

Article citation info: Yaşar, M., Analysis of the competition between transportation modes from the perspective of competitive dynamics: A study on Ankara-Istanbul transportation line. *Transport & Logistics: the International Journal*, 2017; Volume 17, Issue 42, April 2017, ISSN 2406-1069

ANALYSIS OF THE COMPETITION BETWEEN TRANSPORTATION MODES FROM THE PERSPECTIVE OF COMPETITIVE DYNAMICS: A STUDY ON ANKARA-ISTANBUL TRANSPORTATION LINE

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Abstract:

The purpose of this study is to try to understand the competitive view of the managers from different transportation modes. For this purpose, the road, rail and airline transportation modes which they have different resources and infrastructure, operating on Ankara-Istanbul transportation line, are examined from competitive dynamics perspective. Data were gathered from bus operators operating in Ankara-Istanbul route, the administrators of the Republic of Turkey State Railways and airline companies using semi-structured interview technique. In addition to this, the activities that enterprises have undertaken in order to provide competitive advantage in the market have also been analyzed in terms of the data obtained from the web sites and news sites of the firms and analyzed by the content analysis method. As a result, it has been seen that even the bus operations are considered as competitors of the airline companies and they react to protect the market position; It has become clear that airline companies do not see bus operators as nearly rival. In the context of the railroad, the high speed train services that have not yet started their campaigns are not dominant in the current situation but the competitiveness of the railway will be increased by the beginning of the flights. In addition, it has emerged that the lack of railway access to the European side did not constitute a competitive element for airway operators due to the existing shortcomings in the integration with the existing transport system.

Key words:

Competitive Dynamics, Cross Competition, Awareness, Action-Reaction, Transportation Modes.

INTRODUCTION

The increase in the number of firms operating in the passenger transport sector has led to the growth of the supply and enlargement of the customer selection range. In this context, competition in the transport sector has increased and the challenges in the passenger transport

sector have become tight. In the past years, competition was considered as compete in the same mode of transport, but the influence of factors such as the widespread of high-speed trains, airline companies' lowering of ticket prices due to the increasing competition within themselves and state's efforts to regulate market shares of transportation modes in Turkey have increased airlines, railways and bus companies competition. The substitution of goods in Michael Porter's [1] power model suggests that the threat of goods leads to an alternative product when the customer does not reach a product or does not want to prefer it [1]. In this context, it is inevitable that different modes of transport may be alternatives.

The main purpose of this study is to examine the competitive dynamics of airline, rail and road transportation, which have different infrastructure, resources and arrangements, with each other on the same transport line. In this context, 2 basic questions were searched in the research:

- Do different transportation areas see each other as competitors?
- What are these businesses doing to compete with businesses outside the sector?

In this context, the competitiveness of the transportation modes operating on the Ankara-Istanbul line has been examined and interviews were held with the managers of the related line operating companies in 2013 and 2015 (before and after the start of the high-speed train service between Ankara and Istanbul). Secondary data were also used to provide data diversity and deepen analysis, and content analysis of the web sites of the enterprises was conducted in this context.

1 LITERATURE REVIEW

Rival is defined as firms operating in the same market, offering similar products and targeting similar customers. Firms interact as part of a wide range of activities they undertake while attempting to generate an average income with their competitors [2]. Competitive dynamics have emerged as a strong theory of strategic management that explains and predicts the competitive interactions among competitors among themselves within the above-mentioned objectives, and the effects of these interactions on the firm [3]. Smith et al. have indicated that a series of moves between companies operating an industry and the reactions shown to these actions create competitive dynamics. These moves and reactions reflect the normal and innovative movements of companies seeking profit [4].

Firms are involved in a variety of actions, such as promoting new products, promotional activities, or new agreements, to improve or increase profits, competitive advantages and market positions. Successful moves encourage opponents to make moves against opponents, such as when the opponents imitate it or try to block the move. For this reason, competitive dynamics are based on research into how firm actions affect competitors, competitive advantages and performances [4].

In situations where industry performance is adversely affected, these actions and reactions may increase, but at other times these behaviors are milder [4]. According to Baum and Korn [5], competitive dynamics examine firms' competitive moves and reactions, their strategic and organizational dimensions, the components of the actions taken, and the competition between firms based on the results of these actions.

