları,
- Son on yılda gelişmiş destinasyonlar arasına girilmiş olması,

V.2. Türkiye'nin zayıf yanları

- Türk medyasının haber alma ve verme özgürlüğü ile toplumsal menfaatleri dengeleyememesi,

• Altyapı ve hizmet kalitesinin ve destek sektörlerdeki gelişmenin, hızlı talep artışının beraberinde getirdiği ihtiyaçlara cevap verememesi,
• Turist sağlığı ve güvenliğindeki yetersizlikler,
• Tesis ve çevre kalitesi arasında uyumsuzluk,
• Düzensiz ve denetimsiz yönde gelişen ticari faaliyetlerin ülke turizminde ve ürün kalitesinde yolaçtığı yozlaşma,
• Stratejik Pazarlama Yönetimine işlerlik kazandırılamaması,
• Kapasite kullanım oranlarının düşüklüğü,
• Yetersiz dış yatırımlar,
• Finansman yetersizliği,
• Toplumda turizm bilincinin yeterince geliştirilememiş olması,
• Turistik bölgelerde esnafın turistlere karşı olumsuz davranışları,
• Başta yerel yönetimler olmak üzere kamunun turizme yeteri kadar ilgi göstermemesi,
• Sektörle ilgili kurumlar arasında iletişim eksikliği; yetki karmaşası ve çok başlılık,
• Belirli yörelerde düzensiz ve çarpık yapılaşma nedeniyle doğal çevrenin giderek bozulması; ikinci konut sayısındaki artış; doğal, tarihi ve kültürel mirasın özgün niteliklerinin erozyona uğraması,
• Tanıtma ve pazarlamaya ayrılan kaynakların yetersizliği,
• Trafik riskleri,
• Pazarlara ve turizm arzına ilişkin araştırmaların yetersizliği nedeniyle sağlıklı stratejik kararların alınmasındaki güçlükler,
• Turizm arzındaki olumsuz gelişmelerin gerek ülke imajını, gerekse turistik ürün imajını olumsuz yönde etkilemesi ve rekabet üstünlüklerimizin ortaya konulmasını güçleştirmesi; sonuçta düşük fiyatlara ve düşük fiyatların bir çekim unsuru haline gelmesine yol açması,
• Türk ekonomisinin kronikleşmiş yüksek enflasyon sorunu.

V.3. Türk turizmini tehdit eden faktörler;

• Dış basında, Türkiye'de ortaya çıkabilen münferit terör eylemleri ile demokrasi, insan hakları vb. konulara ilişkin olarak yer alan olumsuz yayınlar ve bunların neden olduğu imaj sorunları,
• Coğrafi konum nedeniyle yakın çevrede (Ortadoğu, Balkanlar, BDT Ülkeleri) yaşanan savaşlardan ve siyasi istikrarsızlıklardan olumsuz yönde etkilenme,

• Son yıllarda Türk turizmini doğrudan etkileyen dış destekli terörist faaliyetlerin ortaya çıkması,
• Türk ekonomisinin kronikleşmiş yüksek enflasyon sorunu,
• Yatay ve dikey entegrasyonlarla dev boyutlara ulaşan uluslararası tur kartellerinin rasyonel çalışma yöntemleri, modern teknik donanım ve ölçek ekonomileri gibi avantajları kullanarak piyasaya egemen olmaları ve hem dış talep, hem de işletmelerin kar marjları üzerindeki baskılarını arttırmaları,
• Yabancı tur kartellerinin Türkiye'deki acente ve otelleri satın alarak döviz kayıplarına neden olmaları,
• AB'nin Birlik içi turizm hareketlerini özendirici politikaları,
• AB üyesi rakip ülkelerin birliğin bilgi ve finans desteklerinden yararlanarak rekabet güçlerini hızla arttırmaları.

V.4. Türk turizmi için fırsatlar;

• AB ve Yunanistan ile olan ilişkilerdeki yumuşama, AB adaylığı,
• Küreselleşme olgusu içerisindeki Avrasya bölgesinin artan önemi ve Türkiye'nin siyasi ve ekonomik yönden stratejik önem kazanması,
• Türkiye'nin rekabet gücünün yüksek olduğu doğa, tarih ve kültür turizmine olan ilginin artması,
• Batı Akdeniz'deki kirlenme sonucu Doğu Akdeniz bölgesinin artan çekiciliği,
• Eğitim düzeyi yüksek ve deneyimli turist segmentindeki büyümenin potansiyel tüketicilerin karşı propagandadan etkilenme olasılığını azaltıcı etkileri,
• Büyüyen dünya turizmi,
• Gelişen ulaşım olanakları ve buna bağlı olarak uzun mesafeli seyahatin artması.

APPENDIX D

FİRMA AĞI TANIMLAMA ANKETİ

Bu anket, Boğaziçi Üniversitesi İşletme Bölümü tarafından hazırlanan İstanbul'daki rekabet bölgelerinin tanımlanması konusundaki anketi temel alarak Ortadoğu Teknik Üniversitesi Endüstri Mühendisliği Bölümü tarafından hazırlanmıştır. Amacı Alanya'daki firma ağını tanımlamaktır. Firmanızın bu ankete cevap vererek tanımlanacak ağda yer alması, Alanya'da yürütülecek olan proje dahilinde yapılacak iyileştirme ve geliştirme çalışmalarından daha kolay yararlanmasında etkili olabilecektir. Ankette vereceğiniz her türlü bilgi kesinlikle gizli tutulacaktır.

Anketin birinci bölümünde firmanızın da dahil olduğu ağın diğer elemanlarını belirlemeye yönelik sorulara yer verilmiştir. İkinci bolumde ise bu ağın üyeleri arasındaki bağlantıları belirlemeye dönük sorular bulunmaktadır.

Anketin doldurulmasında dikkat edilecek hususlar:

a. Lütfen bir soruyu cevaplarken en fazla ilişkiniz olan kurum/firmadan (en fazla ilişkiniz olan 1. olmak üzere) en azına doğru sıralayarak belirtiniz. ("En fazla ilişki" konusunda en fazla ciro yaptığınız firma, en fazla işgücü sağlayan okul vs. gibi düşünebilirsiniz).

b. Sorulara cevap verirken aksi belirtilmedikçe **son beş senelik dönemi gözönünde bulundurunuz.**

c. Firma/kurum adlarını yazarken mümkünse firmaların tam adlarını ve eğer biliyorsanız telefon numaralarını ve bu anketin gönderilebileceği kontak isimlerini de yazınız.

ANKETİ CEVAPLAYAN FİRMA ADI:

FİRMA FAALİYET ALANI:
Cevaplayan Kişinin Adı, Ünvanı, Kontak Bilgileri (telefon, E-mail vs.) :

Firma Adresi:

BÖLÜM 1:

1.Enerji ihtiyaçlarınızı hangi firmalardan satın alırsınız?
1.
2.
3.
4.
5.
6.Bilmiyorum
7. Bu soru organizasyonumuz için geçerli degil
8.Diğer. Lütfen Belirtiniz:

2.Kullandığınız makina ve ekipmanlarınızı hangi firmalardan satın alırsınız?
1.
2.
3.
4.
5.
6.Bilmiyorum
7. Bu soru organizasyonumuz için geçerli degil
8.Diğer. Lütfen Belirtiniz:

3.Yedekparça ihtiyacınızı hangi firmalardan satın alırsınız?
1.
2.
3.

4.

5.

6.Bilmiyorum

7. Bu soru organizasyonumuz için geçerli degil

8.Diğer. Lütfen Belirtiniz:

4.Bakım hizmetini hangi firmalardan karşılarsınız?

1.

2.

3.

4.

5.

6.Bilmiyorum

7. Bu soru organizasyonumuz için geçerli degil

8.Diğer. Lütfen Belirtiniz:

5. Kullandığınız hammadde/yarımamullerinizi hangi firmalardan sağlarsınız?

1.

2.

3.

4.

5.

6.Bilmiyorum

7.Bu soru organizasyonumuz için geçerli degil

8.Diğer. Lütfen Belirtiniz

6. Gelen turistleri hangi firmalardan/acentelerden sağlarsınız?

1.

2.

3.

4.

5.

6.Bilmiyorum

7.Bu soru organizasyonumuz için geçerli degil

8.Diğer. Lütfen Belirtiniz

7. Tanıtım ve promosyon hizmetlerinizi hangi firmalardan/acentalardan sağlarsınız?

1.

2.

3.

4.

5.

6.Bilmiyorum

7. Bu soru organizasyonumuz için geçerli degil

8.Diğer. Lütfen Belirtiniz:

8.Müşterifirmalarınız (turistleri gönderdiğiniz otel, restaurant, acenta, tur operatörleri vs.) kimlerdir?

1.

2.

3.

4.

5.

6.Bilmiyorum

7. Bu soru organizasyonumuz için geçerli degil

8.Diğer. Lütfen Belirtiniz:

9.Taşıma hizmetlerini(personel, insan ve mal) hangi firmalardan satın alıyorsunuz (belediye de dahil)?

1.

2.

3.

4.

5.

6.Bilmiyorum

7. Bu soru organizasyonumuz için geçerli degil

8.Diğer. Lütfen Belirtiniz:

10.Hangi finans kuruluşları(banka, faktoring,leasing) çalışmaktasınız?

1.
2.
3.
4.
5.
6.Bilmiyorum
7. Bu soru organizasyonumuz için geçerli degil
8.Diğer. Lütfen Belirtiniz:

11.Hangi döviz bürolarından hizmet alırsınız?

1.
2.
3.
4.
5.
6.Bilmiyorum
7. Bu soru organizasyonumuz için geçerli degil
8.Diğer. Lütfen Belirtiniz:

12.Hangi danışmanlık firmaları ile çalışmaktasınız?

1.
2.
3.
4.
5.
6.Bilmiyorum
7. Bu soru organizasyonumuz için geçerli degil
8.Diğer. Lütfen Belirtiniz:

13.Denetleme hizmetlerini hangi organizasyonlardan almaktasınız?

1.
2.
3.
4.

5.

6.Bilmiyorum

7. Bu soru organizasyonumuz için geçerli degil

8.Diğer. Lütfen Belirtiniz:

14.İletişim hizmetinizi hangi firmalardan almaktasınız(telefon, internet, vs.) ?

1.

2.

3.

4.

5.

6.Bilmiyorum

7. Bu soru organizasyonumuz için geçerli degil

8.Diğer. Lütfen Belirtiniz:

15.Sigorta hizmetlerini hangi kuruluşlardan almaktasınız(SSK, Emekli sandığı, BağKur,KoçHayat vs.)

1.

2.

3.

4.

5.

6.Bilmiyorum

7. Bu soru organizasyonumuz için geçerli degil

8.Diğer. Lütfen Belirtiniz:

16.Gümrük hizmetlerinizi hangi firmalardan almaktasınız?

1.

2.

3.

4.

5.

6.Bilmiyorum

7.Bu soru organizasyonumuz için geçerli degil

8.Diğer. Lütfen Belirtiniz:

17.Yapısal hizmetleri (inşaat, dekorasyon) hangi firmalardan sağlarsınız?

1.

2.

3.

4.

5.

6.Bilmiyorum

7.Bu soru organizasyonumuz için geçerli degil

8.Diğer. Lütfen Belirtiniz:

18.Sağlık hizmetlerini hangi kuruluşlardan almaktasınız (SSK, Emekli Sandığı, Bağkur, özel kuruluşlar vs.) ?

1.

2.

3.

4.

5.

6.Bilmiyorum

7.Bu soru organizasyonumuz için geçerli degil

8.Diğer. Lütfen Belirtiniz:

19.Güvenlik hizmetlerini hangi firmalardan almaktasınız?

1.

2.

3.

4.

5.

6.Bilmiyorum

7.Bu soru organizasyonumuz için geçerli degil

8.Diğer. Lütfen Belirtiniz:

20.Hizmet aldığınız devlet kurumları hangileridir?

1.

2.

3.

4.

5.

6.Bilmiyorum

7.Bu soru organizasyonumuz için geçerli degil

8.Diğer. Lütfen Belirtiniz:

21.İşgücünüzü hangi firma ve okullardan bünyenize kazandırdınız?

1.

2.

3.

4.

5.

