



T.C.

YEDITEPE UNIVERSITY

INSTITUTE OF SOCIAL SCIENCES

INTERNATIONAL TRADE and LOGISTIC MANAGEMENT

**A RESEARCH ON THE PERCEPTION OF SERVICE QUALITY OF
INTERCITY PASSENGER TRANSPORT: THE EXAMPLE OF BLACK SEA
REGION**

By

Erdoğdu ALP

Submitted to Pre-Proposal Institute of Social Sciences

for Master Degree of

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PLAGIARISM

I hereby declare that all information in this document has been obtained and presented in accordance with academic rules and ethical conduct. I also declare that, as required by these rules and conduct, I have fully cited and referenced all material and results that are not original to this work.

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ÖZET

Karayolu yolcu taşımacılığı sektörü, Türkiye'de yolcu taşımacılığı alanında büyüyen bir sektör olarak öne çıkmaktadır. Yolcu taşımacılığı şirketleri, bu sektörde hayatta kalmak ve ilerlemek için müşterilerin beklentilerini hesaba katmak zorundadır. Bu nedenle müşterilerin algılanan ve beklenen hizmet kalitesinin ölçümü önem kazanmaktadır.

Bu çalışmada Karadeniz Bölgesi kapsamında şehirlerarası karayolu yolcu taşımacılığının hizmet kalitesine yönelik bir araştırma yapılmıştır. Karayolu yolcu taşımacılığında hizmet kalitesinin ölçümü hizmet sağlayıcılar olan firmalar açısından önemi ortaya konmakta ve müşterilerin algıladığı ve beklediği hizmet kalitesinin ölçümü Tokat ili özelinde icra edilmektedir.

Bu kapsamda ülkemizin önemli sektörleri arasında yer alan karayolu yolcu taşımacılığı sektörünün sunduğu hizmetlerin kalitesi hem ekonomik büyüklük hem de sağlanan istihdam açısından incelenmiştir. Bu amaçla, karayolu taşımacılığı literatürü araştırılmış ve SERVQUAL ölçeği kullanılarak literatüre göre Tokat'ta 400 kişiye anket yapılmış sorulmuştur. Daha sonra toplanan veriler SPSS 24.0 ile analiz edilmiştir. Test sonuçlarına göre yaş, aylık gelir ve seyahat amacı yolcuların karayolu taşımacılığı hizmet kalitesi algısını etkilemektedir. Buna ilave olarak Servis Kalitesi (SERVQUAL) ölçeği test edilmiş ve Türkiye'de karayolu yolcu taşımacılığı sektörü için güvenilir ve geçerli bulunmuştur.

Anahtar Kelimeler: Ulaştırma, Karayolu yolcu taşımacılığı, Hizmet kalitesi, Servqual.

ABSTRACT

Highway passenger transportation sector stands out as a growing passenger transport sector in Turkey. Transport companies have to take into account the expectations of customers in order to survive and advance in this sector. For this reason, the measurement of the perceived and expected service quality of the customers is becoming important.

In this study, a survey will be carried out on the service quality of highway intercity passenger transportation within the city of Tokat. It is explained why customer satisfaction and perception are very important for service providers, in highway passenger transportation which is one of the important sectors in our country. In this context, it has been understood that it is necessary to measure perceived and expected service quality of the customers. With this data, it will be possible to make improvements and improvements to the preferences of the customers.

In this study it is examined the quality of the services primarily offered by the highway passenger transport sector, which is among the important sectors of our country in terms of both the economic magnitude and the employment it provides. For this aim the highway transportation literature is surveyed and according to literature using SERVQUAL scale one questionnaire is implemented to 400 people in Tokat. Then the collected data is analyzed with SPSS 24.0. According to test results age, monthly income and the travel purpose effects the highway transportation service quality perception of the passengers. In addition to this Service Quality Scale (SERVQUAL) is tested and found reliable and valid for highway passenger transport sector in Turkey.

Key Words: Transportation, Highway Passenger Transport, Service quality, Servqual.

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1.INTRODUCTION

1.1. Background

The need for service sector has been continuously rising due to the developing technology, increasingly complex business life, increasing levels of prosperity and the willingness of people to devote more time to themselves. One of the most important services that the individual needs is transportation. Demand for transportation service; business, visiting or tourist purposes. Individuals generally purchase the need for transportation services from travel agencies that offer this service.

Human transport, more specifically, intercity passenger transport is also an important part of the transport sector. This sector is consist of transportation companies and terminal enterprises bus industry, recreational facilities, insurance, catering etc. with its complementary elements, and this sector stands out as a very large sector with these components. The transport sector is concerned with the development of existing settlement areas and other sectors (such as insurance, bonded warehousing, customs clearance, packaging), the evaluation of economic resources, the connection with other countries, the regulation of goods flows and the continuity of this process, economic and social inputs, because of the reasons such as the creation of employment is important in terms of economic growth.

The intercity road passenger transport is known to be an important market for Turkey. Because of the income structure of our country, especially the people, depending on the habits and available opportunities, the domestic passenger transportation system is very large. It is seen that competition has increased in this market due to the technological developments experienced in recent years, changing

economic and social conditions. In this competitive environment, it is very important for companies to consider the rights that consumers have in order to survive and to act in accordance with these criteria.

One of the important issues in this sector is the quality of the service provided. Many types of services, including intercity transportation services provided by bus companies, are implemented and distributed by the service provider at the beginning or part of service consumption due to the inability to separate production and consumption of service. Therefore, a service quality, the basic service brought to the market and the distribution of this service should meet customer expectations.

In this study, a survey is carried out on the service quality of highway intercity passenger transportation within the Black Sea Region. In the first part of this work, concepts of transport and passenger transport are explained. In the second part, the concept of quality and service quality are examined and, the importance of service quality in highway passenger transport is emphasized.

In this study it is examined the quality of the services primarily offered by the highway passenger transport sector, which is among the important sectors of our country in terms of both the economic magnitude and the employment it provides. For this aim, the highway transportation literature is surveyed and according to literature, using SERVQUAL scale one questionnaire is implemented to 400 people in Tokat. Then the collected data is analyzed with SPSS 24.0. According to test results age, monthly income and the travel purpose effects the highway transportation service quality perception of the passengers. In addition to this Service Quality Scale (SERVQUAL) is tested and found reliable and valid for highway passenger transport sector in Turkey.

2. TRANSPORTATION AND PASSENGER TRANSPORT

2.1. Definition of Transportation

One of the sectors that is most influential and influencing this change in our competitive world is the transportation sector. In parallel with the rapid growth of the industrial population, population increase and the spread of the settlement centers, transportation systems continue to improve in terms of comfort, speed and reliability.

Transportation is a word meaningfully conveying loads and passengers from one place to another. Transportation is also defined as the movement of a physical unit from space-time origin to space-time destination. Transportation is an individual activity, a social service and an industry. Transportation is a broad concept that affects the overall performance of an operator, constitutes an integral part of overall economic growth and development, and is defined as a complex compound of alternatives. For those competing in national and international markets, an inexpensive and efficient transport system contributes to greater competition, larger scale economies in production, and lower prices for products (Cerit, 2007).

Transportation system can be defined as "the set of all the relevant physical, social, economic and institutional components that are organized and their functions and mutual interactions are brought together in order to ensure that the transmission of people and goods from one place to another, in order to ensure in a specific and well-organized way. The transportation system consists of a combination of highway, sea, air and rail sub-systems, each with its own network, vehicle fleet and business facilities (Kaya, 2008).

Purpose of transportation is conveying of people and goods in the shortest time with cheaper and safer way. The main task of the state is to establish and coordinate transport systems that create transport capacity to meet the needs created by economic and social developments and that are in line with the interests of the country and society. Transportation systems and services are the basic elements of modern economies and social development (Cengiz, 2009: 225-247).

2.2. Passenger Transport

2.2.1. Significance of Passenger Transport

The transport sector is concerned with;

- Development of existing settlement areas and other sectors (such as insurance, bonded warehousing, customs clearance, packaging),
- Taking advantage of economic resources,
- Connection with other countries,
- Regulation of goods flows and
- Continuity of this process, economic and social inputs,

because of the reasons such as the creation of employment is important in terms of economic growth. Improvement of transportation possibilities, macroeconomic employment, investments and production level; micro-economically, it affects the operations of the enterprises in the sales and distribution phase positively (Çekerol & Nalçakan, 2011: 324).

Factors affecting transportation demand can be expressed as economic development, labor force - production - consumption increase, spatial spread of

economic activities, globalization, international relations and agreements, energy prices and tourism sector (KGM, 2007: 48).

It is of great importance to develop transport systems in harmony with the economic and social development of the country and complement each other. This development must also be regionally balanced. In this framework, it is very important to expand the interregional transport system that provides access to the hinterland markets (Henderson, 2000: 27).

Another important preoccupation of public transport is the reduction of the use of private vehicles by passengers. As a result, the opportunity to save money is provided through the use of public vehicles. On the other hand, fewer cars are left in traffic and less carbon dioxide emissions are left in the atmosphere. The fact that fewer vehicles are in traffic reduces the likelihood of accidents and increases the availability of safe transport (Law et al., 2017).

A large part of freight and passenger transport in our country takes place on highways. Road transport, which has a major role in the development of economic development and prosperity, is a service area that is closely related to all other sectors and affects these sectors either positively or negatively, as it is an economic activity in its own right. When we look at the distribution of domestic freight transports in relation to the transportation sectors in 2015, as shown in Figure 1., The share of highways in freight transport is 90% and the share of passenger transport is 89%. According to this, it is seen that transportation by road is receiving more requests than other transportation sectors (KGM, 2017).