The topic of competitive dynamics has developed over the last few years for a variety of reasons. First, it offers a fine-grained approach to understanding what specific companies do for themselves when competing with companies they see privately. Measurable actions that are subject to rigorous work are being investigated. It also examines the interaction between competitors and focuses not only on reactions that occur but also on reactions that occur. For this reason, competition dynamics are inherently one of the few work areas of the longitudinally oriented strategy [6]. Figure 1 contains an illustration of how competitors behave, how and why they do it, and how they shape industry's competitive dynamics.

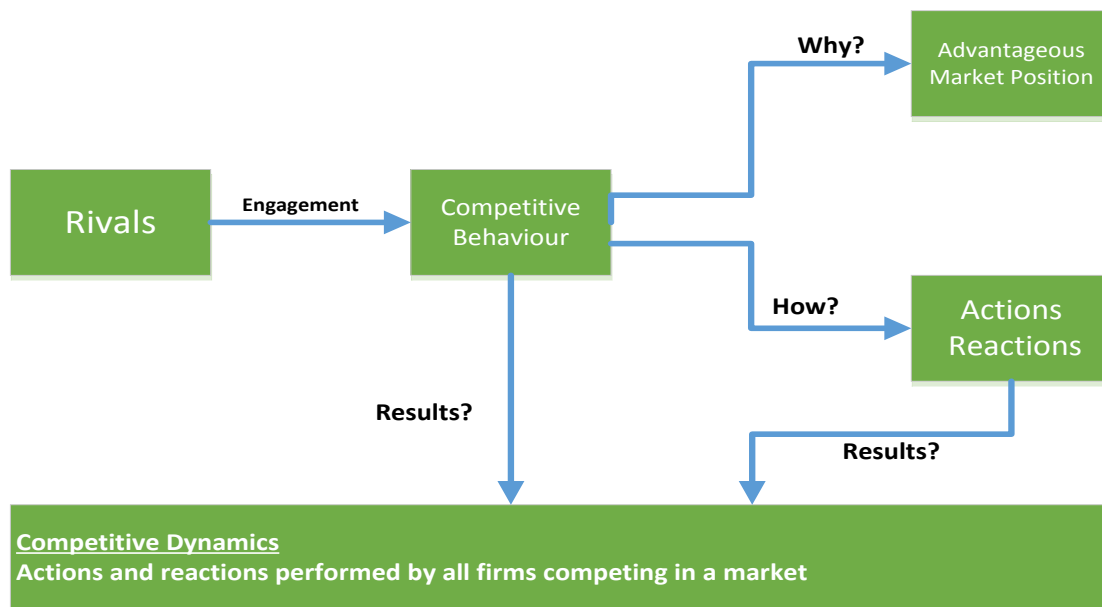


Fig. 1 Formation of Competitive Dynamics [2]

There are three basic premises that influence the competitive activities of a company. These premises are the awareness of firm or its' competitive actions, the motivation for the move or the counter-move, and the ability to do so. Using these three factors, the firm can estimate and analyze the competitive behavior of his rival [6].

Awareness is a statement that must be found primarily for any competitive action and response undertaken by the firm or competitor, and includes the extent to which competitors are aware of the degree of interdependence as a result of resource similarity and market partnership [7]. Awareness also refers to the awareness of a firm, its competitors, the competitive elements within the industry, and the general competitive environment. The level of awareness is very important because it affects the extent and conception of conclusions of the results of the firm's actions in a competitive environment [4].

Motivation involves incentives offered by the company to make moves or to respond to the rush of the opponent in relation to perceived gains and losses [2]. A firm may be aware of its competitor, but if it sees that the moves of the competitors will not have any negative impact on the firm, the motivation to enter the competition with competitors will be low [7]. In his research on competitive dynamics, he noted that organizational characteristics such as past performance and market dependency [8] reflect motivation to move [4]. A firm with high market dependence will be more aggressive in maintaining its market position [8].

Capability is about the resources of each company and the flexibility they provide. Without appropriate resources (such as finance capital and people), the firm will not have the ability to make moves or respond to its actions [7]. Nonetheless, similar resources will bring about similar capabilities for moves and responses [9].