6.Bilmiyorum

7. Bu soru organizasyonumuz için uygun degil

8.Diğer. Lütfen Belirtiniz:

22.İşbaşında eğitim için hangi firmalardan destek alırsınız?

1.

2.

3.

4.

5.

6.Bilmiyorum

7.Bu soru organizasyonumuz için geçerli degil

8.Diğer. Lütfen Belirtiniz:

23. En fazla ticari ilişkide bulunduğunuz 5 şirketi yazınız.

1.

2.

3.

4.

5.

24.Alanınızdaki rakipleriniz kimlerdir?(Lütfen tahmini pazar paylarını da belirtin)

1.

2.

3.

4.

5.

6.Bilmiyorum

7. Bu soru organizasyonumuz için uygun degil

8.Diğer. Lütfen Belirtiniz

BÖLÜM 2:

1. İlişkide olduğunuz firmalarla iletişiminizde hangi yolları kullanmaktasınız?(Faks, telefon, e-mail vs.)

2. İletişimde bulunduğunuz firma ve organizasyonlarla kurulan ilişkinin kurulmasında hangileri kullanılmıştır?

1.Aile bağları

2.Coğrafi yakınlık

3.Okul, gidilen kurslar, eski işyeri gibi ortamlardan kurulan arkadaşlıklar

4.Ticari öncelikler

5.Diğer(Lütfen belirtiniz):

3.Firmanız hangi sektörel ve yerel derneklere, birliklere vs. üyedir?

1.

2.

3.

4.

5.

6.Diğer. Lütfen Belirtiniz:

4. Firmanın gereksinim duyduğu konusundaki bilgilere nasıl ulaşırsınız?

1.Bağlı olduğunuz sektörel birliklerden

2.Sektörel yayınlar(lütfen belirtiniz)

3.Diğer:(lütfen belirtiniz)

5.Firmanızın yıllık ciro seviyesi aşağdaki gruplardan hangisine uymaktadır?

1. 0-$100.000

2.$100.001-$1.000.000

3.$1.000.001-$10.000.000

4.$10.000.000-$100.000.000

5.$100.000.000'dan daha fazla

6. Ortak Ürün geliştirdiğiniz firma ve organizasyonlar var mıdır? Belirtiniz:

7. Ortak pazarlama çalışmalarında bulunduğunuz firma ve oryanizasyonlar var mıdır? Belirtiniz:

8. Ortak işgücü eğitiminde bulunduğunuz firma ve organizasyonlar var mıdır? Belirtiniz:

9. Ortak satınalma yaptğınız firmalar varmdır? Belirtiniz:

10.Firmanız başka firmalarla birlikte son bir yıl içinde yürütüğü ortak bir proje var mıdır? Eğer varsa hangi firmalarla ve hangi projelerdir?

11. Hangi sektörel yayınlara üyesiniz?

12. Hangi Belediye, Bakanlıklar ve Üniversitelerden ne tür hizmet ve destekler almaktasınız?

13. Genel müşteri profiliniz nedir? (Uyruk, yaş ve gelir grubu)

14.Müşterilerinizin tercih ettiği müze ve ören yerleri nerelerdir?

15. Müşterilerinizin Alanya'ya dair en büyük şikayetleri nelerdir?

16. Sizce Alanyanın turizmde en büyük sorunu nedir?

Anketi cevapladığınız için teşekkür ederiz.

APPENDIX E

ALANYA MAP

Figure Ap.E.1: Alanya Map (Source: http://www.hentbolantrenorleri.com, 2005[**])

[**] Modified from the original version at http://www.hentbolantrenorleri.com/alanya2005/map.jpg

APPENDIX F

THE OUTPUTS OF ANALYSIS

Below, the Ucinet 6.0 analysis outputs are represented respectively.

TABLE F.1: ALANYA TOURISM CLUSTER ADJACENCY MATRIX

```
--------------------------------------------------------------------------------
Input Excel file            C:\WINDOWS\Desktop\Thesis\Adjacency\Kitap1.xls
Output UCINET dataset:      C:\Program Files\Ucinet 6\DataFiles\Kitap1
```

	1 R	2 T	3 K	4 H	5 G	6 Ö	7 P	8 F	9 M	10 E	11 T	12 K	13 T	14 A	15 G	16 D	17 K	18 G	19 P	20 R	21 O	22 A	23 B	24 D	25 H	26 G	27 M	28 S	29 A	30 A	31 M	32 E	33 D	34 N	35 O	36 G	37 D	38 T	39 A	40 S	41 O	42 Y	43 P	44 A	45 B	46 T	47 G	48 E	49 A	50 N	51 N	52 Ş	53 B	54 M	55 G	56 J	57 A	58 A	59 V	60 A	61 A	62 G	63 G	64 T	65 G	66 K	67 L	68 A	69 A	70 O	71 L	72 T	73 A	74 T	75 D	76 O	77 I	78 Ö	79 A	80 1	81 D	82 K	83 S	84 K	85 M	86 S	87 M	88 J	89 P
1	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
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TABLE F.1 (Continued)

65	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
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80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
81	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
82	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
83	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
84	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
85	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0
86	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0
87	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
88	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
89	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Running time: 00:00:24
Output generated: 17 May 05 23:05:05

TABLE F.2: OVERALL DENSITY OF ALANYA TOURISM CLUSTER

BLOCK DENSITIES OR AVERAGES

Input dataset: D:\HGA-MS Thesis\Thesis-Günalp\Adjacency\alanya-network

Relation: 1

Density (matrix average) = 0.0465

Standard deviation = 0.2105

Use MATRIX>TRANSFORM>DICHOTOMIZE procedure to get binary image matrix.
Density table(s) saved as dataset Density
Standard deviations saved as dataset DensitySD
Actor-by-actor pre-image matrix saved as dataset DensityModel

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Running time: 00:00:01
Output generated: 27 Kas 05 16:07:18