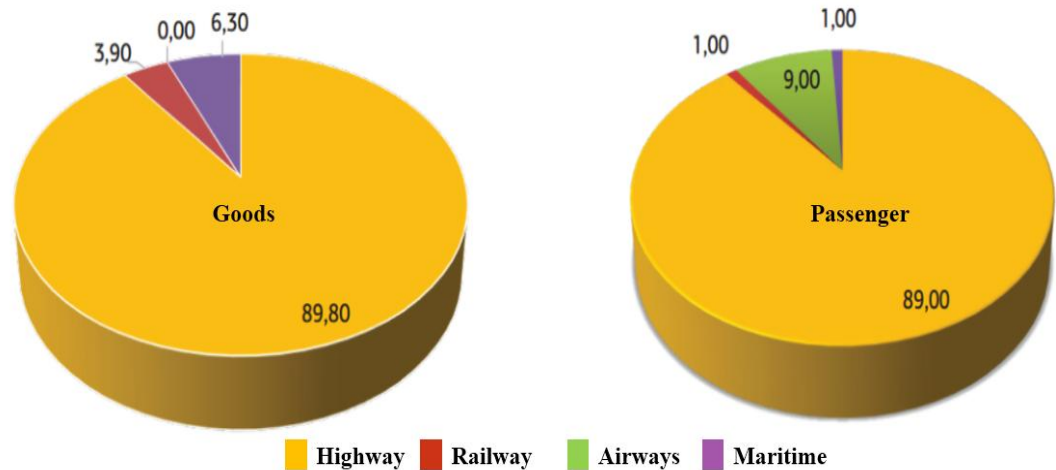


Figure 1. Domestic Passenger-Freight Carrying Ratios by Type of Transportation in Turkey – 2015

Source: KGM Strategic Plan 2017-2021.

Road construction investments have significant impacts on public, social, cultural, commercial, and economic and many other dimensions. The efficiency of construction investments ensures efficiency of other sectors. Benefits provided as a result of the development of roads and the increase of transportation can be listed as follows (UBAK, 2013).

- Increasing production and employment,
- Reduction of production cost,
- Increasing productivity in all sectors,
- The direct or indirect effects of road construction on the economy,
- The effects of land use and regional development,
- Meeting the demand for transportation for business and social purposes,
- Meeting of travel, health and tourism requests,
- Balanced distribution of national income over the country,
- Financial contributions to the national budget through imports tax.

2.2.2. Types of Passenger Transport

The transportation system comes from sub-systems such as road, rail, sea, air and pipelines, each of which has its own characteristics. The mentioned subsystems can provide autonomous services and also offer many kinds of (multi-modal, combined) transportation services as seen in Figure 2 (Deniz, 2016).

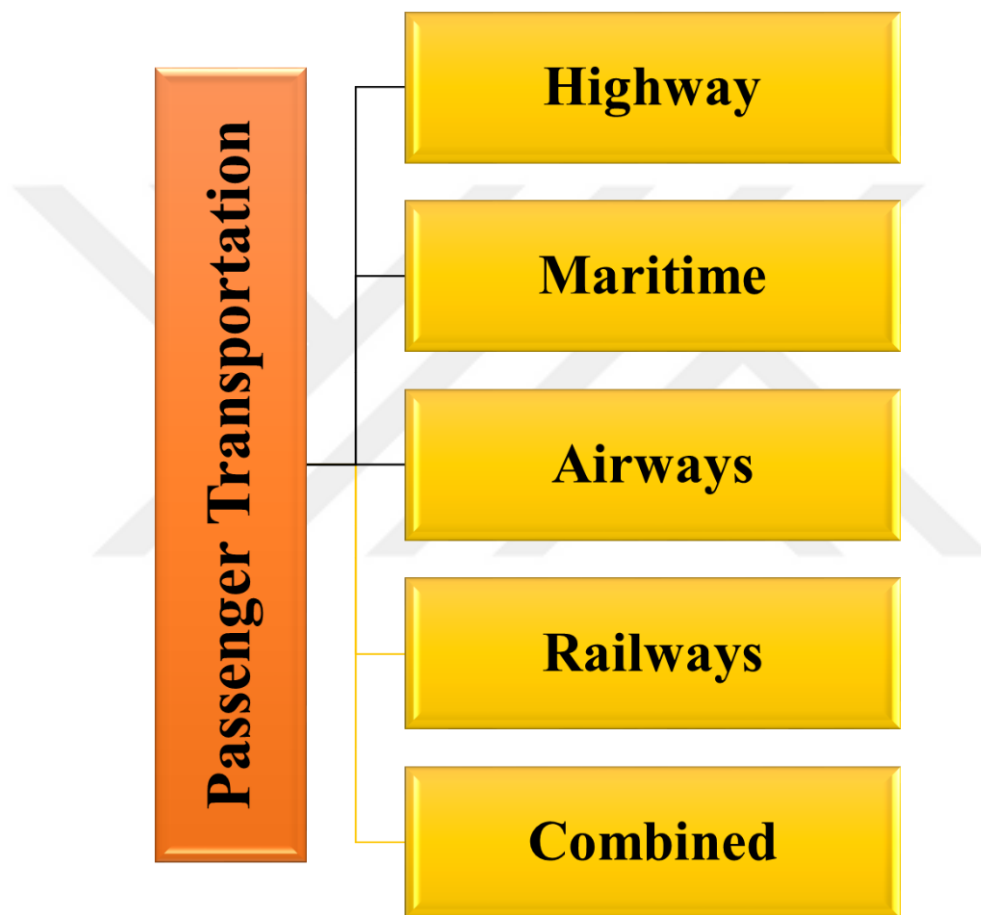


Figure 2. Types of Passenger Transportation

2.2.2.1. Highway Passenger Transport

Carrying passengers by means of buses, trolleys, trolleybuses, midibuses and minibuses to passengers on fixed routes, depending on the specific route is called passenger transportation. In addition, the operation of service, school vehicles and touristic sightseeing buses, as well as the transportation of passengers to terminals,

especially the airport, constitute the area of activity of road passenger transportation. (Karagülle, 2007).

Intercity passenger transport is conveyance of people between cities generally by highway, railway or airways. Intercity transport is defined as the carriage which starts from any point or settlement of any province and ends at any point or settlement of another province as defined in the Road Transport Law (TBMM, 2003).

Due to the advantage of lower investment costs compared to airlines and the superiority of other modes of transport at departure and arrival points, the arrival point and frequency of the passengers attract those who travel. Intercity road passenger transportation has become the most preferred mode of transportation for intercity passenger transportation, with the transportation policies of our country improving the roads, as well as the higher frequency of services to more points of destination (Karagülle, 2007).

2.2.2.2. Maritime Passenger Transport

Maritime transportation is a preferred transportation system especially for transporting large volumes of raw materials, semi-finished products and finished goods. In addition to cargo transportation, it is also used for passenger transportation. The fact that large quantities can be transported over long distances in large quantities when speed is not important, high reliability in spite of slowness, and relatively much cheaper than other modes of transportation, make up the advantages of maritime transport (TVB, 2001). In addition to this, the fact that the speed of sea transportation is low is due to the fact that the establishment of the transportation network depends on the natural conditions, the possible traffic congestion in the terminals can be listed

as disadvantages as the terminals - the waterways - the sufficiency status of the facilities and the channels restrict the flexibility of transportation (Kurt, 2010: 45).

It is maritime transportation with the lowest unit transportation cost within the mass transportation. For this reason, industrialized and coastal countries prefer maritime transportation in transit. Approximately 80 percent of the world's trade is done by sea, and 99 percent of the world's trade is on a ton-mile basis. Maritime transport has economic advantages over other transport types. For instance, it is 3.5 times less than the railway and 7 times less than the roadway. (Akten, 1995).

Maritime passenger transportation usually takes place in the form of short-distance transport for intercity journey, domestic transportation in inland waters, and touristic cruise journeys.

2.2.2.3. Airways Transport

Mass transport, high speed, safety, comfort and the ability to establish a wide range of transportation networks under certain conditions affect the demand for air transportation. The more convenient way of air transport is an effective system for passenger transport over long distances (Saatçioğlu 2006: 47)

Constantly changing people 's demands for safety, comfort and speed depend on technology, increasing investment, competition, diversification and development in transportation ways. Air transport is at the top of the transportation systems that have the most development in this sector. According to other types of transportation, airway transportation, which has important advantages, is also becoming a critical type of transportation in terms of economic, political and environmental factors (Bakırcı, 2012: 342).

Air transportation has started and developed mainly for travel purposes. The most important reason for the rapid increase observed in air traffic is the time advantage of this transport type. In the developing world, time is the most valuable economic value. Therefore, the time advantage of jet aircraft is the main reason for the growth of this sector. Yet another dimension is the cost. Traveling with other means of transportation includes other costs for food and beverage. These costs also have economic factors when choosing the means of the transport. Airways has the advantage in terms of these costs (Öner 1997: 43-44)

Airway transportation is the newest and least utilized within transportation systems. While air transport was used only for military purposes before World War I, it began to be used for civil aviation along with the beginning of the commercial aviation operations after the war. The first commercial airline flights began in France in 1919, then in 1926 in the United States. Regular flights started after World War II. Today, airway transportation has become a system that is developing increasingly widespread among transportation systems in parallel with technological development, production and consumption in the globalization process, and internationalization. The long distance between the terminals has a superior speed feature that allows short-term overtaking, which is an effective system for transporting passengers who want to move long distances quickly, comfortably and safely, and for the transport of small packaged commercial goods. This system is used where the time is the priority in the transport choice, and the cost is in the second plan. In addition, the limitations brought by transportation by air and geographical conditions are reduced to a minimum. The disadvantages of the system include;

- Low carrying capacity of air transport vehicles,

- High cost of the vehicles,
- High cost of the system relative to other systems,
- Necessity of proper runways for the landing and take-off of air vehicles.

However, the current disadvantages are diminishing in parallel with technological developments (Kurt, 2010: 44).

2.2.2.4. Railway Transport

The advantages of this system are that the railway transportation has mass transport in both long and short distances, the friction between the iron wheel and the railway is low, energy consumption per unit transportation is lower than other systems, there is no traffic problem in railway transportation and safe and comfortable travel is available. . However, the disadvantages of the system are the disadvantages of the system due to the high infrastructure construction costs, the impossibility of gradual investment, the availability of the system only if the land is located at the specified slopes, and the various constraints stemming from geographical obstacles to establishing the rail transport network (Kurt, 2010: 46).