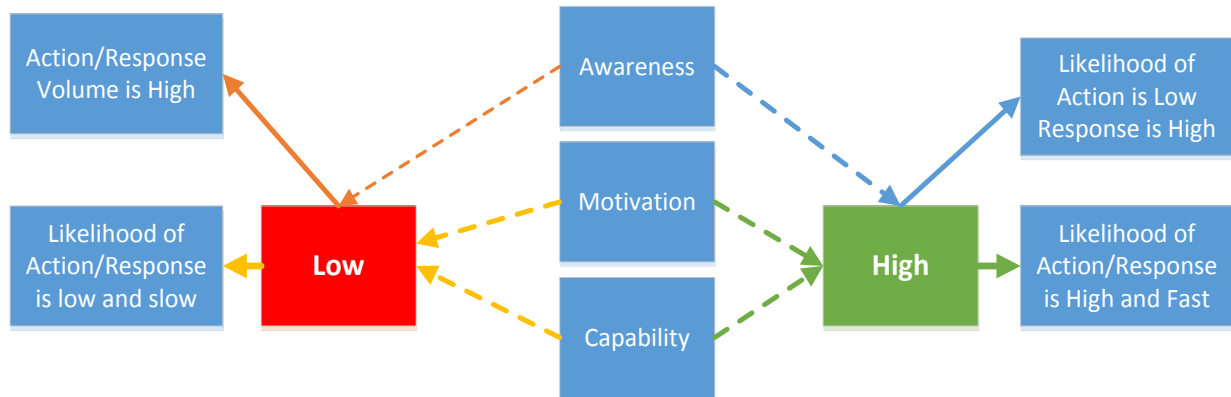


Fig. 2 Illustration of AMC Perspective [6]

2 METHODOLOGY

2.1 Purpose of Study

When competition is considered, the challenges of two different companies belonging to the same sector come to mind. The theory of competitive dynamics examines the actions and reactions of firms operating in the same industry. However, in this study, the theory of competitive dynamics was applied to rail, air and road transport, which are three different industry sectors (substitute products) in which completely different vehicles use different infrastructures and have different regulations but can substitute for each other.

The importance of the research is that the competition between firms fighting in different sectors instead of competing in the same sector is addressed by how firms are perceived and what actions are taken.

Three basic questions were asked in the research:

- How are the competitive views of the firms from different sectors to each other?
- What are these firms doing in order to compete with each other?
- What are the factors that influence competition around the industry apart from rivals?

2.2 Data Collection Tool and Data Collecting Process

A semi-structured interview technique was applied as qualitative research method as data collection tool in this study where the perspective of the different modes of transport in Ankara-Istanbul transportation line is examined from the perspective of competitive dynamics. Interviewing is the most frequently used data collection tool in qualitative research and is one of the most commonly used research methods in social sciences [10]. In addition, interview technique was used in the study, considering the strengths such as flexibility,

response rate was higher than the quantitative research, control was provided in the interviewed environment, flexibility of the question was changed depending on the conversation, questions could be added, ability to see the movements and mimics of the interviewed person and to collect in depth information [11]. Prior to the talks, companies operating in modes of transport operating on the Istanbul-Ankara line were identified (Bus operators, Railway and Airline Operations).

Later, appointments were made and interviews were held with the relevant firms. During the first stage of the study, the manager of two airline operations, the senior manager of the four regional bus companies and the head of the passenger departments representing the railways were interviewed, as it was two stages (before and after the start of the flights of the high speed trains). Interviews were held at the Ankara Intercity Bus Terminal, Istanbul Sabiha Gokcen Airport, General Directorate of Turkish State Railways. In addition, two interviews were conducted online. The talks lasted an average of 30 minutes. The high-speed train of the workshop was moved to the 2nd stage by starting operations on the Ankara-Istanbul line. Within this scope, interviews were held with bus operators, railways and airline operators as they were in the first stage. Interviews started with bus companies and two companies were interviewed on the Ankara-Istanbul line with more than 10 daily voyages. The third person, who is represented in the representation of the bus companies, is a person in the managerial position from the Turkish Bus Federation. At the same time, secondary data were obtained through the web sites of the enterprises and content analysis was performed on these data.

2.3 Analysis of the Data

The data obtained from interviews were analyzed by descriptive analysis method included in qualitative research methods. Also, secondary data were analyzed by content analysis method. After the analysis, four different themes were created and the findings were presented under these themes.

3 FINDINGS AND COMMENTS

As mentioned in the previous section, 4 different themes were created as a result of the content analysis and descriptive analysis. These themes are competitive perceptions of different modes of transport, monitoring competitive behavior of competitors, actions and reactions taken by firms, and finally government regulations. Figure 2 shows the themes created as a result of the analysis.