TABLE F.3: NUMBER OF GEODESIC PATHS IN ALANYA TOURISM CLUSTER PART 1

Input dataset: D:\HGA-MS Thesis\Thesis-Günalp\Adjacency\alanya-network

# of Geodesic Paths

	1 RİV	2 TAN	3 KAM	4 HAS	5 GÖÇ	6 ÖZÇ	7 PAS	8 FLO	9 MAY	10 EV	11 TOT	12 KEM	13 TUR	14 ALA	15 GAR	16 DEH	17 KLE	18 GÜR	19 PEG	20 RİV	21 OAS	22 AYD	23 BOT	24 DEL	25 HOL	26 G K	27 MIS	28 STA	29 ALP	30 ALB	31 MAS	32 EXO	33 DİE	34 NOV	35 OGE	36 GTI	37 DET	38 TEZ	39 ANI	40 SİD	41 ORK	42 YEL	43 PEG	44 ATT	45 BRO
1	1	1	1	1	1	1	1	2	1	1	1	2	1	1	2	1	1	1	1	1	1	1	1	1	1	1	3	7	5	4	1	5	5	7	6	1	2	1	1	1	1	3	2	1
2	3	1	3	3	8	4	1	1	1	1	1	5	3	3	6	3	3	3	1	1	1	8	7	6	6	1	5	2	2	2	1	1	1	1	19	1	1	3	4	3	1	1	1	5	3	1
3	1	1	1	1	2	2	3	3	2	4	2	1	1	1	1	1	1	1	2	4	4	2	6	6	7	4	3	6	1	16	2	4	2	2	2	2	1	5	1	2	4	2	1	3	4
4	1	4	1	1	5	4	1	1	1	2	1	1	1	1	1	1	1	1	1	3	4	5	7	7	6	8	1	1	1	1	1	2	1	2	3	3	1	1	1	1	2	1	1	1	1
5	4	2	4	1	1	2	2	2	29	39	29	1	4	4	1	1	1	1	1	1	1	5	2	6	8	1	5	2	3	1	39	18	11	1	1	1	1	1	1	18	28	10	2	1	1
6	1	4	1	1	2	1	3	1	1	1	1	2	1	1	1	1	1	1	1	20	2	2	1	1	1	1	1	2	2	1	3	1	1	1	1	18	1	4	1	1	1	1	4	2	2
7	1	4	1	6	3	1	1	2	1	1	1	2	1	1	1	6	6	6	1	5	1	3	1	1	2	1	1	1	1	1	1	3	1	5	4	3	2	6	1	6	1	1	1	2	10	1
8	1	3	1	1	2	1	1	1	1	1	1	1	1	1	2	1	1	1	1	7	1	2	1	1	1	1	1	1	1	1	4	1	6	5	6	5	1	1	1	1	1	1	1	1	1
9	1	2	1	1	3	1	1	1	10	7	2	1	1	1	1	1	1	1	1	8	1	3	2	1	2	2	3	2	1	1	3	10	5	6	8	5	1	2	1	5	8	3	2	1	9
10	4	1	4	1	17	1	1	2	1	1	1	9	4	4	1	1	1	1	2	4	8	17	2	2	1	1	1	4	5	2	1	1	6	3	5	4	1	1	1	1	1	1	18	1	1
11	3	1	3	3	1	6	1	1	1	1	1	5	3	3	6	3	3	3	1	1	1	1	1	1	14	2	2	2	2	1	2	1	1	1	1	1	3	2	3	1	1	1	1	1	3
12	1	1	1	1	1	9	1	1	6	7	6	1	1	1	2	1	1	1	1	1	1	1	20	15	2	25	1	1	1	5	14	7	2	3	5	3	1	1	1	2	3	1	1	1	1
13	24	1	24	1	8	11	9	8	7	1	2	2	1	24	1	1	1	1	46	6	10	8	2	2	2	34	13	18	2	38	1	1	1	1	10	6	1	15	1	1	2	1	10	1	1
14	3	2	3	5	1	1	1	1	1	1	1	8	3	1	8	5	5	5	5	1	1	1	1	1	1	2	1	2	4	4	1	1	1	5	2	1	1	5	1	5	1	1	1	13	8	1
15	33	1	33	2	1	14	11	12	10	1	2	2	33	33	1	2	2	2	3	1	1	1	2	2	1	1	17	24	1	2	1	2	1	1	1	1	1	2	1	2	1	1	12	4	1
16	1	16	1	1	10	1	8	1	5	7	5	4	1	1	1	1	1	1	1	5	10	10	1	1	2	1	1	1	3	1	1	7	4	1	8	5	1	1	1	4	6	2	7	1	4
17	1	23	1	1	1	1	10	1	8	12	8	4	1	1	1	1	1	1	4	1	1	1	2	2	1	2	1	1	1	2	3	1	12	7	4	1	1	1	2	1	7	11	4	13	1	12
18	1	31	1	1	1	1	13	1	11	17	11	4	1	1	1	1	1	1	4	1	2	1	1	1	1	3	1	1	2	3	1	17	7	4	1	1	1	3	1	7	13	6	9	1	10
19	3	1	3	1	1	1	1	2	6	7	6	1	3	3	1	1	1	1	1	4	1	1	1	1	1	1	1	4	1	1	1	7	3	3	5	3	1	2	1	3	4	1	1	1	4
20	2	23	2	4	1	1	14	2	7	9	7	1	2	2	4	4	4	4	2	1	2	1	2	2	1	2	2	4	7	1	22	9	5	4	13	1	4	2	4	5	7	2	2	1	1
21	20	16	20	2	6	6	6	8	6	10	6	54	20	20	2	4	4	2	32	6	1	6	14	14	10	2	6	14	28	26	24	10	4	28	1	6	2	1	2	4	8	4	120	4	4
22	2	14	2	4	7	1	8	2	4	6	4	4	2	2	4	4	4	4	1	3	2	1	2	1	1	3	2	4	4	1	18	6	4	1	9	3	4	2	4	4	6	2	1	1	1
23	1	15	1	4	7	1	9	1	5	6	5	4	1	1	4	4	4	4	2	3	12	7	1	3	3	2	1	2	4	2	18	6	6	4	10	3	4	21	4	6	7	1	1	8	1
24	1	15	1	4	7	1	9	1	5	6	5	4	1	1	4	4	4	4	2	3	12	7	3	1	3	2	1	2	4	2	18	6	6	4	10	3	4	21	4	6	7	1	1	8	1
25	4	3	4	6	1	1	2	1	1	1	1	1	4	4	10	6	6	6	5	3	12	1	2	2	1	2	2	3	1	4	1	1	6	1	7	2	6	22	6	1	1	1	1	10	1
26	1	1	1	1	14	1	7	1	5	9	1	3	1	1	1	1	1	1	2	10	1	14	2	2	1	1	1	1	2	2	2	9	1	4	1	10	1	3	1	1	1	5	12	2	13
27	1	1	1	1	1	1	1	1	2	2	2	1	1	1	2	1	1	1	1	1	1	1	2	1	2	2	1	2	1	1	6	2	1	2	3	9	1	1	1	1	1	2	1	1	1
28	3	2	3	3	8	4	1	1	1	1	1	5	3	3	6	3	3	3	1	1	1	8	7	6	6	5	2	1	1	1	19	1	1	3	4	3	1	1	1	1	5	3	1	1	1
29	1	1	1	1	1	4	1	1	3	3	3	1	1	1	1	1	1	1	3	1	3	1	7	5	1	7	1	1	1	2	5	3	1	1	21	7	1	3	1	4	4	3	1	1	1
30	1	2	1	2	2	3	2	1	2	2	3	2	1	1	2	2	2	2	1	24	1	2	1	6	7	1	1	2	2	1	3	2	1	1	13	2	22	2	1	2	1	1	13	3	3	1
31	4	1	4	1	1	3	1	2	1	1	1	18	4	4	1	1	1	1	9	1	1	1	1	1	7	7	3	4	13	8	1	1	1	1	14	1	1	1	3	1	2	1	1	3	1	1
32	11	1	11	2	1	4	3	6	2	1	2	1	11	11	2	2	2	2	14	2	1	9	1	6	5	2	1	1	2	2	2	9	1	4	1	10	1	3	1	1	1	5	12	2	5
33	5	1	5	13	1	2	1	3	1	1	1	11	5	5	13	13	13	13	7	1	1	1	1	8	7	2	6	10	6	1	1	1	1	1	1	1	13	2	13	1	1	2	3	26	4
34	10	8	10	22	3	3	4	3	3	4	3	1	10	10	32	22	22	22	15	2	4	3	8	8	1	10	4	7	1	12	8	4	2	1	4	2	22	5	22	2	3	1	2	37	1
35	10	8	10	1	3	3	3	4	3	5	3	27	10	10	1	1	1	1	16	3	1	3	7	7	5	1	3	7	14	13	12	5	2	14	1	3	1	1	1	2	4	2	60	2	2
36	9	7	9	29	1	3	3	3	3	4	3	1	9	9	38	29	29	29	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
37	2	3	2	1	1	4	1	2	28	38	2	1	2	2	1	1	1	1	1	1	1	1	1	1	11	10	1	3	1	1	3	38	2	20	1	1	1	3	1	2	2	12	4	2	4
38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
39	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
41	3	1	3	1	1	8	1	1	1	1	1	1	3	3	1	1	1	1	3	1	11	1	2	2	23	29	12	2	2	2	1	1	1	2	8	1	1	16	1	2	1	2	11	2	2
42	21	1	21	3	5	7	6	9	6	1	1	62	21	21	3	3	3	3	32	5	1	5	1	1	16	2	7	16	36	27	1	1	5	1	1	5	3	2	3	6	1	1	1	5	1
43	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
44	10	8	10	1	3	3	3	4	3	5	3	27	10	10	1	1	1	1	16	3	1	3	7	7	5	1	3	7	14	13	12	5	2	14	6	3	1	1	1	2	4	2	60	1	2
45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
46	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
47	10	8	10	1	3	3	3	4	3	5	3	27	10	10	1	1	1	1	16	3	1	3	8	7	5	1	3	7	14	13	12	5	2	14	6	3	7	1	1	2	4	2	60	2	2
48	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
49	10	8	10	22	3	3	4	3	3	4	3	1	10	10	32	22	22	22	15	2	4	3	8	8	1	10	4	7	1	12	8	4	2	2	4	2	22	5	22	2	3	1	2	37	1
50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
51	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
52	2	2	2	1	1	1	1	1	7	1	1	1	2	2	1	1	1	1	4	5	10	1	2	2	2	1	2	3	1	3	3	1	1	5	5	4	1	1	1	1	1	4	1	1	13
53	1	3	1	8	1	1	1	1	9	3	9	1	1	1	1	9	8	8	1	1	1	1	1	1	1	1	1	5	1	1	8	1	1	8	1	66	8	1	8	8	11	3	1	9	18
54	4	2	4	5	1	1	1	2	1	1	1	1	4	4	9	5	5	5	1	4	1	1	2	2	1	2	1	1	1	1	2	1	1	3	8	4	5	1	5	1	1	1	1	6	1
55	1	1	1	6	4	1	6	1	3	1	3	3	1	1	6	6	6	6	2	1	10	4	3	2	1	2	1	1	3	2	1	3	7	1	8	1	6	21	6	7	8	1	3	11	3
56	33	1	33	4	9	14	11	13	9	13	1	2	33	33	4	4	4	4	58	7	1	9	2	2	2	3	16	24	2	49	1	13	1	1	1	7	4	2	4	1	1	5	1	8	9
57	4	1	4	6	1	1	2	1	1	1	1	1	1	4	10	6	6	6	1	1	1	1	2	2	1	2	2	3	3	1	1	1	3	2	3	1	6	1	1	1	1	1	1	9	1
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59	7	4	7	1	1	1	1	1	3	2	2	2	17	7	7	1	1	1	7	1	4	1	5	5	4	1	1	5	9	6	5	2	2	2	1	4	2	2	1	1	2	2	2	1	2
60	3	2	3	5	1	1	1	1	1	1	1	1	8	3	3	8	5	5	5	1	1	1	1	1	1	2	1	2	4	4	1	1	5	2	1	1	5	1	5	1	1	1	13	8	1
61	3	2	3	5	1	1	1	1	1	1	1	1	8	3	3	8	5	5	5	1	1	1	1	1	1	2	1	2	4	4	1	1	5	2	1	1	5	1	5	1	1	1	13	8	1
62	24	1	24	2	8	11	8	9	7	1	2	1	24	24	2	2	2	2	47	7	1	8	2	2	1	1	12	18	1	39	4	1	1	3	1	7	2	1	2	1	2	1	1	8	3	1
63	3	3	3	5	1	16	1	1	1	2	1	7	3	3	8	5	5	5	4	1	1	1	1	1	1	2	2	3	1	3	4	2	7	3	1	1	1	5	1	1	1	1	14	7	1
64	1	20	1	6	1	17	10	1	7	10	7	4	1	1	6	6	6	6	1	1	2	1	3	2	1	3	1	2	3	1	29	10	7	2	1	6	2	6	7	10	3	1	12	1	1
65	1	2	1	3	1	1	1	1	6	8	1	1	1	1	4	3	1	3	1	4	1	1	3	3	2	1	1	2	1	1	1	8	1	4	7	4	1	1	3	1	1	3	1	5	12
66	20	1	20	6	8	15	6	10	4	6	1	2	20	20	6	6	6	6	1	6	15	8	2	2	2	3	18	16	2	1	1	6	1	4	13	6	6	1	6	1	1	3	2	1	2

TABLE F.3 PART 1(Continued)

67	2	4	2	2	3	3	37	2	27	43	4	15	2	2	2	2	2	2	1	3	4	3	9	8	5	1	4	2	10	1	6	43	4	17	2	3	2	1	2	4	4	20	4	1	4
68	11	1	11	2	1	4	3	6	2	1	2	1	11	11	2	2	2	2	2	14	2	1	9	9	6	5	2	1	1	2	1	3	2	13	27	13	2	2	2	2	3	1	5	2	5
69	11	1	11	2	1	4	3	6	2	1	2	1	11	11	2	2	2	2	2	14	2	1	9	9	6	5	2	1	1	2	1	3	2	13	27	13	2	2	2	2	3	1	5	2	5
70	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
71	1	1	1	1	1	3	40	1	26	37	1	16	1	1	1	1	1	1	1	1	4	1	1	1	9	12	4	1	14	1	2	37	1	15	3	1	1	6	1	1	1	12	1	2	1
72	2	3	2	2	44	2	30	2	22	36	3	10	2	2	2	2	2	2	5	32	4	44	8	8	6	1	2	2	8	5	5	36	3	14	4	32	2	9	2	3	3	17	2	5	2
73	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
74	3	2	3	3	8	4	1	1	1	1	1	5	3	3	6	3	3	3	1	1	1	8	7	6	6	5	2	2	2	1	1	1	1	19	1	1	3	4	3	1	1	1	5	3	1
75	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
76	6	3	6	2	1	5	2	3	1	1	1	1	6	6	2	2	2	2	13	29	2	1	1	1	1	1	6	5	1	12	5	1	2	1	2	28	2	6	2	2	2	1	3	4	2
77	4	1	4	1	1	3	1	2	1	1	1	18	4	4	1	1	1	1	9	1	1	1	1	1	7	7	3	4	13	8	3	1	1	14	1	1	1	3	1	2	1	1	3	1	1
78	3	2	3	5	1	11	1	1	1	1	1	6	3	3	8	5	5	5	4	1	1	1	29	26	23	2	2	2	2	3	1	1	6	2	1	1	5	1	5	1	1	1	1	8	1
79	3	2	3	7	13	13	1	1	1	1	1	6	3	3	10	7	7	7	1	4	1	13	1	1	1	3	2	2	3	1	1	1	7	2	1	4	7	2	7	1	1	1	1	11	1
80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
81	1	1	1	1	1	15	9	1	7	12	1	4	1	1	1	1	1	1	1	1	2	1	2	1	34	2	1	1	2	1	2	12	1	4	1	1	1	3	1	1	1	6	11	1	11
82	1	19	1	4	1	1	9	1	7	10	7	3	1	1	4	4	4	4	4	1	1	1	1	1	1	3	1	2	2	3	27	10	7	2	16	1	4	1	4	7	10	3	2	1	2
83	1	1	1	1	1	1	6	1	4	6	1	3	1	1	1	1	1	1	4	1	11	1	2	2	1	1	1	2	2	3	1	6	1	3	7	1	1	1	1	1	1	3	11	3	9
84	1	1	1	1	14	1	7	1	5	9	1	3	1	1	1	1	1	1	2	10	1	14	2	2	1	3	1	1	2	2	2	9	1	4	1	10	1	3	1	1	1	5	12	2	13
85	16	11	16	3	4	8	5	7	4	6	4	1	16	16	3	3	3	3	29	3	1	4	1	1	1	2	9	12	1	25	17	6	4	1	1	3	3	1	3	4	6	2	1	6	1
86	16	11	16	3	4	8	5	7	4	6	4	1	16	16	3	3	3	3	29	3	1	4	1	1	1	2	9	12	1	25	17	6	4	1	1	3	3	1	3	4	6	2	1	6	1
87	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
88	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
89	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Output matrix of geodesic counts saved as dataset GeodesicsCount

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Running time: 00:00:01
Output generated: 27 Kas 05 16:17:17