The most important innovation and benefit of the railway transport is time variability, as the duration of the journey is significantly shortened and production-distribution activities are facilitated in terms of planning with reliable and consistent time schedules (Yeldan et al., 2012: 146). Railway transport investments and accessibility facilitate access to wider markets for companies using services sector development and transport, and this expansion in the markets also stimulate specialization, such as increasing trade and production levels by increasing interaction

between economic units and regions with different characteristics (Yeldan et al., 2012 : 146).

Railway operations in Turkey have traditionally been a monopoly by the public sector and are continuously subsidized by the public due to operational losses. Due to the absence of competitive environment, the sector can not reach the desired efficient business structure and the government is forced to leave the public resources to be sustainable from the sustainability to keep the sector alive and the regulations to open the sector to the sector and the private enterprises to enter the sector (Özcan, 2006:1058).

2.2.2.5. Combined Passenger Transport

Combined transport is a type of transport made using one and the same transport unit or multiple transport types. The United Nations Economic Commission for Europe (UNECE) describes the same transport vessel as the transportations where more than one transport type is used at the 1991 AGTC Convention (AGTC, 1991).

Combined transport is defined as integrated passenger transport (Integrated Transport) services in the European Commission's passenger transport report. It is emphasized that several different passenger handling methods are used in the definition so as to provide the most advantage for the benefit of the passengers (EC, 2013).

Combined transportation can be considered as a limited form of intermodal transport. The main route is advantageous for those with a rail or sea route and more than 300 km. It is the mode between the modes where most of the ship is made by rail or sea, and the starting and / or ending foot is made by using as little road as possible.

There are different perceptions about the definition in the living applications, which are needed in the used resources. It is also used in the terms of "combined transportation", "multiple or multimodal transport" and is also referred to as transportation of two or more transportation modes (MEB, 2009). This system, which is usually used for freight transport, is also used for passenger transport. For example, one part of the journey can be done by air and the other part which is short by air can be done by road or any other types of passenger transport.

2.2.3. Sector And Competition In Highway Passenger Transport

In this part of the study highway passenger sector will be evaluated and the competition in the market will be examined in detail.

2.2.3.1. Sector Of Highway Passenger Transport

The Turkish highway passenger transport sector consists mainly of the General Directorate of Land Transfers (KUGM), urban, intercity and international passenger transport operators, bus station operators and employees (Karagülle, 2007).

Factors affecting transportation demand; economic development can be expressed as labor force - production - consumption increase, spatial spread of economic activities, globalization, international relations and agreements, energy prices and tourism sector (KGM, 2007: 48).

The share of the service sector in the economy is continuously increasing in the world and in our country. As a result of these increases, many service sectors have taken place in the economy (Koçoğlu and Aksoy, 2012: 2). One of the important services that people can not give up is transportation services. Transportation services is one of the sectors with the greatest supply and demand intensity today. Increasing

population and high urbanization rate have caused people to go out of the house only by means of transportation. The development of urbanization and the resulting increase in population require that people travel from their homes to remote places, businesses and schools only by means of transport. The inability of everyone to provide their means of transport made the means of public transport a necessity (Çatı, 2003: 121). The rapid development of road transport in our country has led to significant improvements in the quality of service offered in proportion to the competition arising from the increase in number of companies that make intercity passenger transport (Duman et al., 2007: 152).

One of the factors that contribute to the development of road passenger transport in Turkey in recent years is the increase in road construction. When Figure 2.3 is examined, it is observed that the total length of road has increased about 4 times in the last 13 years. This positively contributes to the transport of passengers with road transportation (UDBH, 2016).

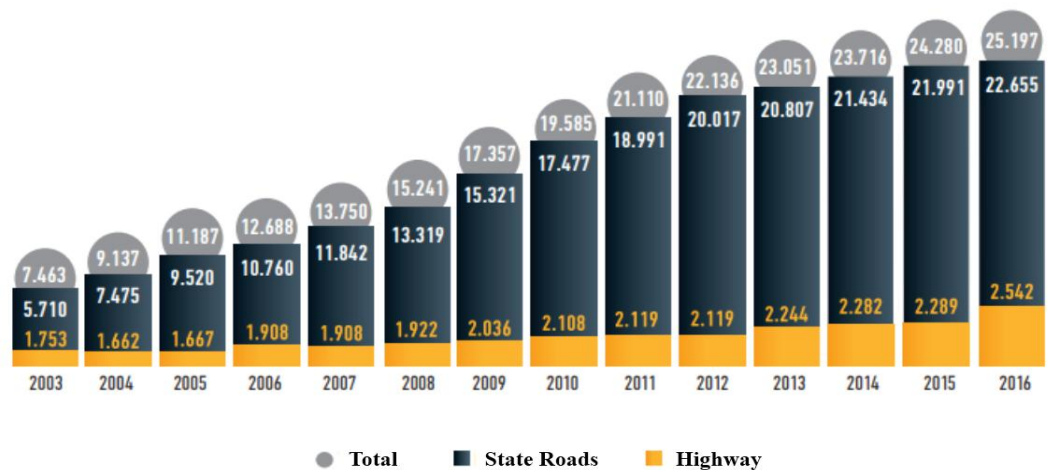


Figure 3. Changes by Years of road length in Turkey

Source: KGM.

2.2.3.2. Historical Development Of Highway Passenger Transport

The main vehicles used for intercity passenger transport are buses or coaches in other words. The root of the term “bus” comes from the words "Omnibus, autobus, multibus" in Latin language. The word Omnibus means "for everyone." It is understood from this that the concept of public transportation is expressed at the origin of this word (Soloviev, 2015).

The first bus operation in the world was founded by a French entrepreneur. This entrepreneur carried his customers to the baths where he operated. Later, the idea of transporting by bus was moved to other French, British and European cities. Vehicles used in these transport companies, which were established in 1824 and 1825, were originally drawn with animals. In the 19th century, with the influence of the industrial revolution, motor vehicles were started to be used in public transport. With the development of technology and transportation infrastructure over time, these businesses have started intercity passenger transportation (Bus and Coach Operators, 2014).

In Turkey between the years 1923-1950, railways constructed during the years of the fall of the Ottoman Empire period, which connected inland and coastal areas in the country, was used as the most important tool. It is observed that the transportation policy created in this period is mainly railway and highways are used as an auxiliary means of transportation to the railway. The reasons for this are insufficient number of motor vehicles in the country, vehicles used due to animal power on the roads, lack of technical knowledge, financial troubles experienced in the country (Çetin et al., 2011, 3).

It is seen that before the Republican period, when a large part of the railways were located on the west of Ankara-Konya line. On the other hand, after the Republican period, the investments made were shifted mostly to the east. It was decided that these investments were made with the decisions taken in the first iron railway congress in 1925 to be established primarily in areas close to natural resources, production centers and market areas, and it was aimed to contribute to the economy by means of these decisions. Despite all the developments that took place on the railroad, no progress has been made on the highway. The Republic of Turkey has taken over a road network of 18,000 km from the Ottoman Empire. The developments in the railways continued until 1940 and stagnated between 1940-1950. This recession has a great impact on the rapid development of World War II and the automotive industry (MEGEP, 2011: 7). The II. World War had some negative effects in terms of road construction. These include the recruitment of citizens, the long-term military service of military personnel, the use of transportation means on military grounds, and limited financial resources. Nonetheless, even if the country falls into difficulty, road construction and maintenance work has been continued to ensure military success and to maintain national defense effectively (Çetin et al. 2011: 2).

On 1 March 1950, the period that began with the establishment of the Highways General Directorate of Turkey, has been given a great importance and speed to the road. After the Second World War, the approaches adopted by the Truman doctrine, called the Marshall Plan in the 1950s, supported the construction of highways. It has been seen that in the five-year development plans that have been implemented in our country since 1963, road investments have continuously increased in general investments. Because of these policies, the share of passenger transport in highways has increased to 90% (Duman et al., 2007).

The first bus company established in Turkey which was founded in 1926, is Kamil Koc bus company. In 1926, the founder of the firm, Kamil Koç, made the first human transport between Bursa and Karaköy by covering the top of the Fiat brand car, which he bought after obtaining his driver's license, with tents and wood. After the Second World War, Kamil Koç continued to grow this company up to day by enlarging the company in the framework of Marshall Plan (Kayacan, 2015).

Entering the transportation sector of Hacı Mehmet Bahattin Ulusoy, the founder of Ulusoy Tourism, one of the oldest bus companies in the history of the Republic, has been incidental. Due to heavy rainfall in 1925, there was a problem of transportation between the two towns after the flood of the Solaklı Stream on the border of Of and Çaykara. Having an entrepreneurial personality, Hacı Mehmet Bahattin Ulusoy manufactured a simple raft and restored the transportation between the two towns. Ulusoy then bought the first vehicle in 1928 and started with the name of Lider, Ulusoy. Also Çayırağası and Varan companies established in the early 1940s and some of Turkey's first road haulage firms. As human demands and needs are constantly changing and unlimited, bus companies need to continuously develop and provide the best service in terms of speed and comfort. Today Turkey has close to 500 bus companies serving the ongoing activities in passenger transportation for years (Karak et al., 2016).

2.2.3.3. Competition In Highway Passenger Transport

There are a number of variables affecting the efforts of bus companies to realize service production. The most important of these variables are competition, cost, organization, technology, and trained occupations (Tokat and Kara, 1999: 315-332).

It is understood from this that competition in the sector is also an important element. However, it can not be said that the competitive environment created in the bus companies has had such an effect that the sector will be structured. Because in the competitive environment, the behavior of businesses for the sector is important. This is indicated by the degree to which individual bus companies compete with each other. Although the cost of moving from the same place to the same destination does not change much among companies, the service they offer the frequency of the flights, the difference in the comfort ticket prices of the buses (Alnıaçık and Özbek, 2009).

Highways, which have the largest share of passenger and freight transport over the years, have recently started to lose weight due to the additional capacity that private airlines bring to the aviation sector and cheaper transportation facilities (Karagülle, 2007).