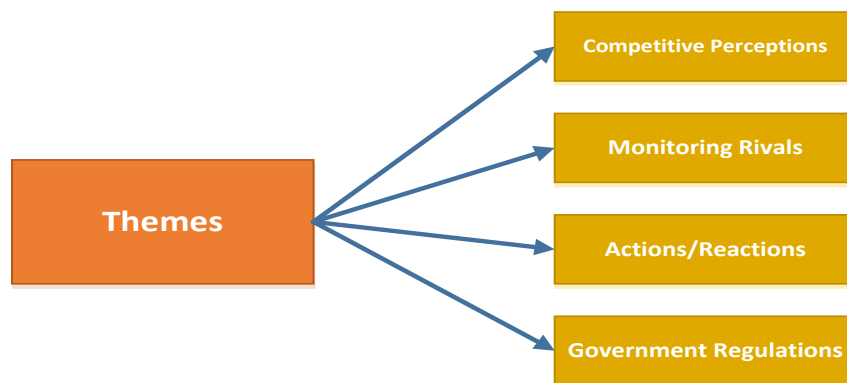


Fig. 3 Themes Created As a Result of Analysis

3.1 Findings Related To Competitive Perceptions of Different Modes of Transport

The perception of airlines, railways and highways in the intensity of competition in Ankara-Istanbul varies according to mode and firms. Interviewed bus operators now consider airlines operating on this line as an important competitor to them. Regarding this, the response of one of the bus companies interviewed to the Ankara District Governor is as follows:

" Before the airlines entered this market, the market share of highways reached 97%, but after the airlines became effective on this market, especially after the liberalization, the market share of the highways decreased to 85% and air transportation obtained 12% market share. "

Airline operators have the idea that HSR (High Speed Rail) will be a competitor to them, but it will not pose a serious threat. The reason for this is the profile of the passenger traveling on the Ankara-Istanbul route by air. Most of the passengers traveling by air in the airport are business travelers. A manager from the interviewed airlines explained this as follows.

" It takes 35 minutes to travel from Ankara to Istanbul and this is a very important event for a business traveler. For a normal passenger, in addition to these 35 minutes, pre- and post-flight processes are added. For example, if you arrive at the airport two hours before your flight, you leave earlier than home for that process, take baggage after flight, and so on. However, business-minded passengers who make this work permanent are not exposed to many of these processes. They check in online before arriving at the airport and they do not deal with the counters at all. So they come directly to the airport 30 minutes before the flight. So the total travel time is around 2 hours. For this reason, the airline is becoming the reason for preference in terms of time."

When the competitiveness of highways and airports are examined, bus operators have indicated that the decrease in prices intensifies competition. It is the common opinion of bus operators that the price benefit offered by airlines affects the highways and this is sometimes negatively reflected in the occupancy rates of the buses. Bus operators have stated that the existing competition with the railways is not yet intense as the existing YHT lines are limited to a certain extent and as a result, they consider the airlines as more serious competitors. However, in the following years, with the expansion of the YHT lines, it has been pointed out that the competition with the railways will intensify and that the railways will be more serious competitors for themselves in the future.

Tab. 1 Mutual Perceptions of Different Modes of Transport

	Airlines	Bus Companies	High Speed Train
Airlines	-	Low	Low
Bus Companies	High	-	High
High Speed Train	High	High	-

3.2 Findings Related To Monitoring Rival's Actions/Reactions

When looking at the highways, there is generally no special team and there is no systematic follow-up, with the exception to follow the competitive behavior of airlines in bus operations. More mid-level executives monitor price, flight times, and flight frequency through airlines' web sites. The reason for this is that the number of airline operators operating on this line is limited, that airlines do not have any transfers to other lines of bus operations, and that the actual follow-up takes place within themselves. However, some bus operators have Enterprise Communication Units to follow the competitive behavior of airlines. This unit tracks what kind of new services the airlines offer, their promotional and social activities, what lines they enter, their prices and frequencies.

In the interviews held on the airlines, one of the manager stated that they did not follow the competitive behavior of other modes of transportation operating on the Ankara-Istanbul line very much and that no team members were involved. The reason for this is that in the same way as the highways, the competition with the other airlines is kept in the foreground, and therefore, they give more importance to watching intra-sector competition from outside the sector.

State railways track airlines and highway transports at the current position, but there is no professional and systematic data flow. With the future regulations and innovations in the Ticket Sales and Reservation System, policies will be developed in a more systematic manner by tracking the competitive behavior of airlines and other competing modes.