TABLE F.3: NUMBER OF GEODESIC PATHS IN ALANYA TOURISM CLUSTER PART 2

Input dataset: D:\HGA-MS Thesis\Thesis-Günalp\Adjacency\alanya-network

# of Geodesic Paths

	46 TUR	47 G.	48 ETS	49 ALL	50 NAZ	51 NAT	52 ŞİF	53 BLU	54 MAR	55 GRE	56 JUS	57 ARO	58 ANE	59 VAS	60 ALA	61 ALA	62 GYP	63 G.	64 TİT	65 G.O	66 KON	67 LİT	68 AIR	69 AUR	70 OBİ	71 LİM	72 TEN	73 ASY	74 TUI	75 DEH	76 ODE	77 ITS	78 ÖZK	79 ARY	80 1 2	81 DOĞ	82 KAR	83 SAP	84 KAP	85 MER	86 SİD	87 MİN	88 JET	89 PAR
1	1	1	1	6	3	1	1	1	1	1	22	7	1	1	27	27	21	16	8	1	2	1	2	1	1	2	4	1	2	2	3	37	1	1	7	1	1	1	5	2	4	2	4	1
2	1	1	1	24	1	3	1	1	3	1	1	2	1	1	2	2	1	2	1	3	9	5	2	1	1	17	1	3	9	5	20	3	1	1	2	5	5	5	38	18	1	18	1	1
3	4	4	4	2	16	1	4	4	3	4	8	1	4	10	8	8	6	4	2	1	5	4	8	4	4	14	13	1	1	1	29	10	10	10	1	4	4	4	43	14	13	14	13	10
4	4	4	4	35	15	1	2	2	1	2	6	1	2	7	9	9	6	7	3	1	1	9	4	2	2	18	1	25	32	1	30	13	7	7	1	9	9	9	49	19	1	19	1	7
5	1	1	1	2	1	4	39	39	1	39	3	2	28	3	6	6	5	4	1	1	9	8	78	39	39	9	17	17	22	1	17	9	3	3	2	8	8	8	26	9	17	9	17	3
6	2	2	2	2	2	1	1	1	1	1	4	2	1	4	4	4	4	1	2	1	1	1	2	1	1	2	2	13	1	3	3	5	4	4	2	1	1	1	5	2	2	2	2	4
7	1	1	1	6	2	1	1	1	1	1	17	1	1	1	15	15	13	5	5	6	1	1	2	1	1	3	3	1	3	2	4	18	1	1	1	1	1	1	7	3	3	3	3	1
8	1	1	1	5	2	1	1	1	1	1	21	1	1	1	22	22	17	12	8	1	2	1	2	1	1	3	4	1	2	1	3	29	1	1	1	1	1	1	6	3	4	3	4	1
9	1	1	1	6	4	1	10	10	3	10	22	1	8	25	27	27	22	15	8	1	3	2	20	10	10	3	5	1	3	2	5	37	25	25	1	2	2	2	8	3	5	3	5	25
10	8	8	8	5	5	4	1	1	1	1	19	5	1	1	18	18	14	10	10	1	3	1	2	1	1	6	1	55	1	10	5	24	1	1	5	1	1	1	12	7	1	7	1	1
11	1	1	1	2	1	3	1	1	3	1	1	2	1	1	2	2	1	2	1	3	2	2	2	1	1	2	1	5	8	5	3	3	1	1	2	2	2	2	5	2	1	2	1	1
12	1	1	1	1	1	1	7	7	1	7	1	1	3	1	1	1	1	10	3	1	29	28	14	7	7	1	64	3	4	1	3	1	1	1	1	28	28	28	3	1	64	1	64	1
13	10	10	10	1	5	1	1	1	1	1	3	2	2	4	2	2	2	16	10	1	49	47	2	1	1	4	1	6	6	2	9	2	4	4	2	47	47	47	13	4	1	4	1	4
14	1	1	1	6	2	3	1	1	1	1	1	4	1	1	2	2	2	1	2	1	5	2	2	2	1	1	3	5	1	1	10	5	3	1	1	4	2	2	2	8	3	5	3	5	1
15	1	1	1	9	5	33	1	1	1	1	3	1	2	4	3	3	2	2	1	1	2	1	1	2	1	1	5	3	8	9	3	9	4	4	1	1	1	1	14	5	3	5	3	4
16	10	10	10	3	2	1	7	7	1	7	1	3	6	1	1	1	1	14	7	1	2	1	14	7	7	2	3	3	4	5	5	5	1	1	1	3	1	1	1	7	2	3	2	3	1
17	1	1	1	10	4	1	12	12	1	12	1	2	11	1	2	2	1	2	1	1	1	3	24	12	12	5	1	5	7	7	8	3	1	1	2	3	3	3	14	6	1	6	1	1
18	2	2	2	8	2	1	17	17	1	17	1	2	13	1	3	3	2	3	1	1	4	3	34	17	17	3	7	8	10	7	5	5	1	1	2	3	3	3	8	3	7	3	7	1
19	1	1	1	3	1	3	7	7	1	7	12	1	4	13	16	16	13	10	5	1	2	1	14	7	7	2	3	49	1	1	2	23	13	13	1	1	1	1	4	2	3	2	3	13
20	2	2	2	1	5	2	9	9	2	9	2	7	7	2	2	2	1	1	1	4	2	2	18	9	9	4	4	5	7	1	8	2	2	2	7	2	2	2	12	4	4	4	4	2
21	1	1	1	4	32	20	10	10	6	10	14	28	8	18	2	2	2	2	6	2	2	2	20	10	10	34	4	6	6	2	60	4	18	18	28	2	2	2	98	38	4	38	4	18
22	2	2	2	5	4	2	6	6	2	6	13	4	6	15	1	1	1	1	1	1	1	6	4	3	3	12	6	6	3	6	3	3	4	7	4	2	15	15	4	3	3	6	3	15
23	12	12	12	1	1	1	6	6	1	6	1	4	7	1	1	1	1	13	1	4	4	4	12	6	6	1	8	3	5	8	1	1	1	1	4	4	4	4	2	1	8	1	8	1
24	12	12	12	1	1	1	6	6	1	6	1	4	7	1	1	1	1	13	1	4	4	4	12	6	6	1	8	3	5	8	1	1	1	1	4	4	4	4	2	1	8	1	8	1
25	12	12	12	6	4	4	1	1	2	1	1	1	1	1	1	1	1	9	6	6	3	3	2	1	1	4	7	3	1	1	1	1	1	1	1	3	3	3	1	4	7	4	7	1
26	1	1	1	7	4	1	9	9	1	9	1	2	1	1	1	1	1	1	14	1	1	1	18	9	9	4	2	4	4	1	7	2	1	1	2	1	1	1	13	6	2	6	2	1
27	1	1	1	1	4	1	2	2	1	2	2	1	1	2	1	1	1	4	1	1	2	2	4	2	2	1	4	4	2	1	5	1	2	2	1	2	2	2	1	1	4	1	4	2
28	1	1	1	24	1	3	1	1	3	1	1	2	1	1	2	2	1	2	1	3	9	5	2	1	1	17	1	3	9	5	20	3	1	1	2	5	5	5	38	18	1	18	1	1
29	3	3	3	1	15	1	3	3	1	3	2	1	4	2	2	2	2	32	1	1	8	8	6	3	3	1	19	7	1	1	1	2	2	2	1	8	8	8	1	1	19	1	19	2
30	1	1	1	1	2	1	2	2	1	2	2	2	1	2	4	4	3	1	2	1	1	1	4	2	2	1	2	13	18	3	1	7	2	2	2	1	1	1	2	1	2	1	2	2
31	1	1	1	2	3	4	1	1	1	1	5	13	1	1	4	4	3	2	3	1	13	11	2	1	1	2	1	11	19	29	2	5	1	1	13	11	11	11	4	2	1	2	1	1
32	2	2	2	1	19	11	1	1	1	1	3	1	3	1	1	1	1	42	2	2	1	9	2	1	1	2	1	3	8	1	34	1	4	4	1	9	9	9	3	3	1	3	1	4
33	1	1	1	2	2	5	1	1	2	1	1	10	1	1	5	5	4	2	3	13	12	12	2	1	1	2	25	14	22	23	3	6	1	1	10	12	12	12	5	2	25	2	25	1
34	4	4	4	1	17	10	4	4	4	4	1	1	3	1	1	1	1	6	2	22	12	12	8	4	4	18	28	3	3	1	2	1	1	1	1	12	12	12	2	18	28	18	28	1
35	1	1	1	2	16	10	5	5	3	5	7	14	4	9	1	1	1	1	3	1	1	1	10	5	5	17	2	3	3	1	30	2	9	9	14	1	1	1	49	19	2	19	2	9
36	8	8	8	2	22	9	4	4	5	4	1	23	2	1	1	1	1	8	1	1	29	16	16	8	4	4	1	36	2	3	1	2	1	1	1	23	16	16	3	1	36	1	36	1
37	1	1	1	4	2	2	38	38	1	38	7	1	2	7	6	6	5	2	3	1	1	1	76	38	38	2	1	18	25	1	3	7	7	7	1	1	1	1	6	3	1	3	1	7
38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
39	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
41	11	11	11	6	6	3	1	1	1	1	2	2	1	1	1	1	1	16	1	1	1	43	41	2	1	1	5	1	2	3	1	7	1	4	4	2	41	41	41	12	5	1	5	1	4
42	1	1	1	4	1	21	1	1	1	1	1	36	1	1	1	1	1	1	7	3	2	2	2	2	1	1	2	5	3	5	2	4	2	1	1	36	2	2	6	2	5	2	5	1
43	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
44	1	1	1	2	16	10	5	5	3	5	7	14	4	9	1	1	1	1	3	1	1	1	10	5	5	17	2	3	3	1	30	2	9	9	14	1	1	1	49	19	2	19	2	9
45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
46	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
47	1	1	1	2	16	10	5	5	3	5	7	14	4	9	1	1	1	1	3	1	1	1	10	5	5	17	2	3	3	1	30	2	9	9	14	1	1	1	49	19	2	19	2	9
48	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
49	4	4	4	1	17	10	4	4	4	4	1	1	3	1	1	1	1	6	2	22	12	12	8	4	4	18	28	3	3	1	2	1	1	1	1	12	12	12	2	18	28	18	28	1
50	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
51	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
52	10	10	10	6	4	2	1	1	1	1	1	1	1	1	21	21	17	10	10	1	3	1	2	1	1	6	1	62	2	1	7	27	1	1	1	1	1	1	14	7	1	7	1	1
53	1	1	1	6	2	1	3	3	1	4	3	15	1	11	18	8	8	1	9	8	4	1	1	1	3	9	3	26	1	1	1	3	9	18	18	1	1	1	15	12	3	12	3	18
54	1	1	1	1	4	4	1	1	1	1	2	1	1	2	1	1	1	12	1	5	1	1	2	1	1	1	3	3	3	1	9	1	2	2	1	1	1	1	1	1	3	1	3	2
55	10	10	10	6	4	1	1	1	1	1	15	3	8	16	16	16	15	9	1	6	1	1	5	1	1	1	1	52	1	8	10	24	16	16	3	5	5	5	2	2	1	2	1	16
56	1	1	1	7	4	33	13	13	16	13	1	2	1	1	2	2	2	1	11	4	4	4	26	13	13	4	8	6	9	6	1	3	1	1	2	4	4	4	1	4	8	4	8	1
57	1	1	1	4	4	4	1	1	3	1	9	1	1	1	10	10	10	4	3	6	2	2	2	1	1	3	5	36	2	1	5	14	1	1	1	2	2	2	8	3	5	3	5	1
58	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
59	4	4	4	22	10	7	2	2	1	2	1	9	2	1	6	6	5	5	1	1	1	2	1	4	2	2	11	2	18	2	1	2	10	1	1	9	1	1	2	13	2	13	2	1
60	1	1	1	6	2	3	1	1	1	1	1	4	1	1	1	2	1	2	1	5	2	2	2	1	1	3	5	1	1	10	5	3	1	1	4	2	2	2	8	3	5	3	5	1
61	1	1	1	6	2	3	1	1	1	1	1	4	1	1	2	1	1	2	1	5	2	2	1	4	2	2	1	1	1	10	5	3	1	1	4	2	2	2	8	3	5	3	5	1
62	1	1	1	1	5	24	1	1	1	1	2	1	2	3	2	2	1	1	1	2	1	1	2	1	1	4	3	1	6	2	7	1	3	3	1	1	1	1	11	4	3	4	3	3
63	1	1	1	1	3	3	2	2	1	2	1	4	2	2	3	3	2	1	1	5	1	1	4	2	2	3	4	8	1	8	6	1	3	3	3	1	1	1	9	3	4	3	4	3
64	2	2	2	9	6	1	10	10	1	10	1	3	10	1	2	2	1	2	1	6	5	5	20	10	10	1	10	5	7	9	1	3	1	1	3	5	5	5	2	1	10	1	10	1
65	1	1	1	1	6	1	8	8	1	8	2	1	1	2	1	1	1	11	11	1	1	2	16	8	8	7	1	3	4	1	11	1	2	2	1	2	2	2	19	8	1	8	1	2
66	15	15	15	1	4	20	6	6	18	6	2	2	1	2	1	1	1	20	10	6	1	1	12	6	6	4	1	4	4	1	1	1	2	2	2	1	1	1	2	1	1	1	1	2

TABLE F.3 PART 2 (Continued)