Today, modern marketing strategies are at the forefront, businesses that understand and implement the modern marketing approach will continue to compete successfully. Modern marketing concept gives priority to "customer satisfaction". It is stated that the following activities should be performed in order for customer satisfaction to be realized in order to provide competition superiority (Çoroğlu, 2003):

- To follow the purchasing behaviors of the consumers closely,
- To develop services in the direction of consumer expectations,
- Not only the sales of the products that the consumers demand, but also the development of new products,
- To develop an effective marketing communication activity,
- To create an active marketing mix.

2.2.3.4. Differentiation in Road Passenger Transport and Occupation in the Market

It is remarkable that the share of freight and passenger transport of road traffic in our country is very large. In the European Union countries, while the share of freight transport is 45% and the share of passenger transport is 79%, the share of freight transport in our country is 90% and the share of passenger transport is around 90%. Considering that our highways and transportation standards are far below and inadequate in the EU standards, the issue and the problem are more clearly understood (Uzunkaya, 2009).

Table 1
Types of Transportation in Turkey Between Passenger and Cargo Carried Shares (%) (2015)

Means of Transport	Passenger Share (%)	Cargo Share (%)
Highway	89.8	89.5
Railway	1.1	4.6
Maritime	0.6	5.4
Airway	8.5	0.4
Pipeline	-	11.5

Source: Ulaştırma Bakanlığı, 2015:11.

Percentage share of the amount of transported passengers and freight transport types in Turkey are given in Table 2.1 by the year 2015. Accordingly, it is observed that the use of highways in both passenger and freight transport has come to the fore.

In this context, it is seen that approximately 90% of the passengers and cargo in our country are transported by road transport (Deniz, 2016).

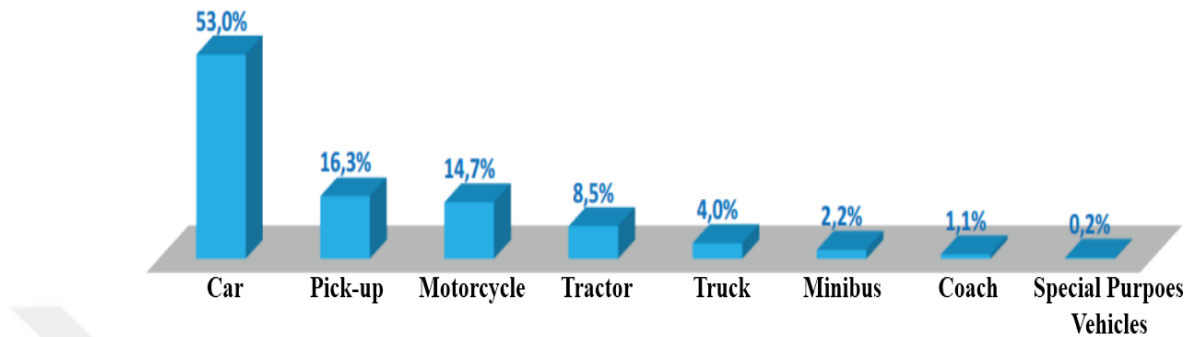


Figure 4. Distribution of Road Motor Vehicles Registered in Traffic (2015)

Source: TÜİK.

According to the Turkey Statistical Institute 2015 data, there are about 20 million registered motor vehicles. As seen in Figure 2.4, the car is the most important vehicle type with 53% of the total number of vehicles registered in the Trafficking. The number of automobiles in our country is still 134 for every 1000 persons, while this figure in developed countries is around 500 as seen in Figure 2.5. At this point it is concluded that Turkey is at lower levels than European countries in terms of car ownership. It is anticipated that the car's ownership is far below the saturation point and that this rate will reach higher values in the coming years. It is therefore essential that the geometrical and physical standards of the road network should be upgraded to the qualities required by current and future traffic. The development of highways in harmony with other modes of transport; transportation costs and the damage caused by heavy vehicles on the road surface will be reduced and the level of service and the impact of the sector on economic development will increase (KGM, 2017).

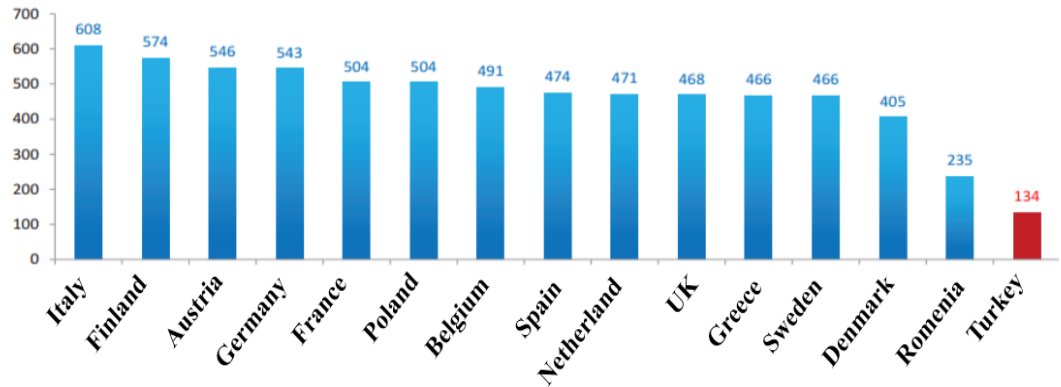


Figure5. Numbers of Cars for Every 1000 Persons in Some European Countries

Source: TÜİK, 2015.

It is understood that the number of motor vehicles in our country increases continuously according to the years when Table 2.2 is examined. Among these vehicles, the number of buses, which is the main element of mass transportation, is also increasing. It is seen that the increase in personal vehicles is twofold in 10 years, while the rate of increase in bus numbers is lower. However, it can be said that this increase can be very high when considering the carrying capacity of buses.

Table 2
Number of Motorized Land Vehicles by Years

Year	Car	Minibus	Coach	Van	Truck	Motorcycle	Others	Total
2005	5.772.745	338.539	163.390	1.475.057	676.929	1.441.066	1.278.100	11.145.826
2006	6.140.992	357.523	175.949	1.695.624	709.535	1.822.831	1.324.939	12.227.393
2007	6.472.156	372.601	189.128	1.890.459	729.202	2.003.492	1.365.907	13.022.945
2008	6.796.629	383.548	199.934	2.066.007	744.217	2.181.383	1.393.677	13.765.395
2009	7.093.964	384.053	201.033	2.204.951	727.302	2.303.261	1.402.136	14.316.700
2010	7.544.871	386.973	208.510	2.399.038	726.359	2.389.488	1.440.364	15.095.603
2011	8.113.111	389.435	219.906	2.611.104	728.458	2.527.190	1.500.324	16.089.528
2012	8.648.875	396.119	235.949	2.794.606	751.650	2.657.722	1.548.492	17.033.413
2013	9.283.923	421.848	219.885	2.933.050	755.950	2.722.826	1.601.965	17.939.447

2014	9.857.915	427.264	211.200	3.062.479	773.728	2.828.466	1.667.669	18.828.721
2015	10.589.337	449.213	217.056	3.255.299	804.319	2.938.364	1.740.884	19.994.472
2016	11.317.998	463.933	220.361	3.442.483	825.334	3.003.733	1.816.582	21.090.424

Source:TÜİK.



3. SERVICE QUALITY IN HIGHWAY PASSENGER TRANSPORTATION SECTOR

3.1. Definition of Service

Humans encounter the services in various forms at every stage of their lives and live in harmony. There is talk of service in every matter directly or indirectly related to people. As such, service is seen as a very broad concept. For this reason, many definitions have been made on this concept. Some of these are as follows:

According to Grönroos, service, which has a very abstract structure, is formed between the physical resources of the customer, the service person and the service provider and is presented as a solution to customer problems (Gidhagen, 1998: 3).

Service, according to Kuriloff, which is brought to the market in order to response consumer needs (Devebakan and Aksaray, 2003: 39).

According to Kotler, service, which one side presents to the other, is basically untouched and does not result in the ownership of anything, apart from the products (Kotler, 2001).

The reason for the existence of so many different definitions of the term of service arises from the development of definitions according to the particular characteristics of services (Ghobadian, 1994: 45) and the approach that every researcher is under the influence of science. For example; economists define service by classifying or listing it; marketing services; they are defined according to their basic characteristics such as immunity, lack of strength, deprivation, variability and concurrency (Uygur, 1998: 9).

3.1.1. Characteristics of Service

As service is included among business elements, service characteristics and quality are taken up by business organization and techniques and applications are developed to measure service quality. There are many studies in the literature on service characteristics and various models have been developed to classify these properties. The most fundamental characteristic that distinguishes service from concrete products is being abstract, not a solid thing. Producer is directly transferred to consumer and can not be stored.

The abstinence of the service means that it does not have any property when the service is consumed, meaning that the person receiving the service does not own the property (Kotler, 2001). They are consumed and non-physical products at the time and place where the service is produced. For this reason, services carry synchronism. Physical products have a useful life but do not survive until the service is available. The service is non-stocked and non-repeatable. If we take care of an accommodation service, we can say that the service offered is an abstract activity, an action taken only for a certain period of time to meet needs. For this reason, the service we purchase is an activity consumed within the time it is produced. In addition, the customer / buyer and the person or organization producing the service participate together in the production process of the service. In general, it is possible to rank service characteristics as follows:

- The service is consumed when it is produced. While the production of a good is not seen by the buyer, the people who produce the customer and the service are in the process of interaction.

- A product has a certain life span but the service can not be stocked or reused after it is produced. For this reason, the life of the service comes to an end within the period of production.
- The service has no physical size, so make it robbery.
- It is an activity where human labor is heavily used. For this reason, the knowledge, experience and performance of service providers are directly related to the quality of service.
- The quality of the interaction between the parties that produce and consume the service is enhanced by healthy communication. For this reason, the service provider plays a major role in the success of the communication service that will attract buyers.
- The human factor is important in service activities. However, the error rate is high in activities based on human power. It is easy to identify errors in the production of goods, but it is a separate effort to recognize errors in service production. It is possible to test the durability of a commodity, but it is impossible to fully test the service quality. Physical conditions that are thought to affect service quality can be tested.
- It is part of the consumer service process. When a consumer does not see the production of a commodity, it is in the role of participant in the service production process and therefore has an effect on the service. The service production process should not be considered separately from the consumer.
- Services are unstable because they can not be stocked and reused.