3.3 Findings Related To Actions Taken by Firms

There are applications for bus operators to develop in-coach services aimed at enabling passengers to benefit from multimedia features such as TV, internet, games, movies by putting LCD screens behind each seat. Also, with 2 + 1 seat arrangement vehicles, you can make your travels more comfortable by offering wider seats and seat ranges than regular buses. In addition, the free shuttle service before and after the trip and the networks of these services in İstanbul and Ankara are playing an important role and influencing the demand of the passengers in the highways. Although bus companies generally do not go to separate due to the nature of the sector in the passenger profile, they observe what kind of passengers travel at intervals with the databases they obtain from the travel cards they provide to the passengers and they make the appropriate moves accordingly. Bus operations are especially important to students and they are primarily informed when there are any campaigns and offer price reductions to them in order to retain frequent travellers.

In addition, when bus operators' websites are reviewed, there is a possibility to obtain certain percentage discounts on transactions made on the Internet between selected dates. Also, bus companies make agreements with some special cards or online systems and provide discounts on business done through that channels [12].

Apart from this, the price reductions made by airlines can be considered as a move by the airline in bus operations, which has a negative effect on the demand for road traffic reduction. Low-cost policies by airlines allow this, but price-based moves on the road are not frequent due to the current fuel prices. According to the bus operators, their unit cost is more than airlines' unit cost and in terms of passenger numbers, an airplane can carry 3-4 times more passengers than a bus.

In terms of highways, the inflexible structures of airlines (limited number of planes, limited service) are ahead of their flexible moves. On the highways this is becoming more possible. Fleet structures owned by bus companies can be made more convenient with bus numbers reducing and increasing.

Airlines are aware of bus operators' actions such as cheaper and diversified prices, improved service quality, and diversification of products, but they think that they are ineffective and that the demand for airlines has not changed much. Even though the number of existing airline companies in the aviation sector is low, it is thought that the players are very strong, their capital is bigger than bus operations, and air transport is more systematic than road transport.

According to airlines, HSR will have a negative effect on the number of airline passengers in the first place. This effect will not be much in the first place again. It should not be forgotten that too many transit passengers are transported between Istanbul and Ankara. These passengers will continue to use the airline again. Train can be an alternative if it reaches to European side of Istanbul.

In response to this idea of the airlines, it is planned to build the Ankara-Istanbul Speed Rail Project on the railways in accordance with the speed of 350 km/h. With this move, the travel time between Ankara and Istanbul will drop to 2 hours and the total travel time will also threaten the airline. Customer Relations Management will be established along with the new system on the railways and the passengers will be able to be segmented. It will be possible to develop separate competition policies for each segment. In this way, airline passengers traveling for business, the biggest trump card in the market, will switch to railroads.

After Ankara-Istanbul route was opened, Electronic Passenger Ticket Sales System (EYBİS) is an e-ticket application aimed at enabling railway customers to make fast and trouble-free travel, to easily buy e-tickets and to make reservations. Passengers are allowed to board a direct train with a barcode without the physical ticket by this system. As a result of the development of passenger profile that uses information technologies more actively with the introduction of High Speed Trains and the spread of smartphones, state railways started the EYBİS (Electronic Passenger Ticket Processing System) project in the second half of 2010 in order to increase service quality and accessibility to services. The project undertaken by Havelsan in 2014. The system includes internet, agency, box office, hand terminal, mobile application, kiosk and call center sales channels. In addition, a "promotional module" was designed in the scope of the project, unlike other train ticket sales systems in the world [13].

When we look at the airlines, the prices offered are the biggest competitive moves that have forced bus operators into trouble. As a matter of fact, when the prices are examined on Ankara-Istanbul line, it is seen that the prices offered by airlines at some times are close to or even below the roads. This is one step ahead of the airline of choice and it is effective when people opt for airlines. In addition, since aviation culture has not yet been fully established within the borders of Turkey, airlines have been forced to work with passengers to love air travel and travel by air. In addition, frequency increases play an important role in distributing demand in the movements made by airlines such as making travel times more attractive, car rentals, hotel reservations, airport-city center transportation networks in remote locations.