67	4	4	4	1	18	2	43	43	4	43	8	10	4	8	7	7	4	6	3	2	1	1	86	43	43	20	2	1	25	1	1	10	8	8	10	1	1	1	3	2	2	2	2	8
68	2	2	2	1	19	11	1	1	1	1	3	1	3	4	1	1	1	42	2	2	1	9	1	1	1	2	1	3	8	1	34	1	4	4	1	9	9	9	3	3	1	3	1	4
69	2	2	2	1	19	11	1	1	1	1	3	1	3	4	1	1	1	42	2	2	1	9	2	1	1	2	1	3	8	1	34	1	4	4	1	9	9	9	3	3	1	3	1	4
70	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
71	4	4	4	2	2	1	37	37	4	37	4	14	1	4	6	6	5	4	1	1	1	1	74	37	37	1	2	18	25	1	4	9	4	4	14	1	1	1	1	1	2	1	2	4
72	4	4	4	1	16	2	36	36	2	36	4	8	3	4	5	5	5	4	48	2	1	3	72	36	36	16	1	18	20	3	3	9	4	4	8	3	3	3	1	1	1	1	1	4
73	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
74	1	1	1	24	1	3	1	1	3	1	1	2	1	1	2	2	1	2	1	3	9	5	2	1	1	17	1	3	1	5	20	3	1	1	2	5	5	5	38	18	1	18	1	1
75	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
76	2	2	2	2	2	6	1	1	6	1	5	1	2	5	5	5	5	2	2	2	2	2	2	1	1	2	4	17	1	3	1	7	5	5	1	2	2	2	1	2	4	2	4	5
77	1	1	1	2	3	4	1	1	1	1	5	13	1	1	4	4	3	2	3	1	13	11	2	1	1	2	1	11	19	29	2	1	1	1	13	11	11	11	4	2	1	2	1	1
78	1	1	1	4	1	3	1	1	3	1	2	2	1	1	2	2	1	2	1	5	2	2	2	1	1	1	5	5	1	8	4	3	1	1	2	2	2	2	5	1	5	1	5	1
79	1	1	1	4	2	3	1	1	3	1	1	3	1	1	1	1	1	1	6	7	4	4	2	1	1	2	9	3	1	10	1	2	1	1	3	4	4	4	1	2	9	2	9	1
80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
81	2	2	2	7	4	1	12	12	1	12	2	2	1	2	2	2	1	2	1	1	3	2	24	12	12	4	5	5	6	6	6	3	2	2	2	1	2	2	10	4	5	4	5	2
82	1	1	1	7	2	1	10	10	1	10	1	2	10	1	2	2	1	2	1	4	1	5	20	10	10	3	1	5	7	1	8	3	1	1	2	5	1	5	1	1	1	1	1	1
83	11	11	11	6	4	1	6	6	1	6	2	2	1	2	1	1	16	1	1	1	1	1	12	6	6	5	2	1	4	4	8	1	2	2	2	1	1	1	13	5	2	5	2	2
84	1	1	1	7	4	1	9	9	1	9	1	2	1	1	1	1	1	1	14	1	1	1	18	9	9	4	2	4	4	1	7	2	1	1	2	1	1	1	1	6	2	6	2	1
85	1	1	1	4	2	16	6	6	9	6	12	1	6	14	1	1	1	1	5	3	3	3	12	6	6	2	6	3	4	4	1	2	14	14	1	3	3	3	1	1	6	1	6	14
86	1	1	1	4	2	16	6	6	9	6	12	1	6	14	1	1	1	1	5	3	3	3	12	6	6	2	6	3	4	4	1	2	14	14	1	3	3	3	1	2	1	2	1	14
87	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
88	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
89	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1

Output matrix of geodesic counts saved as dataset GeodesicsCount

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Running time: 00:00:01
Output generated: 27 Kas 05 16:35:14

TABLE F.4: LONGEST SHORTEST PATH AND DIAMETER OF ALANYA TOURISM CLUSTER

Pajek Output for Diameter:

Reading Network --- Adj matrix-MOD-Excel 97.net

Working...
455 lines read.
Time spent: 0:00:00

Searching the longest shortest path in 1. Adj matrix-MOD-Excel 97.net (89)

Working...

Result:
The longest shortest path from Member(12) to Member(88). Diameter is 9.
Time spent: 0:00:00

TABLE F.5: IN AND OUT DEGREES OF ALANYA TOURISM CLUSTER MEMBERS

FREEMAN'S DEGREE CENTRALITY MEASURES

Diagonal valid? NO
Model: ASYMMETRIC
Input dataset: D:\HGA-MS Thesis\Thesis-Günalp\Adjacency\alanya-network

	1 OutDegree	2 InDegree	3 NrmOutDeg	4 NrmInDeg
44	6.000	3.000	6.818	3.409
35	6.000	19.000	6.818	21.591
47	6.000	1.000	6.818	1.136
36	6.000	14.000	6.818	15.909
5	5.000	3.000	5.682	3.409
1	5.000	1.000	5.682	1.136
7	5.000	4.000	5.682	4.545
8	5.000	5.000	5.682	5.682
4	5.000	12.000	5.682	13.636
10	5.000	8.000	5.682	9.091
6	5.000	26.000	5.682	29.545
12	5.000	3.000	5.682	3.409
2	5.000	4.000	5.682	4.545
9	5.000	3.000	5.682	3.409
15	5.000	2.000	5.682	2.273
16	5.000	1.000	5.682	1.136
17	5.000	2.000	5.682	2.273
18	5.000	1.000	5.682	1.136
19	5.000	2.000	5.682	2.273
20	5.000	2.000	5.682	2.273
21	5.000	5.000	5.682	5.682
11	5.000	4.000	5.682	4.545
23	5.000	8.000	5.682	9.091
24	5.000	7.000	5.682	7.955
25	5.000	5.000	5.682	5.682
26	5.000	9.000	5.682	10.227
27	5.000	9.000	5.682	10.227
28	5.000	3.000	5.682	3.409
29	5.000	8.000	5.682	9.091
30	5.000	8.000	5.682	9.091
31	5.000	5.000	5.682	5.682
32	5.000	3.000	5.682	3.409
33	5.000	14.000	5.682	15.909
34	5.000	5.000	5.682	5.682
13	5.000	1.000	5.682	1.136
14	5.000	1.000	5.682	1.136
37	5.000	2.000	5.682	2.273
82	5.000	1.000	5.682	1.136
83	5.000	1.000	5.682	1.136
84	5.000	3.000	5.682	3.409
41	5.000	4.000	5.682	4.545
42	5.000	3.000	5.682	3.409
65	5.000	1.000	5.682	1.136
22	5.000	1.000	5.682	1.136

TABLE F.5 (Continued)

67	5.000	3.000	5.682	3.409
68	5.000	2.000	5.682	2.273
3	5.000	4.000	5.682	4.545
59	5.000	4.000	5.682	4.545
49	5.000	10.000	5.682	11.364
72	5.000	3.000	5.682	3.409
62	5.000	5.000	5.682	5.682
52	5.000	3.000	5.682	3.409
53	5.000	3.000	5.682	3.409
54	5.000	4.000	5.682	4.545
55	5.000	3.000	5.682	3.409
56	5.000	5.000	5.682	5.682
57	5.000	1.000	5.682	1.136
69	5.000	1.000	5.682	1.136
81	5.000	1.000	5.682	1.136
60	5.000	6.000	5.682	6.818
61	5.000	6.000	5.682	6.818
78	5.000	1.000	5.682	1.136
63	5.000	4.000	5.682	4.545
64	5.000	2.000	5.682	2.273
76	5.000	9.000	5.682	10.227
66	5.000	3.000	5.682	3.409
77	5.000	2.000	5.682	2.273
79	5.000	1.000	5.682	1.136
74	5.000	7.000	5.682	7.955
86	5.000	1.000	5.682	1.136
71	5.000	5.000	5.682	5.682
85	5.000	2.000	5.682	2.273
51	0.000	1.000	0.000	1.136
58	0.000	1.000	0.000	1.136
73	0.000	5.000	0.000	5.682
43	0.000	5.000	0.000	5.682
50	0.000	4.000	0.000	4.545
45	0.000	4.000	0.000	4.545
46	0.000	1.000	0.000	1.136
48	0.000	1.000	0.000	1.136
70	0.000	1.000	0.000	1.136
38	0.000	4.000	0.000	4.545
39	0.000	1.000	0.000	1.136
40	0.000	2.000	0.000	2.273
80	0.000	1.000	0.000	1.136
75	0.000	2.000	0.000	2.273
87	0.000	1.000	0.000	1.136
88	0.000	1.000	0.000	1.136
89	0.000	1.000	0.000	1.136

TABLE F.5 (Continued)

DESCRIPTIVE STATISTICS

		1 OutDegree	2 InDegree	3 NrmOutDeg	4 NrmInDeg
1	Mean	4.090	4.090	4.648	4.648
2	Std Dev	1.998	4.071	2.270	4.627
3	Sum	364.000	364.000	413.636	413.636
4	Variance	3.992	16.576	5.155	21.405
5	SSQ	1844.000	2964.000	2381.198	3827.479
6	MCSSQ	355.281	1475.281	458.782	1905.063
7	Euc Norm	42.942	54.443	48.798	61.867
8	Minimum	0.000	1.000	0.000	1.136
9	Maximum	6.000	26.000	6.818	29.545

Network Centralization (Outdegree) = 2.195%
Network Centralization (Indegree) = 25.181%

Actor-by-centrality matrix saved as dataset FreemanDegree

Running time: 00:00:01
Output generated: 27 Kas 05 14:15:49

TABLE F.6: CLOSENESS VALUES OF ALANYA TOURISM CLUSTER MEMBERS

CLOSENESS CENTRALITY

Input dataset: D:\HGA-MS Thesis\Thesis-Günalp\Adjacency\alanya-network
Method: Geodesic paths only (Freeman Closeness)
Output dataset: C:\Documents and Settings\XP\Desktop\Closeness

Note: Data not symmetric, therefore separate in-closeness & out-closeness computed.

The network is not connected. Technically, closeness centrality
cannot be computed, as there are infinite distances.

Closeness Centrality Measures

	1	2	3	4
	inFarness	outFarness	inCloseness	outCloseness
50	1640.000	7832.000	5.366	1.124
40	1641.000	7832.000	5.363	1.124
6	1646.000	300.000	5.346	29.333
73	1655.000	7832.000	5.317	1.124
38	1660.000	7832.000	5.301	1.124
26	1672.000	293.000	5.263	30.034
23	1672.000	342.000	5.263	25.731
35	1672.000	318.000	5.263	27.673
33	1674.000	349.000	5.257	25.215
24	1675.000	342.000	5.254	25.731
25	1684.000	300.000	5.226	29.333
4	1684.000	307.000	5.226	28.664
45	1684.000	7832.000	5.226	1.124
27	1685.000	292.000	5.223	30.137
46	1686.000	7832.000	5.219	1.124
48	1686.000	7832.000	5.219	1.124
49	1689.000	338.000	5.210	26.036
43	1690.000	7832.000	5.207	1.124
36	1694.000	326.000	5.195	26.994
61	1695.000	296.000	5.192	29.730
60	1695.000	296.000	5.192	29.730
8	1699.000	285.000	5.180	30.877
56	1699.000	337.000	5.180	26.113
62	1701.000	325.000	5.173	27.077
58	1703.000	7832.000	5.167	1.124
21	1703.000	397.000	5.167	22.166
76	1708.000	313.000	5.152	28.115
29	1709.000	317.000	5.149	27.760
74	1717.000	297.000	5.125	29.630
75	1718.000	7832.000	5.122	1.124
41	1720.000	332.000	5.116	26.506
71	1721.000	334.000	5.113	26.347
30	1722.000	307.000	5.110	28.664
10	1722.000	287.000	5.110	30.662

TABLE F.6 (Continued)