3.1.2. Service Classes

Nowadays, the importance of service areas depending on economic and social developments necessitates the classification of services sector. The most accepted classification made according to different criteria is the classification of the World Trade Organization within the scope of General Agreement on Trade in Services (GATS). In this classification, 12 service sub-sectors mentioned below are mentioned (Özsağır and Akın, 2012).

- Professional services,
- Communication services,
- Contracting and related engineering services,
- Distribution services,
- Educational services,
- Environmental services,
- Financial services,
- Health and social services,
- Tourism and travel related services,
- Entertainment, culture and sports services,
- Transportation services,
- Other services not included elsewhere.

3.1.3. The Significance of Service Sector

The service sector is the industry area that makes use of the space, time and form that make changes to the benefits of services directly to themselves or to their beneficiaries. Services are produced by producers acting for beneficiaries of services,

by providing the necessary services at the point where beneficiaries of the services are available, and by interacting with beneficiaries and providers of these services (Aslan, 1998).

Since the second half of the 20th century, the service sector has been developing and has left behind two main sectors such as industry and agriculture. For these reasons, the importance of the service sector has increased steadily in economic development. Moreover, the fact that prosperity and development in the country is a sign that the proliferation and differentiation of people's needs in parallel with the technology creates different kinds of services and increases the weight of the people in employment shows clearly the importance of this sector (Özsağır & Akın, 2012).

In terms of world economy, there are various reasons for the service sector to grow and develop at this high level and increase its importance. Some of these reasons are;

- The increase in people's income and leisure time,
- The increased participation of women in the workforce,
- The emergence of complex and new products,
- The shortage of resources and more attention to ecology,
- The change in expectation of the human being.

These reasons lead to differences in the characteristics of enterprises operating in the service sector. One of the most important features of this industry is the limited ability to measure quantity and quality. The quality of service can only be measured by controlling when it is served to the consumer. However, this method may not be the right solution because the services are subjective and satisfactory to the customers.

Another important feature is the difficulty of making cost calculations and recognizing the target market. The market for a service comes from a number of requests with similar qualities and assumes that the purchased services will satisfy the consumer's desires. For this reason, it is necessary to explain the qualities of the services that will be presented in the definition of service markets (Özsağır & Akın, 2012).

3.2. Concept of Service Quality

The service quality can be explained as the result of comparing the performance of the service with the expectations of the customers before taking the service (Saat, 1995: 28).

Service quality is the ability of customers to provide or exceed customer expectations and the quality that the customer perceives in service quality is important. Therefore, the service quality can be evaluated as the level of performance perceived by the customers or the satisfaction level of the customers of the services. In service quality evaluation, the actual service performance is considered. In the measurement of this performance, the standards that are usually brought by competition are used and the price is balanced to create value (Öztürk, 1996: 66-67).

Quality control methods and techniques, which are appropriate for the structure and characteristics of production enterprises as well as daily production, are now widely used by service enterprises. However, it is not right to think of quality management as a new idea in terms of service operations. In 1940, quality control techniques applied by specialist service providers such as Deming, Rosander, Ballowe Jones and Halbert were applied by other service providers during the following years. However, the practices of quality management by the managers in the service

enterprises have not been accepted as widely as they are in the production sector. The main reason for this is; that the techniques and methods are more compatible with the structure and characteristics of the production enterprises and therefore the productivity and efficiency can not be achieved at the desired level in the service enterprises (Gözlü, 1994: 31)

3.2.1. Quality

The term of quality comes from the desire to ensure that people and people's systems work without error and to achieve excellence with these applications. From the origin of the quality it can be seen that it derives from the Latin word "qualitas" which means degree, perfection level or characteristic (Bayrak, 2007: 22).

Quality is a concept with different definitions. According to Juran, quality is the suitability of use, while Deming defines quality as the targeting of current and future customer requirements. There are definitions that identify qualities as zero error, diversity, suitability and excellence. In today's definition of quality, customer's point of view is gaining importance and quality is regarded as meeting or exceeding customer's ever changing demands and requirements (Hurley, 1994: 43).

Among the different definitions of quality, there are five basic approaches: superiority-oriented, product-oriented, user-oriented, value-oriented and production-oriented (Garvin, 1984: 25-29). A study by Reeves and Bednar (1994: 63) focuses on the strengths and weaknesses of different quality definitions in terms of measurement, generalization, managerial benefit and customer compliance. It is pointed out that there is no best quality definition for every situation and that managers and researchers should consider the strengths and weaknesses of each definition when adapting the quality definition to their work.

The American Society for Quality Control (ASQC) generally defines quality as "the whole of qualities and quantities that have the ability to satisfy the expressed or implied needs of a good or service" (Kotler and Keller, 2006: 146).

The difficulties in describing the quality of the goods and services produced have been revealed by renowned quality specialist Walter A. Shewhart. The difficulty in defining quality according to Shewhart is that the future needs of the user are made measurable characteristics for the design and production of a product that will satisfy the buyer at a price acceptable to pay. This is not an easy task, and one feels that people are quite successful in this work, and that the needs of the client have changed, that the competitors have emerged, that the new materials to be used are better, some are worse than others, it is cheaper than some of the older ones, and some of them are more expensive (Deming, 1998: 138).

The first studies on quality are directed towards the identification of physical products; it is seen that the researchers working on the quality approach to the concept of quality from different angles. In the most general sense of quality; meeting customer requirements, improving applications and capabilities, reducing costs, etc., as a strategic management tool used for the purposes. (Akbaba and Kilinc, 2001: 2).

3.2.1.1. Dimensions of Quality

Each dimension of quality is independent and distinct. A dimension of quality in a service or product can be low. This assessment varies from product to product and service to service. Garvin, who made one of the most comprehensive studies of qualitative analysis from various angles, examines the quality perceived by the consumer in eight dimensions, as follows (Garvin, 1998):

- i. **Performance:** Performance that means the basic functional properties of a product, such as speed, comfort for a car; color, sound, image etc. for a television. features. In service enterprises, performance can be measured by service speed and low standby time.
- ii. **Features:** "Feature" can be described as a concept complementing the basic function of a product. For this dimension of quality, the airline offers free refreshments on flights; for example, the cotton or woolen program of the washing machine.
- iii. **Reliability:** It is the criterion that the product fulfills all expected functions within its lifetime. A measurable property, reliability, average initial deterioration time, period between deterioration periods, and so on. can.
- iv. **Eligibility:** Eligibility is the degree to which the design and operating characteristics of the product conform to predetermined standards. Conformity gives the consumer or user an idea of the technical dimension of the qualification.
- v. **Durability:** The length of the life of a product or service. Generally, buyers want product stability to be tested in certain conditions and approved in writing. Technological durability refers to the period of use until a product undergoes deformation.
- vi. **Service Capability:** The sixth dimension of quality is expressed as the ability to serve, namely speed, quickness, courtesy, competence, driver's license and ease of repair.
- vii. **Aesthetics:** Aesthetics are products that appeal to the consumer's five senses. In other words, the product can provide the user with an aesthetic that matches the expectations. Features such as color, packaging, shape do not directly

affect the performance of the product, but can be considered as aesthetic features for the consumer liking.

- viii. **Perceived Quality:** Consumers do not always have detailed knowledge of all the features of the product and in such cases an indirect set of criteria plays an important role in making decisions. Factors such as product image and brand image created in advertising activities are very important for consumers to perceive product quality as positive or negative.

3.2.1.2. Total Quality Management

Total quality approach and Total Quality Management (TQM) is at the forefront of management concepts and practices that started in 1980s and gained widespread popularity in the 1990s (Bumin and Erkutlu, 2002: 83). Total quality management understanding covers control, assurance, development, execution and all other quality activities (Dik, 2003: 22).

Deming, Juran, Ishikawa, Taguchi, Crosby and Feigenbaum are considered to be the pioneers of total quality management (Rao et al., 1996: 37) from thought masters who guided the quality movement in the 1950s and 1960s. Many of today's total quality management concept were improved and taught US how to use statistical methods to improve the quality of military supplies during the Second World War. TQM was based on the work of Dr. W. Edwards Deming, an American who guides the improvement of the postwar Japanese industry. (Kumar, 2006: 19).

Today, total quality management is seen as the only way to achieve quality excellence and increase competitive power (Yenersoy, 1997: 13). In dynamic markets, it is possible to survive against the destructive competition but to adopt this understanding (Demir and Dogan, 1999: 83).

3.2.2. Service Quality

Quality is seen as a strategic tool in the production of goods and services that can satisfy customers' needs, increasing the operational efficiency of the business and reducing costs through an effective cost control process. The quality concept is more difficult to explain in the service sector than in other sectors. Quality in service sector is accepted as a factor that is directly proportional to customer satisfaction and customer satisfaction which can be measured and evaluated (Murat ve Çelik, 2007).

In addition to the increase in the share of the service sector within the country's economies, the competition intensifying together with the number of enterprises offering services has forced firms to adopt the quality concept in the services they offer. It has been difficult to apply the concept of quality, which is easy to apply in concrete products, to abstract products such as services. This difficulty stems from the fact that service is abstract, that production and consumption are made simultaneously, and service can not be separated from production. Due to these characteristics of the service, service enterprises use it as a strategic tool in transforming the quality of the customers into a concrete service definition (Ardıç and Sadaklıoğlu, 2009).

3.2.2.1. Definition and Characteristics of Service Quality

Parasuraman, Zeithaml and Berry (1988) define the service quality in terms of the ability of the service provider to meet or exceed customer expectations. The authors described the quality of service as the difference between customer expectations and perceptions. Ghobadian, Speller and Jones (1994) similarly describe service quality as the level of satisfaction of customer expectations of services offered. Therefore, the perceived quality is good or bad, which is related to the ability

of the offered service to meet customer expectations. Here, the notion of expectation is a reflection of the desires and wishes of customers or of what customers should offer rather than what a service provider will offer (Parasuraman, Zeithaml and Berry 1988).