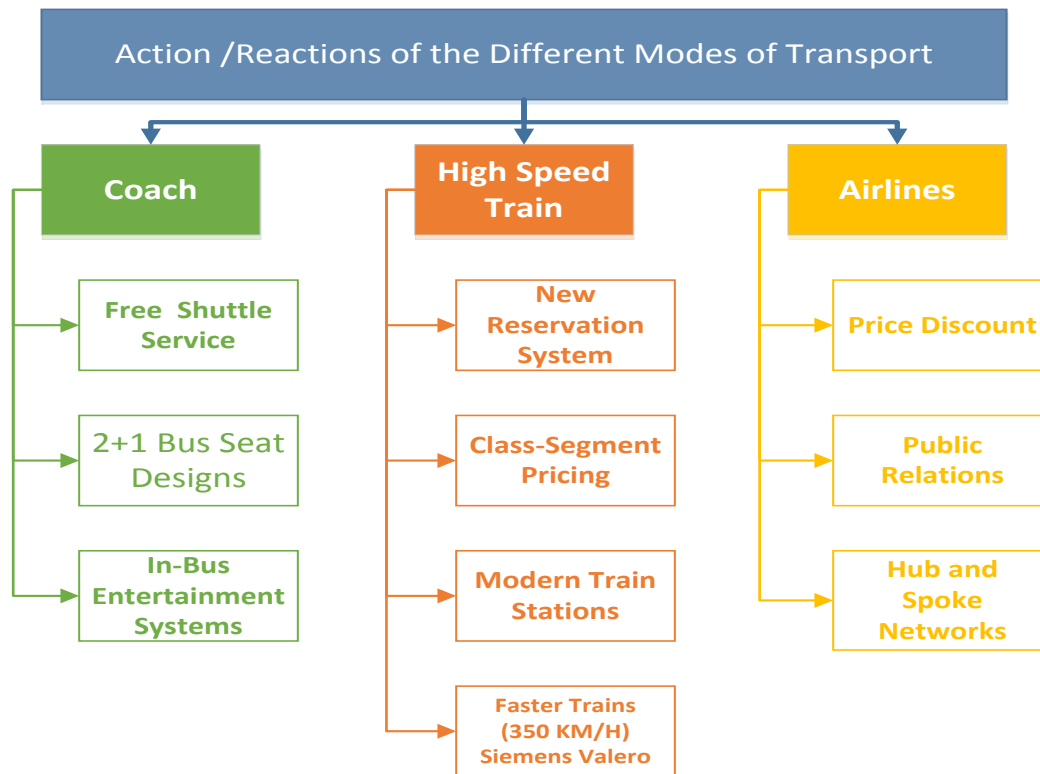


Fig.4 Actions and Reactions Taken By Firms

3.4 Findings Related To Government Regulations

The state is investing in all transport modes in the transport sector. In the past years, measures have been implemented for the reconstruction of the transport balance, which has been corrupted in favor of highways. In this context, in 2003, airline passenger transport was opened to private sector competition, tax advantages and fuel reductions were provided to businesses, airline passenger transportation costs were reduced, and airline transportation share increased by 8 times to 6%. In order to make the transportation of the rail passenger in the middle distance more advantageous, high-speed train investments have been emphasized and as of 2023 10,000 km HSR network has been planned. In this context, the share of railway transportation sector will increase from 1.5% to 10% in 2023. When official reports of the State railways are examined, it can be seen that, the rail passenger-km value is 3.7 billion km and it corresponds to 1.1% of all transport systems by the end of 2015 [14].

Regulations are also on the agenda where highways seem to force them to compete. There is a time limit for promotions made by bus operators, and within one year bus operators can only promote for four months. This is especially the case for low-cost airline companies that are relinquishing recreational highways. Fuel prices are the closest thing to bus operators. The fact that the fuel discounts provided to the airlines are not provided to them causes the conditions to be unequal according to them.

4 CONCLUSIONS

This study was conducted to analyse the competition on Ankara-Istanbul line. In the context of this study, interviews were held with Republic of Turkey State Railways, the bus operators and airlines, and their competitive awareness and their actions were analyzed. Moreover, the commercial viewpoints of companies towards each others were put forward.

While bus operators see both airlines and high-speed trains as serious competitors, airlines are convinced that high-speed train and bus operations will not be a serious threat to themselves due to their existing network systems and their operation.

It is necessary to make moves in order to get competitive advantage and to show some reactions to these moves. In order to do this, the situation among the sectors should be monitored. Railways follow the behavior of airlines and highways, but do not systematically do so. On the highways, the situation is the same except for one exception. The airlines have not yet settled in a follow-up culture outside of the industry. The reason why the follow-up is not serious yet is that the competitive perceptions of enterprises have not yet been fully opened out of their own sectors. Each mode of transport has a set of actions that can take advantage of themselves. High Speed Rail is just new, the railways are going to improve for the future. However, transition from conventional transport to high-speed train transport is the biggest obstacle to other transport modes. When we look at airlines, the price reductions offered are a tactical move that allows them to get significant shares from the market. Highways have realized that current fuel prices are a major disadvantage for them, and instead of competing with price reductions, they have tried to differentiate the product and tried to attract passengers.

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