63	1726.000	294.000	5.098	29.932
11	1726.000	309.000	5.098	28.479
34	1726.000	338.000	5.098	26.036
7	1731.000	299.000	5.084	29.431
89	1732.000	7832.000	5.081	1.124
67	1733.000	330.000	5.078	26.667
64	1736.000	322.000	5.069	27.329
39	1737.000	7832.000	5.066	1.124
54	1739.000	288.000	5.060	30.556
31	1742.000	300.000	5.052	29.333
9	1746.000	307.000	5.040	28.664
15	1747.000	311.000	5.037	28.296
59	1749.000	316.000	5.031	27.848
17	1750.000	299.000	5.029	29.431
42	1753.000	329.000	5.020	26.748
20	1753.000	320.000	5.020	27.500
16	1754.000	327.000	5.017	26.911
18	1754.000	309.000	5.017	28.479
28	1756.000	299.000	5.011	29.431
84	1759.000	291.000	5.003	30.241
2	1759.000	299.000	5.003	29.431
3	1759.000	308.000	5.003	28.571
77	1761.000	298.000	4.997	29.530
80	1762.000	7832.000	4.994	1.124
87	1762.000	7832.000	4.994	1.124
12	1766.000	335.000	4.983	26.269
47	1773.000	318.000	4.963	27.673
57	1779.000	307.000	4.947	28.664
85	1779.000	357.000	4.947	24.650
5	1780.000	342.000	4.944	25.731
66	1783.000	321.000	4.936	27.414
19	1784.000	319.000	4.933	27.586
32	1788.000	300.000	4.922	29.333
44	1801.000	316.000	4.886	27.848
83	1801.000	332.000	4.886	26.506
82	1801.000	306.000	4.886	28.758
81	1801.000	299.000	4.886	29.431
51	1808.000	7832.000	4.867	1.124
37	1818.000	325.000	4.840	27.077
78	1819.000	297.000	4.838	29.630
79	1819.000	296.000	4.838	29.730
72	1822.000	344.000	4.830	25.581
13	1825.000	341.000	4.822	25.806
14	1827.000	294.000	4.817	29.932
1	1829.000	279.000	4.811	31.541
70	1835.000	7832.000	4.796	1.124
22	1846.000	340.000	4.767	25.882
52	1852.000	277.000	4.752	31.769
53	1852.000	316.000	4.752	27.848
55	1852.000	316.000	4.752	27.848
88	1871.000	7832.000	4.703	1.124
65	1888.000	305.000	4.661	28.852
86	1888.000	353.000	4.661	24.929
68	1920.000	300.000	4.583	29.333
69	1922.000	300.000	4.579	29.333

TABLE F.6 (Continued)

Statistics

		1	2	3	4
		inFarness	outFarness	inCloseness	outCloseness
1	Mean	1750.584	1750.584	5.034	22.934
2	Std Dev	64.062	2955.098	0.181	10.722
3	Sum	155802.000	155802.000	447.982	2041.163
4	Variance	4103.996	8732605.000	0.033	114.952
5	SSQ	273109792.000	1049946368.000	2257.834	57043.594
6	MCSSQ	365255.625	777201792.000	2.913	10230.705
7	Euc Norm	16526.033	32402.875	47.517	238.838
8	Minimum	1640.000	277.000	4.579	1.124
9	Maximum	1922.000	7832.000	5.366	31.769

Network centralization not computed for unconnected graphs
Output actor-by-centrality measure matrix saved as dataset C:\Documents and Settings\XP\Desktop\Closeness

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Running time: 00:00:01
Output generated: 27 Kas 05 14:21:08

TABLE F.7: BETWEENNESS VALUES OF ALANYA TOURISM CLUSTER MEMBERS

FREEMAN BETWEENNESS CENTRALITY

Input dataset: D:\HGA-MS Thesis\Thesis-Günalp\Adjacency\alanya-network

Important note: this routine binarizes but does NOT symmetrize.

Un-normalized centralization: 50909.976

	1 Betweenness	2 nBetweenness
26	755.415	9.867
4	752.806	9.833
10	742.510	9.698
6	712.821	9.311
35	663.641	8.668
74	661.109	8.635
32	481.625	6.291
36	461.037	6.022
67	457.933	5.981
27	400.876	5.236
29	395.840	5.170
3	381.537	4.984
33	374.589	4.893
8	372.296	4.863
25	366.988	4.793
49	341.995	4.467
56	329.329	4.302
30	292.814	3.825
76	284.480	3.716
59	278.581	3.639
21	275.730	3.601
71	275.404	3.597
23	231.552	3.024
60	214.807	2.806
61	214.807	2.806
72	213.669	2.791
41	212.200	2.772
31	211.646	2.764
17	205.643	2.686
63	204.207	2.667
55	199.988	2.612
11	199.267	2.603
24	198.574	2.594
84	198.475	2.592
62	190.651	2.490
77	182.733	2.387
12	172.523	2.253
2	171.105	2.235
9	168.073	2.195
7	163.634	2.137

TABLE F.7 (Continued)

42	163.315	2.133
5	160.157	2.092
54	153.440	2.004
20	143.496	1.874
66	140.307	1.833
28	138.066	1.803
85	130.668	1.707
53	123.082	1.608
82	122.173	1.596
34	121.003	1.580
37	110.530	1.444
15	107.247	1.401
57	101.618	1.327
16	97.903	1.279
13	92.656	1.210
86	87.271	1.140
64	86.940	1.136
44	83.163	1.086
52	74.291	0.970
18	70.830	0.925
19	66.322	0.866
47	50.489	0.659
81	35.834	0.468
14	34.916	0.456
78	32.818	0.429
1	32.783	0.428
79	32.595	0.426
22	31.008	0.405
68	30.908	0.404
65	22.325	0.292
83	19.739	0.258
69	11.194	0.146
51	0.000	0.000
58	0.000	0.000
73	0.000	0.000
43	0.000	0.000
50	0.000	0.000
45	0.000	0.000
46	0.000	0.000
48	0.000	0.000
70	0.000	0.000
38	0.000	0.000
39	0.000	0.000
40	0.000	0.000
80	0.000	0.000
75	0.000	0.000
87	0.000	0.000
88	0.000	0.000
89	0.000	0.000

TABLE F.7 (Continued)

DESCRIPTIVE STATISTICS FOR EACH MEASURE

		1	2
		Betweenness	nBetweenness
1	Mean	183.393	2.395
2	Std Dev	190.753	2.492
3	Sum	16322.000	213.192
4	Variance	36386.863	6.208
5	SSQ	6231775.500	1063.183
6	MCSSQ	3238431.000	552.498
7	Euc Norm	2496.353	32.606
8	Minimum	0.000	0.000
9	Maximum	755.415	9.867

Network Centralization Index = 7.56%

Output actor-by-centrality measure matrix saved as dataset FreemanBetweenness

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Running time: 00:00:01
Output generated: 27 Kas 05 14:18:55

TABLE F.8: CLIQUES OF ALANYA TOURISM CLUSTER MEMBERS

```
CLIQUES
------------------------------------------------------------------------------
Minimum Set Size:            3
Input dataset:               C:\Program Files\Ucinet 6\DataFiles\Adj matrix-MOD-Excel 97

WARNING: Directed graph. Direction of arcs ignored.
9 cliques found.
```

1: Members (6-7-27)
2: Members (6-8-27)
3: Members (6-27-53)
4: Members (11-27-65)
5: Members (11-33-40)
6: Members (11-33-41)
7: Members (19-27-29)
8: Members (19-27-30)
9: Members (7-27-29)

Actor-by-Actor Clique Co-Membership Matrix

	1 R	2 T	3 K	4 H	5 G	6 Ö	7 P	8 F	9 M	10 E	11 T	12 K	13 T	14 A	15 G	16 D	17 K	18 G	19 P	20 R	21 O	22 A	23 B	24 D	25 H	26 G	27 M	28 S	29 A	30 A	31 M	32 E	33 D	34 N	35 O	36 G	37 D	38 T	39 A	40 S	41 O	42 Y	43 P	44 A	45 B	46 T	47 G	48 E	49 A	50 N	51 N	52 Ş	53 B	54 M	55 G	56 J	57 A	58 A	59 V	60 A	61 A	62 G	63 G	64 T	65 G	66 K	67 L	68 A	69 A	70 O	71 L	72 T	73 A	74 T	75 D	76 O	77 I	78 Ö	79 A	80 1	81 D	82 K	83 S	84 K	85 M	86 S	87 M	88 J	89 P
1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
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34	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
35	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
36	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
37	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

TABLE F.8 (Continued)

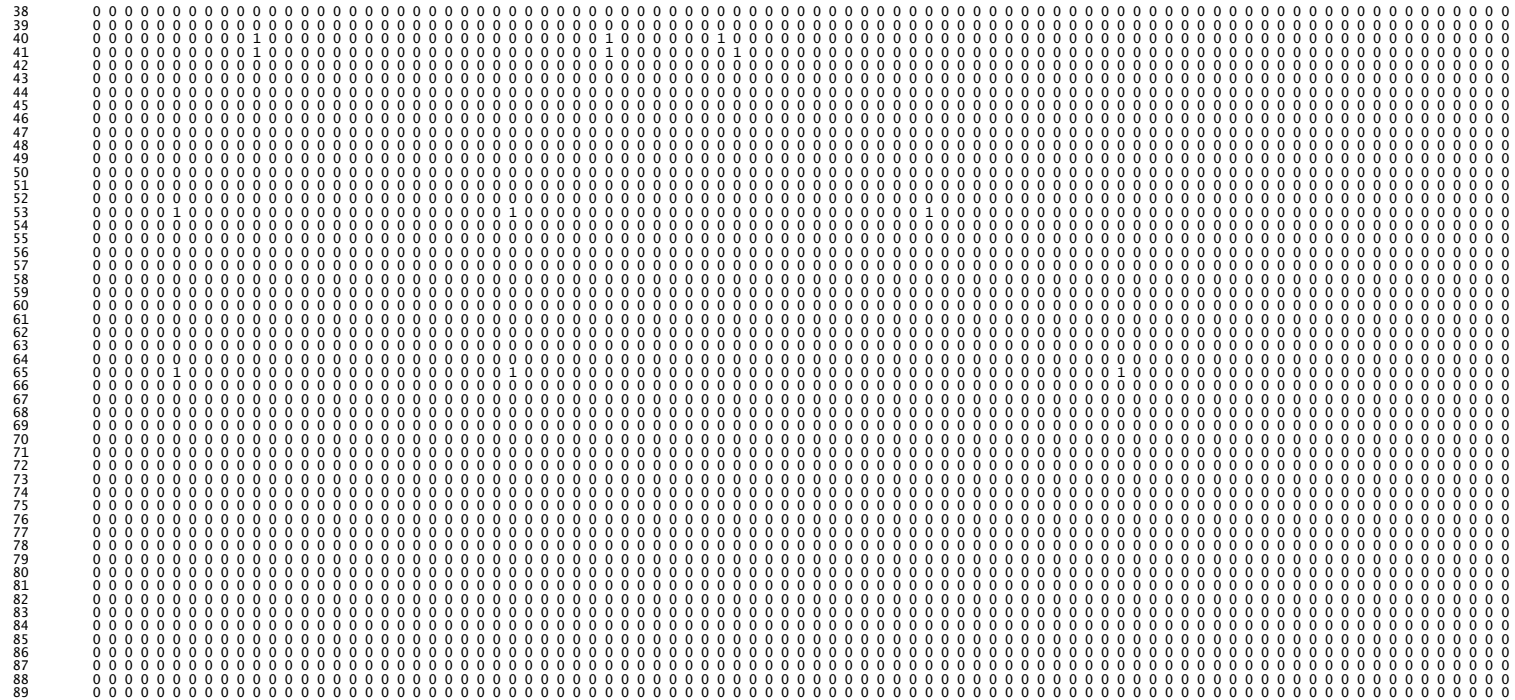


TABLE F.8 (Continued)

```
Group indicator matrix saved as dataset CliqueSets
Actor-by-Actor clique co-membership matrix saved as dataset CliqueOverlap
Clique co-membership partition-by-actor indicator matrix saved as dataset CliquePart


Clique-by-Clique Actor Co-membership matrix

     1 2 3 4 5 6 7 8 9
     - - - - - - - - -
  1  3 2 2 2 0 0 1 1 2
  2  2 3 2 2 0 0 1 1 1
  3  2 2 3 2 0 0 1 1 1
  4  2 2 2 3 0 0 1 1 1
  5  0 0 0 0 3 2 0 0 0
  6  0 0 0 0 2 3 0 0 0
  7  1 1 1 1 0 0 3 2 2
  8  1 1 1 1 0 0 2 3 1
  9  2 1 1 1 0 0 2 1 3


Clique-by-Clique co-membership matrix saved as dataset Clique-by-cliqueOverlap
Clique by clustering partition matrix saved as dataset Clique-by-partition

------------------------------------------
Running time:  00:00:03
Output generated:  28 May 05 14:05:08
Copyright (c) 1999-2005 Analytic Technologies
```