Service quality is defined by the comparison of customer's beliefs / expectations about what businesses should offer, with customer's perception of business performance. Perceived service quality is defined as the degree and direction of the difference between consumers' perceptions and expectations (Zeithaml et al., 1990, Parasuraman et al., 1988, Gronroos, 1984).

If the service that customer expects is higher than the service they perceive, the perceived service quality will not be satisfactory. If the expected service is equal to the perceived service, the perceived service quality will be satisfactory. If the perceived service is high enough, the perceived quality will be ideal (Parasuraman et al., 1985). As the service quality increases, the tendency of customers to use services again will increase (Asubonteng et al., 1996).

3.2.2.2. Dimensions of Service Quality

In the 1980s, research on service quality became more intensive and different theoretical approaches to service quality dimensions were developed (Uyguç, 1998: 36). The service quality dimensions developed by many academics and researchers will provide a better understanding of service quality. The service quality dimensions are as shown in Table 3.1.

Table 3
Dimensions of the Service quality

Authors	Proposed Dimensions
SASSER, OLSEN, WYCKOF (1978)	1. The quality of materials used in production 2. The physical equipment, atmosphere, etc. created by the service. technical possibilities 3. Attitudes and behavior of staff
LEHTINEN (1983)	1. Three dimensional approach a. Physical quality b. Interaction quality c. Company quality 2. Two dimensional approach a. Process quality b. Output quality
GRÖNROOS (1983)	1. Technical quality 2. Functional quality 3. Image of company
PARASURAMAN, ZEITHAML, BERRY (1985)	1. Reliability 2. Responsiveness 3. Ability 4. Accessibility 5. Competence 6. Communication 7. Credibility 8. Security 9. Understanding/Knowing the Customer 10. Tangible
BERRY, ZEITHAML, PARASURAMAN (1985)	1. Process quality 2. Output quality
NORMANN (1988)	Features of the service pack 1. Soft features 2. Hard features

The work of Parasuraman, Zeithaml and Berry in 1985 on the quality and dimensions of service rendered them the basis for many other researches. The ten

dimensions of service quality included in their studies and their explanations are given in Table 3.2 (Parasuraman, Zeithaml and Berry, 1985).

Table 4
Quality dimensions defined by Parasuraman, Zeithaml and Berry, (1985)

Dimension	Definition
Reliability	Includes consistency of reliability and performance. Especially this dimension is related to; - The correctness of bills, - Keeping the records correctly, - The fulfillment of the service at the time specified.
Responsiveness	Voluntary and ready for the staff to provide the service. This dimension includes; - the immediate execution of a process, - Quick return to customer feedback, - Quick service.
Competence	Means having the necessary skills and knowledge to deliver the service. It requires; - The knowledge and ability of the responsible personnel, - the knowledge and ability of transaction support personnel, - The research capability of the intermediary firms, such as security companies.
Accessibility	Accessibility involves easy and accessible service. - The service should be easily accessible via telephone, lines

	should not be busy and customers should not be kept waiting. - For example, the time spent on service in a bank should not be too much. - The location of the service facility and the hours of operation must be appropriate.
Courtesy	Respect, and warmness of the staff, such as the receptionist or the telephone operator. At the same time, the appearance of the staff is clean, elegant and simple, but a kind of courtesy.
Communication	Means that the staff member is informed at the level that the client can understand and is listening to the customer. The requirements of this dimension are; - To explain the contents of the customer service, - To explain how much the service will cost, - To explain the exchange between the cost of the service and the service, - The customer is guaranteed to handle the problems.
Credibility	Credibility requires honesty and the best for the customer. - Company name and name, - Personality characteristics of the personnel in contact with the customer are included in this scope.
Security	The service provided is without doubt, risk and danger. - Physical security, - Financial guarantee,

	- There is a privacy policy.
Understanding/Knowing the Customer	Including making efforts to understand the needs of the client. This dimension; - Requires to learn the specific needs of customers, - Provides individualized attention and attention, - Emphasizes the importance of recognizing regular customers.
Tangible	The physical evidence of the service. Concrete values are the property of the operator; - Physical possibilities, - The appearance of the staff, - With the tools and equipment used to perform the service - Includes other customers in the service operation.

Source: Parasuraman, Zeithaml and Berry, (1985).

3.2.2.3. Measurement Methods of Service Quality

The determination of the qualifications given to quality in customer service preferences has led both producers and researchers to concentrate on the measurement of the service quality. For this reason, interest in service quality has been increasing in business studies and applications since the early 1980's and this interest is related with topics such as quality, total quality management and customer satisfaction (Almıaçık & Özbek, 2009).

Measurement of service quality constitutes the first phase of the service quality improvement and development process. If a business can get the right

information about the current quality level, it can take more precise steps on what to do next. Several methods (Total Quality Index, SERVQUAL, SERVPERF, Critical Event Method, Service Barometer, Statistical Methods, etc.) are used to measure service quality (Eleren & Kılıç 2007: 242).

Each of the methods used gives weight to different dimensions in the measurement of service quality. The most common use of these methods is the service quality scale called SERVQUAL, developed by Parasuraman, Zeithaml and Berry. The authors set out from the customer expectations and identified ten dimensions that determine service quality first. Then, they evaluated the questionnaires they have applied with factor analysis and developed a questionnaire which is a service quality measurement tool. They reduced ten questions to the five and gave the SERVQUAL name to this method (Parasuraman et.al, 1988). These five dimension are explained under the previous topics and given below;

- Tangibles,
- Reliability,
- Responsiveness,
- Credibility,
- Understanding/Knowing the Customer.

3.3. Service Quality in Highway Passenger Transportation Sector

Although transportation service is one of the most demanding and demanding services, it is seen that there is not enough academic work in domestic literature in this issue. However, it is possible to come across a number of theoretical and practical studies on transport services in foreign literature.

In the study of Disney (1998), it was emphasized that drivers need to carry out the following activities in order to get comfortable transportation services;

- Greeting the passengers by car and to accept the passengers inside,
- Smiling to the passenger,
- Answering the traveler's questions and problems sincerely,
- Being polite when asking for fees and thanking you once you get the fees,
- Apologizing for any inconveniences that may arise from non-existent reasons and thank and leave the passenger for coming down.

This author also determines the customer expectations as follows:

- The continuity and reliability of the service,
- The service is sincerely realized,
- Internal and external cleaning of the vehicle,
- The comfort of the vehicle,
- Convenient prices,
- Easy paying,
- The obvious departure times of the vehicles.

3.3.1. Factors in Effecting Service Quality in Highway Passenger Transportation

Today, travel behavior is influenced by many factors such as type of vehicle, travel frequency, distance traveled, duration of travel and prices (Winters, 2000: 1). Population growth, widespread employment opportunities and increases in car ownership have an impact on the choice of means of transport (Dockendorf, 2000: 1; Carlsson, 1999: 2).

3.3.1.1. Attitudes and Preferences of Passengers

It is extremely important for bus companies to obtain satisfied customers when it is thought that a traveler will make many trips during the year. Because satisfied customers are the ones who are likely to buy again (Churchill & Surprenant, 1982).

Passenger satisfaction is one of the important indicators in measuring the quality of the transportation service. Nowadays, in determining the service quality, the opinions of the customers are more important than the opinions of the management and employees. Satisfaction is a cognitive and emotional reaction to the service that results from the comparison of service experience with customer expectations of a service in the service sector. Customer satisfaction in transportation services is the perceived quality level is higher than expected quality level. The firms offer the level of satisfaction of the customers from the services they offer, in other words, they determine the level of service quality that the enterprises offer them the opportunity to observe the process of service to them. In short, the results of the satisfaction surveys reveal aspects that should be improved in the service processes of transportation companies (Ardıç and Sadaklıoğlu, 2009).

In this case, it is very important for the companies that make road transport to understand and meet the customers' changing expectations and desires in order to be successful. Because of this constant change and development in the sector, the fact that bus companies are in a proactive approach to these changes will give them considerable competitive advantage in terms of their expectations. For this purpose, it is important that the dynamics of the market (special conditions of the countries, competitions, travel characteristics, cultural differences, transportation service quality differences, prices, travel time etc.) and changes in customer profile (population

increase, increase in education level, increase in car ownership, ...) must be evaluated by bus companies. For this reason, it is necessary for the bus companies to determine the expectations, perceptions, bus service usage habits and socio-demographic characteristics of the customers and take precautions accordingly (Ardıç and Sadaklıoğlu, 2009).

Abstraction of the general characteristics of the service, inability to stock, the simultaneity of production and consumption, and heterogeneity are also valid for transportation services (Öter ve Tütüncü 2001: 103). In addition, transportation services have different characteristics than other services. According to Esin (2002: 188), some of the features that customers seek in transportation services are (Also given in Figure 6);

- Speed is the flow of life; because it is a general requirement that the fast completion of the lifelong.
- Security is one of the main concerns. Despite the desire for speed, the vehicle must not put people in danger.
- Comfort is a quality feature that has different meanings and meanings for everyone.
- The quality of the vehicle and the characteristics of the environment on which it is traveling (road, rail) or inside (sea, air) affect how the vehicle is used.
- Regularity is among the quality characteristics that passengers consider important; because the flow of service should not be arbitrary in the sense that the traveler can adjust itself.
- Punctuality, arrival and departure are the hallmarks of the sciences and are among the major success indicators of transportation companies.

- Frequency is the interval of service; provides flexibility in selecting the travel time of the passenger and reduces the waiting time.
- Capacity is the number of passengers or loads that the system can carry within a unit time. Capacity is an important feature of the level of system utilization.
- The scope is where the transport system can take it and how far it can go. Where there is no sea, the ship is not where the railway is, the train can not operate the aircraft where there is no airport; cars, buses and trucks can not go where you are not.
- It is not easily affected by weather conditions.
- The prices are economical.



Figure 6. Features that customers seek in transportation services

3.3.2.2. Service Differentiation of Companies

It is the differentiation experienced in the services given to one of the important elements of competition in the intercity passenger transportation. The more advanced technology, the more comfort and the staff who employ quality staff, the more service they offer is preferred.

Bus production is at the forefront in the development process of technology-dependent bus operators. Increasing technological competitiveness is leading the producers to increase the comfort, environment (nature), crew quality and vehicle safety as well as the price item (Alnıaçık and Özbek, 2009).

Occupations (bureau, host-hostess, captain, delegate) working in bus companies may be fewer than the ones working in industrial enterprises. However, the busiest occupation must have some basic characteristics. Having the knowledge, skills and training required by the service, knowing foreign languages in the work areas for

foreign customers, and having the ability to understand and solve the problems is one of the most salient features (Alnıaçık and Özbek, 2009).

In terms of comfort on the other hand, it is essential that ergonomic product design or anthropometric measurements of the mass of the user without re-product development be considered. However, during long journeys, only the seats are not comforted by the dimensional adjustment of the body. It is stated that anthropometric data are generally raw measures taken from naked adults and that these measurements will not provide appropriate data for indented protruding body surfaces (Sabancı, 1999).

In addition, anthropometric data are obtained from people at rest. It is unexpected for a person with a dynamic structure to remain on the seat for a long time. This is impossible, especially on journeys that can find a day in our country. People feel obliged to act in order to reduce the effects of various disorders that may occur over time. The usage volume allocated to the passengers as the moving area is determined by the seat occupancy measures. Therefore, not only the seat measurements but also the seating arrangements should be considered important in terms of comfortable travel (Çayır ve İlçe, 2010).

3.3.2.3. Effects of Other Transportation Methods

Road passenger transport has entered a declining trend as a result of the development in the world and other transport modes in our country. In addition, the profitability of this mode of transport is decreasing day by day as it has lost the advantage of time to transport to distances in road passenger transport. On the other hand, highway passenger transportation enterprises have changed the quality of their services and left the long distance transport load with airway and rail systems but they

have gone to improve their local networks by increasing their routes and frequencies (Karagülle, 2007).

3.3.2.4. Competition in the Sector

Having an important place in the service sector bus companies also continue to operate under the transport services that contribute to transportation in Turkey. The increasing number of bus companies has made intense competition between the companies inevitable. The increasingly competitive environment has resulted in businesses increasing service qualifications and developing various methods to meet the needs and desires of customers. The quality of service provided by the bus operators is determined by the behavior of the driver and other bus personnel, the minute the vehicle is departing and arriving, the technical issues the vehicle has, the comfort of the vehicle and the quality of the stopover places (Koçoğlu ve Aksoy, 2012: 3).

Particularly with the development of air and rail transport options, competition in passenger transport has begun to take place among different types. From this point of view, it is important to go to various applications in the field of passenger transport where the competition is very intense and the companies will meet customer demands and needs. At this point it is possible to see the various efforts of bus operators. Because of this, bus operators are starting to provide more professional services and develop themselves in various issues such as reservation procedures, tariffs, technical equipment of buses and ancillary services (Yılmaz, 2012).

4. RESEARCH METHOD

The method of research consists of theoretical framework, data collection techniques and data analysis. This research will be modelled according to the descriptive method. Data will be gathered by questionnaire and the subjects will be asked to take their views on the present situation. In this context, the study is based on the descriptive screening model, as the passenger's perception for highway transport will be examined.

4.1. Modeling and Hypotheses of Research

These are the main hypothesis formed to be tested for the this research;

- H1A1-A4: There are significant differences between the means of service quality factors of highway transport and the passengers' genders.
- H1B1-B4: There are significant differences between the means of service quality factors of highway transport and the passengers' marital status.
- H1C1-C4: There are significant differences between the means of service quality factors of highway transport and the passengers' age.
- H1D1-D4: There are significant differences between the means of service quality factors of highway transport and the passengers' educational status.
- H1E1-E4: There are significant differences between the means of service quality factors of highway transport and the passengers' monthly income.

- H1F1-F4: There are significant differences between the means of service quality factors of highway transport and the passengers' travel purpose.
- H1G1-G4: There are significant differences between the means of service quality factors of highway transport and the passengers' travel sequence.

4.2. Universe and Sampling

In scientific studies, the sample volume is determined by the formula in cases where the number of main mass units and the parameters belonging to the sampling are known. For this research the total number of individuals in the population in Istanbul is 15,000,000 and the sample volume should be 384. So the questionnaire could be made to 400 people who formed the sample cluster for this research.

4.3. Data Collection Tools

The data collection tool used in our research is the questionnaire method. Before the questionnaire was prepared, the previous researches on this subject were examined and the applications of the authors were researched. According to them, the questionnaire has formed in two sections. In the first section, it is aimed to determine the demographic features and the travelling sequence of the people who involved in the research. In the second part, there are 18 questions about the service quality perceptions of the highway transport passengers. Questions about perceptions were with 5-point Likert scale as indicated by Parasuraman at all. The collected data was analyzed with SPSS 24.0 (Statistical Package for The Social Science).

4.3.1. Personal Information Form

The first section of the questionnaire is about the personal information. In this section questions about gender, age, educational status, monthly income, the travelling sequence and travelling purpose were asked to the participants.

4.3.2. Mobile Banking Services Scale

In this study, the SERVQUAL model was used to measure the service quality perceptions of passengers using highway transportation. The SERVQUAL was first developed by Parasuraman and at all” (Parasuraman at all, 2001). To measure service quality. As a sound instrument, it is also applicable for our research. In this research, it is aimed to scale security, eagerness, physical appearance and sensitiveness for highway passenger transport. For this aim, 18 questions about this are asked to passengers. Their perception try to be scaled with 5-point Likert scale.

4.4. Resolution of Data

According to find answer for research hypothesis, firstly the perceptions of participants will be divided into meaningful parts by factor analysis. Then according the results the service quality factors for highway passengertransport defining statistics will be inspected. While these proses the outcome dimensions of the scale will be checked for normality by Kolmogorov-Smirnov Z test. Addition to this to define the perceptive differentiation for highway transport services of passenger will be analyzed through their demographic features and the other information (travel sequence and travel purpose) gathered by Independent Samples T Test and One-Way Anova test or their alternative Independent Samples Mann-Whitney U test and

Independent Samples Kruskal-Wallis tests if the dependent sample values could not fit normal distribution. All through the research the significance level will be %0,5.



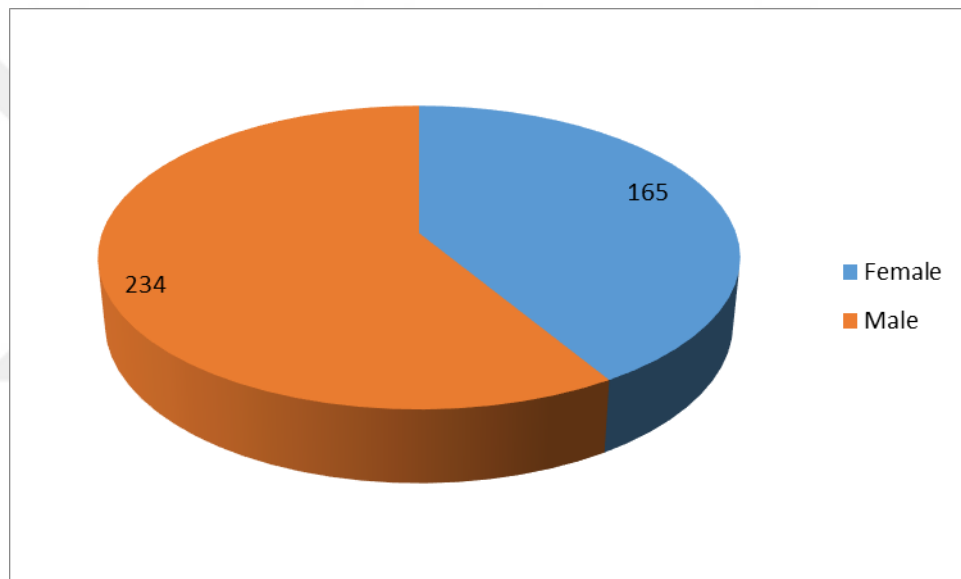
5.RESULTS

5.1. Frequency Distributions of Demographic Characteristics

5.1.1. Findings related to gender

In Table 5 we can see that 41% of the passengers were females (165) and 59% were males (234).

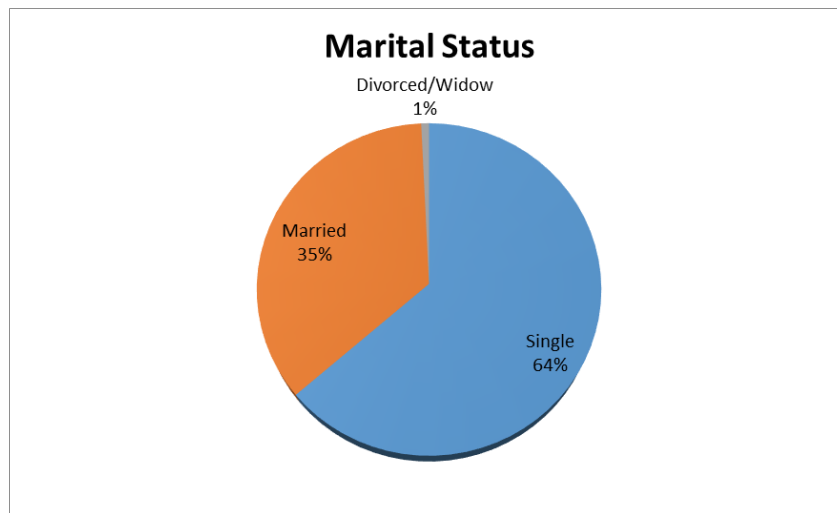
Table 5
Gender frequency



5.1.2. Marital Status Related Findings

In Table 6 we can see that more than half (%64) of the participants are single and %35 of them are married.