TABLE F.9: SIMPLE CORE / PERIPHERY MODEL OF ALANYA TOURISM CLUSTER MEMBERS

```
SIMPLE CORE/PERIPHERY MODEL
---------------------------------------------------------------------------

Input dataset:                C:\Program Files\Ucinet 6\DataFiles\Adj matrix-MOD-Excel 97
Type of data:                 Positive
Fitness measure:              CORR
Density of core-to-periphery ties:
Number of iterations:         50
Population size:              100
Output partition:             C:\WINDOWS\Desktop\Thesis\CorePartition
Output clusters:              C:\WINDOWS\Desktop\Thesis\CoreClasses

Starting fitness: 0.090
Final fitness: 0.180
```

Core/Periphery Class Memberships:

1: 4, 6, 8, 10, 14, 17, 21, 23, 24, 25, 26, 27, 29, 30, 31, 33, 34, 35, 36, 37, 41, 49, 52, 54, 56, 57, 60, 61, 62, 63, 65, 71, 74, 76

2: 1, 2, 3, 5, 7, 9, 11, 12, 13, 15, 16, 18, 19, 20, 22, 28, 32, 38, 39, 40, 42, 43, 44, 45, 46, 47, 48, 50, 51, 53, 55, 58, 59, 64, 66, 67, 68, 69, 70, 72, 73, 75, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89

Blocked Adjacency Matrix

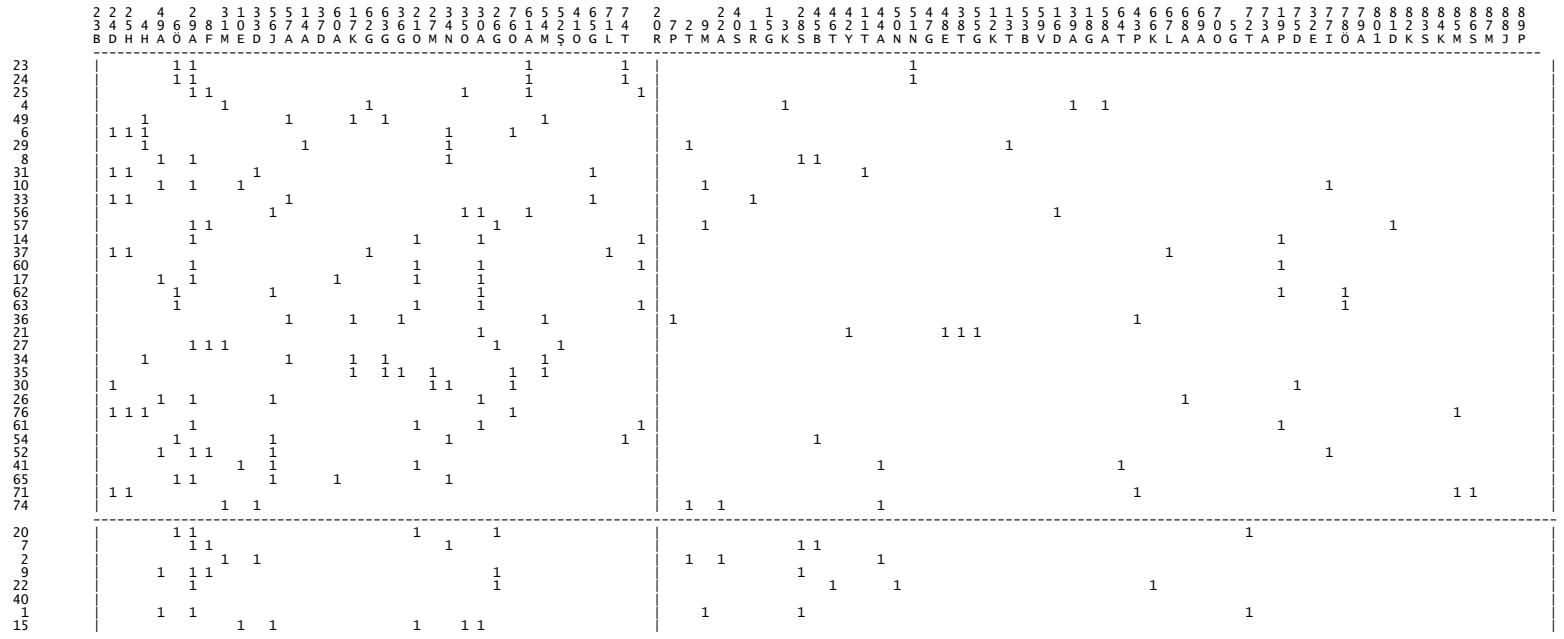
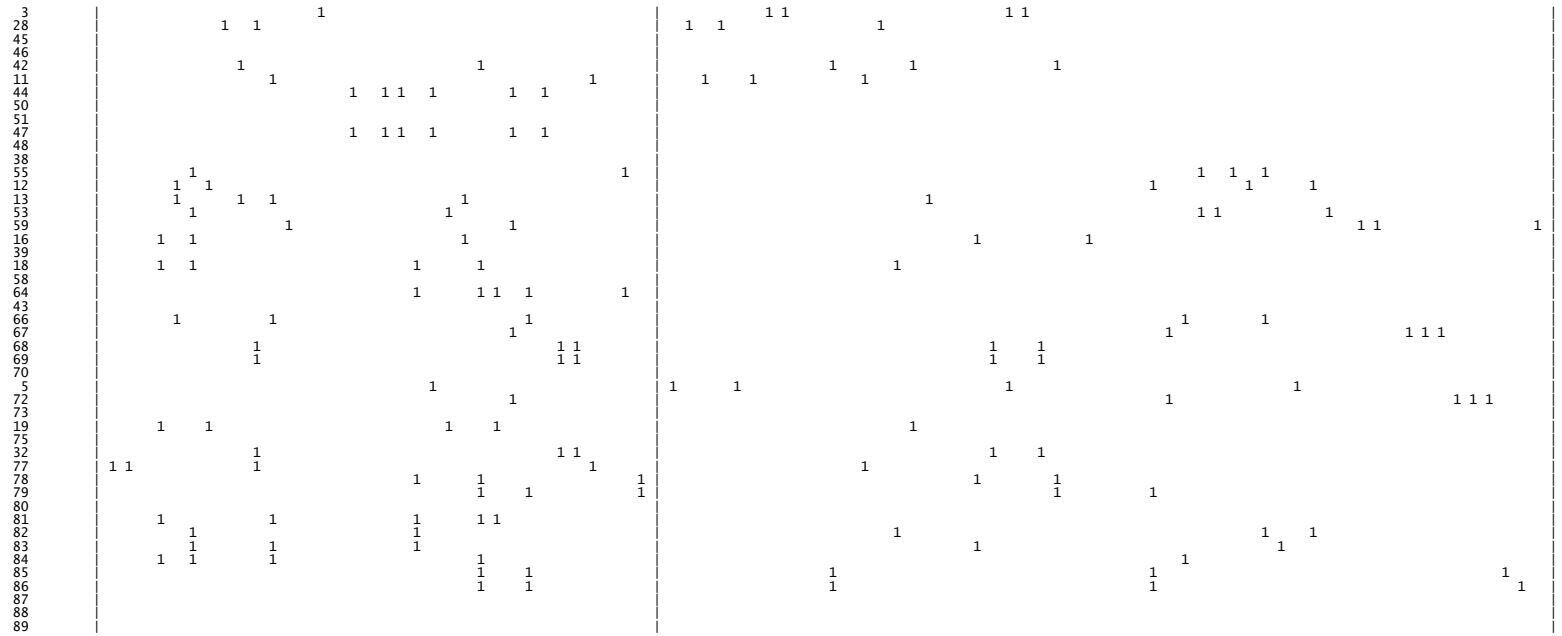


TABLE F.9 (Continued)



```
Density matrix

     1         2
     -----     -----
  1  0.116  0.022
  2  0.060  0.027

Partition saved as dataset    C:\WINDOWS\Desktop\Thesis\CorePartition
Faction-by-actor indicator matrix saved as dataset C:\WINDOWS\Desktop\Thesis\CoreClasses

----------------------------------------
Running time:  00:00:01
Output generated:  28 May 05 15:14:19
Copyright (c) 1999-2005 Analytic Technologies
```

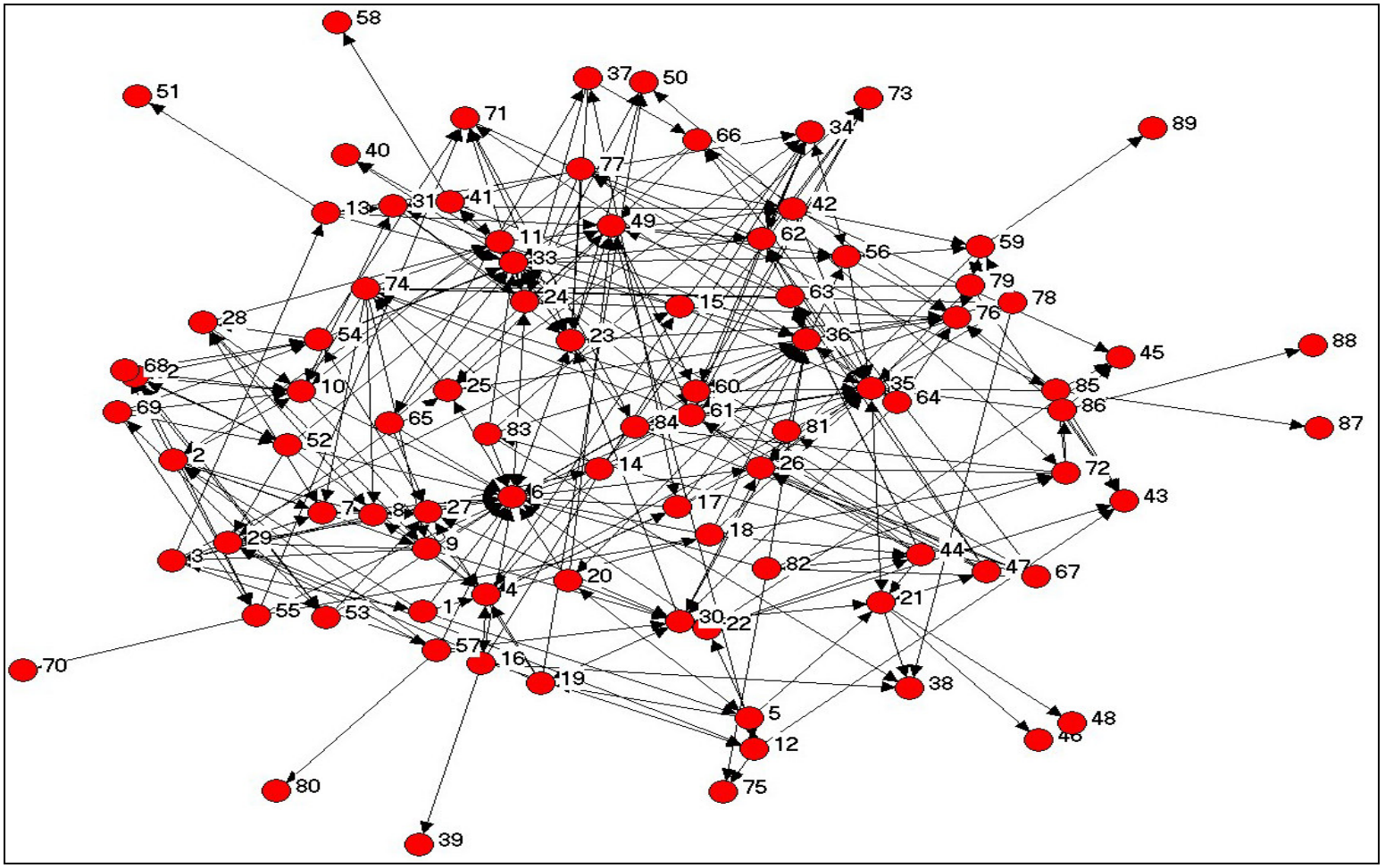


FIGURE F.1: NETWORK MAP OF ALANYA TOURISM CLUSTER MEMBERS

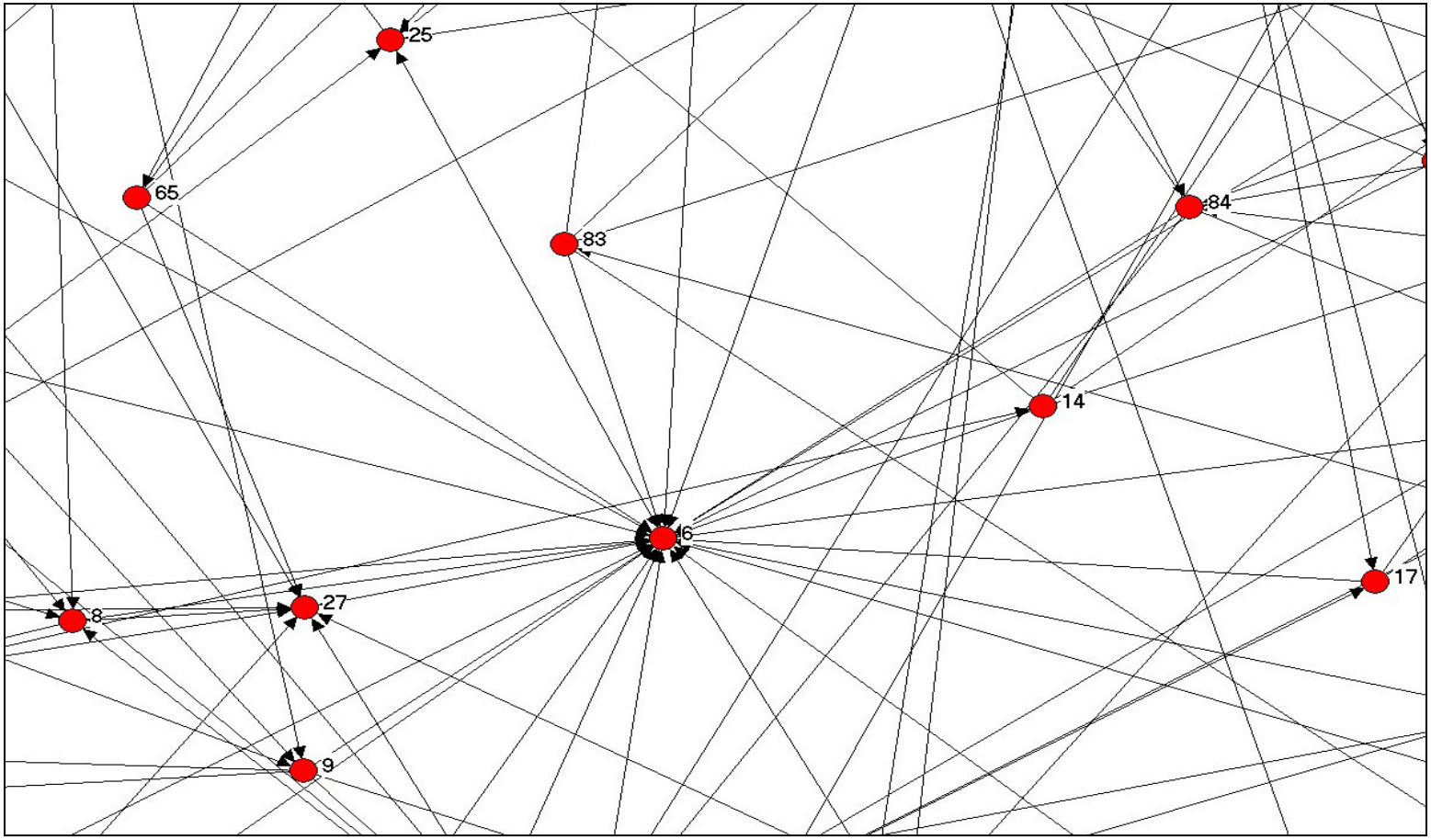


FIGURE F.2: ALANYA TOURISM CLUSTER MAP ZOOMED ON DOWN-LEFT SECTION

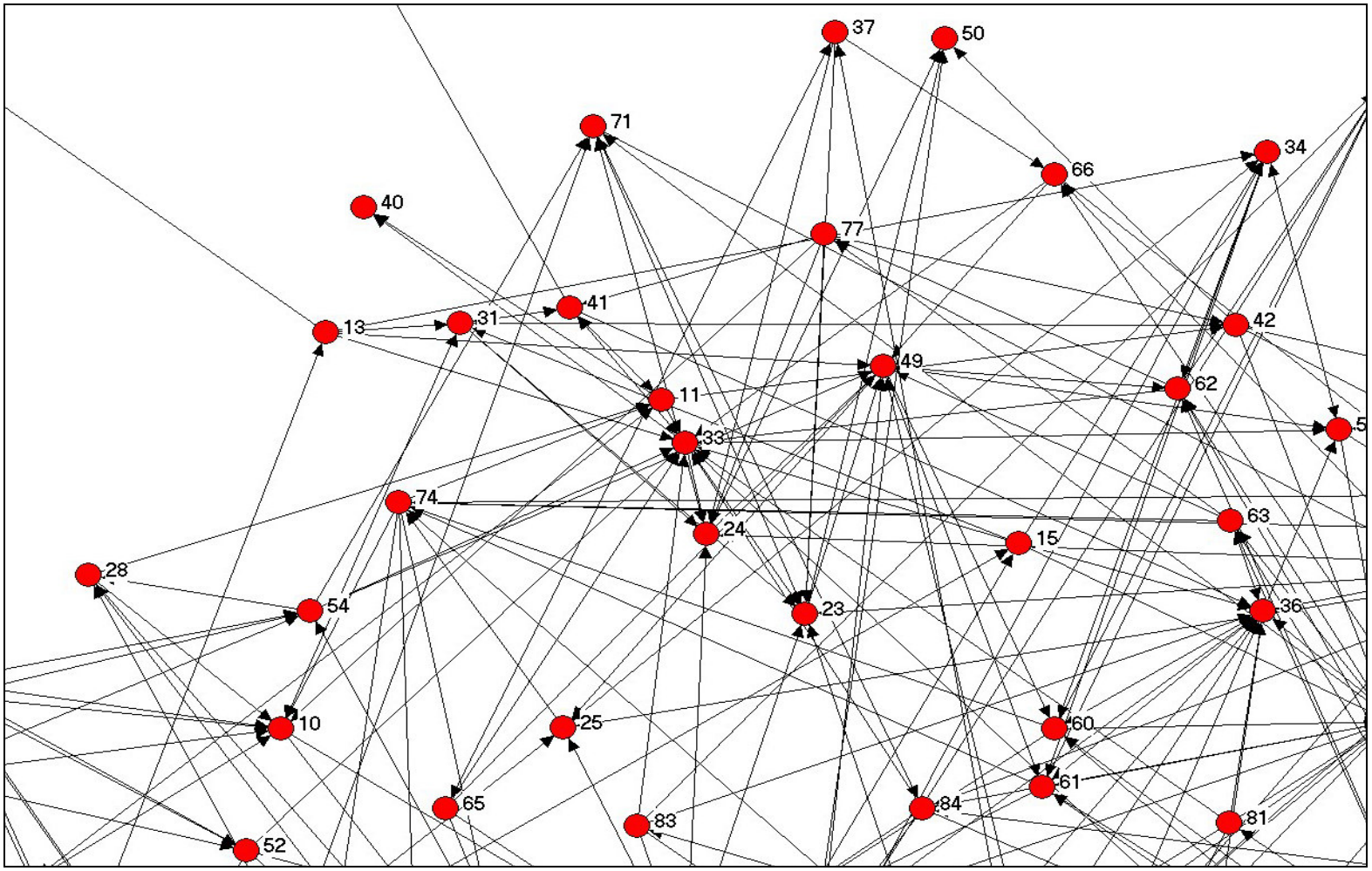


FIGURE F.3: ALANYA TOURISM CLUSTER MAP ZOOMED ON UPPER-LEFT SECTION

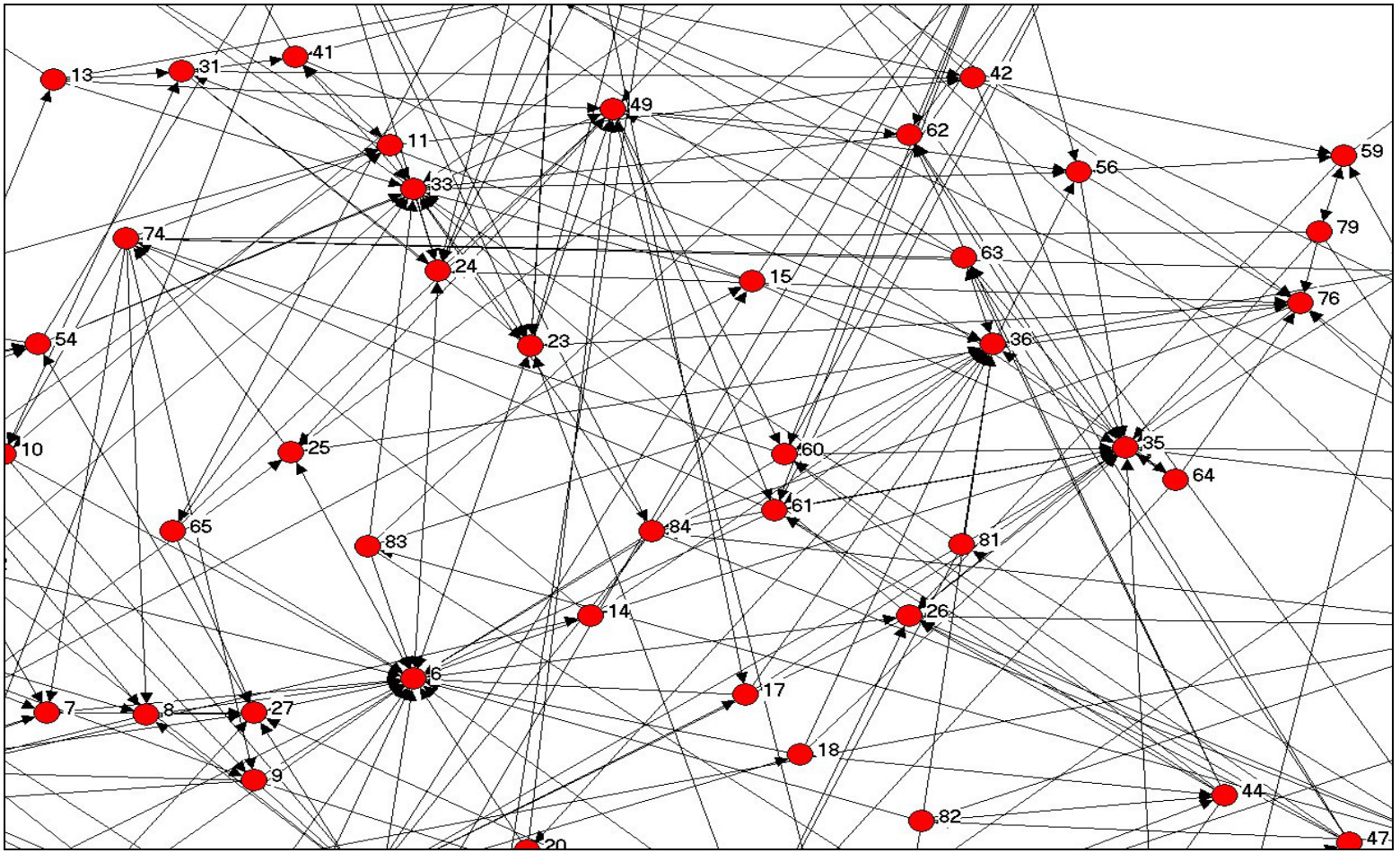


FIGURE F.4: ALANYA TOURISM CLUSTER MAP ZOOMED ON THE CORE