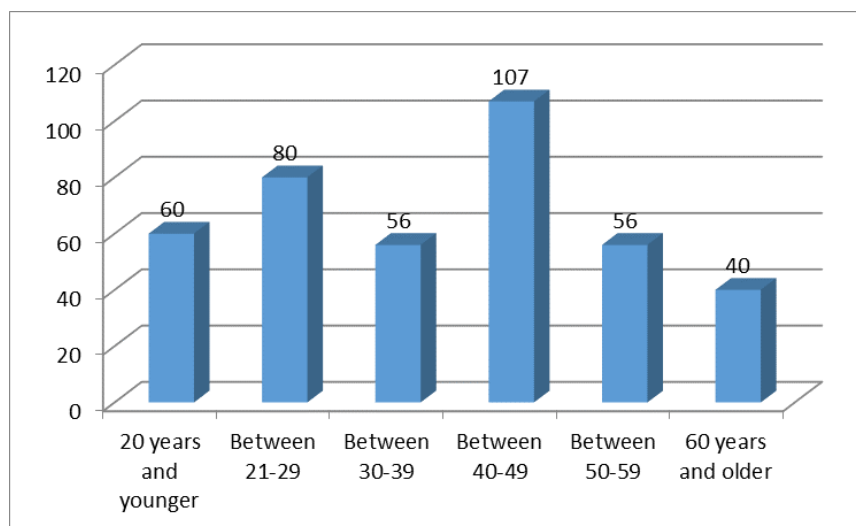
Table 6
Marital Status frequency



5.1.3. Age Findings

In Table 7 we can see that %27 of participants age between 40-49 years old have and %10 of participants age 60 years and older.

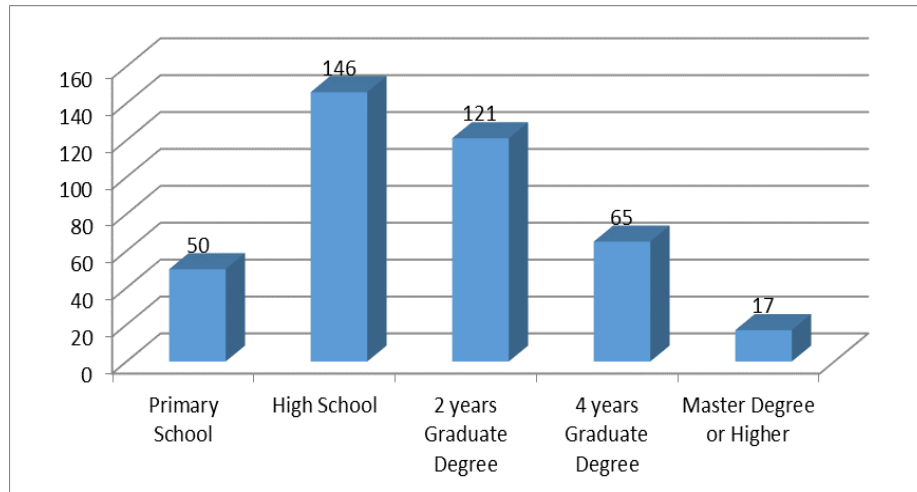
Table 7
Age frequency



5.1.4. Findings related to Educational Status

In Table 8 we can see %36 of the participants has high school degree and more than half of the participants have at least 2 years graduate degree.

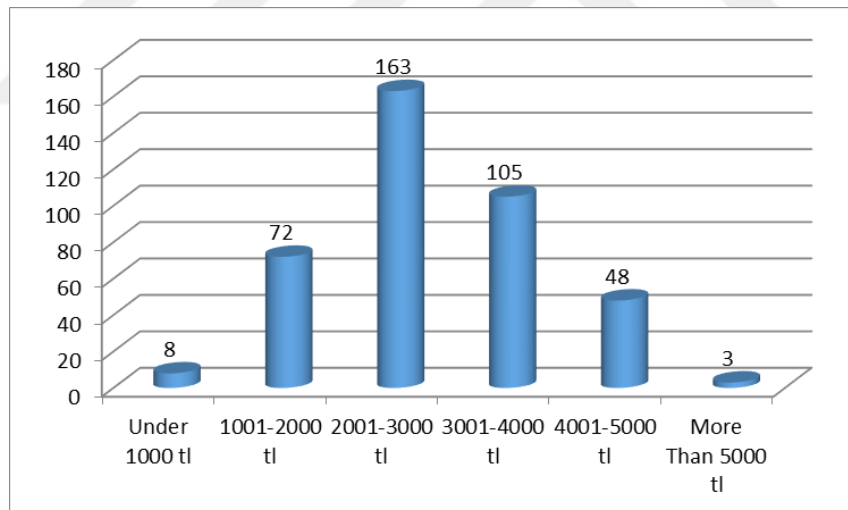
Table 8
Educational Status frequency



5.1.5. Findings related to monthly income

In Table 9, we can see monthly income frequencies of participants. Most of the participants (%41) monthly income is between 2001-3000 TL.

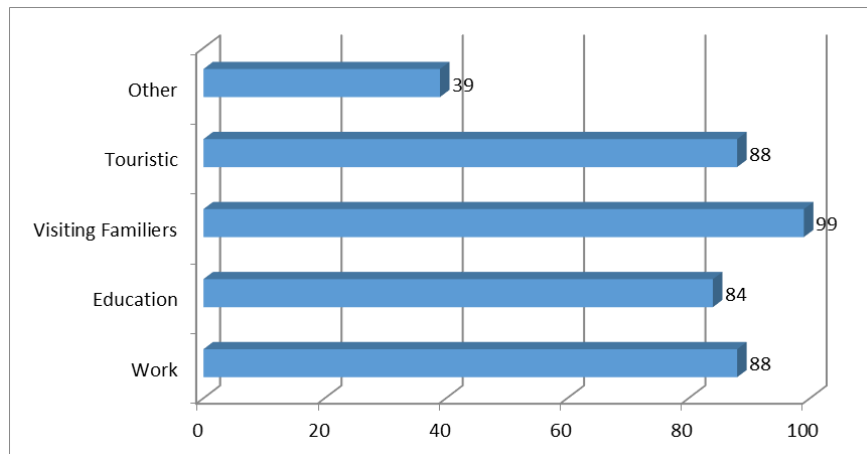
Table 9
Montly income frequency



5.1.6. Findings related to the travel purpose

In Table 10, we can see the travel purpose (highway transport) frequencies of participants. The participants mostly (%50,9) travel for visiting their families. Touristic, work and educational travel purpose rates are almost the same(%22) as shown below.

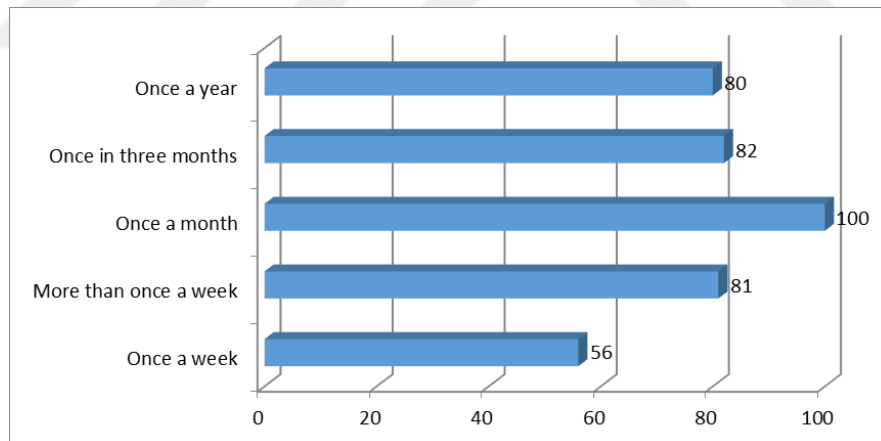
Table 10
Frequency of highway transport purposes



5.1.7. Findings about highway transport frequencies

In Table 11 we can see that more than half (%59) of the participants use highway transport at least once a month.

Table 11
Highway transport frequency



5.2. Factor Analysis Results

Factor analysis is a multidimensional method that allows variables to be interpreted in a more meaningful, easy, understandable, and abstract way, based on the relationship between variables. Before the factor analysis, the data set should be checked for suitability and there are 3 methods are used to evaluate it. These are correlations matrix formation, the Bartlett test and the Kaiser-Meyer-Olkin (KMO)

test. The Bartlett test shows that at least some of the variables in the correlation matrix the probability of a high correlation between the two. The Kaiser-Meyer-Olkin (KMO) test showed that the correlation coefficients is a sample adequacy criterion that compares the partial correlation coefficients. The KMO ratio should be over 0.50. How high is this rate? It is more convenient to apply factor analysis to the data set. KMO and Bartlett's test is executed to measure of sampling adequacy for factor analyses.

Table 12
KMO and Bartlett's Test for factor analyses

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0,799
Bartlett's Test of Sphericity	Approx. Chi-Square	5573,909
	df	136
	Significance (p value)	0,000

As it can be seen in the Table 12 the KMO value is 0,799 which is higher than 0,5 so the sample data is adequate for factor analyses. In addition to this Bartlett Test significance value is less than 0,5 which also shows adequacy of sampling.

After these analyze the second stage is to determine the factors. The goal in this phase is to get few factors to best represent the relationships between variables. Factor analysis gives us the ability to interpret the answers given by the participants less than the factor of 18 instead of using all variables. The factor analysis is executed for 18 statements in the second part of the questionnaire and the ratio of total variance explained is % 73,926.

After Principal Component Analysis, rotated component matrix is obtained by varimax rotation method with Kaiser Normalization. This matrix is the latest state of factor analysis. If the variable has the greatest weight as the absolute value under which factor, that variable is in close relation to that factor. Weights of 0.50 and above are considered to be quite good. At first the statement number 11 is found under 0,5 (negative value) and extracted from the list. Then the factor analyses is done again. The final results are shown in Table 13 that which variable has the highest weight under which factor level for 17 statements. The statements in the scale splits into 4 factors. The factor names and related statements are shown in Table 13.

Table 13
Service Quality Factor Names and Questions Numbers

Factor Name	Question Number
Responsiveness	5, 6, 7,8, 9, and 10
Tangibles	1, 2, 3,and 4
Reliability	14, 15, 16 and 17
Empathy	12, 13, and 14

5.2.1. Reliability Analysis

Following factor analysis Cronbach's Alpha coefficient was calculated to examine the statistical internal consistency of the expected study. Reliability is a prerequisite for validity. Reliability refers to the consistency of a scale, indicating that it will always yield the same results. In this study, the item statistics method was used to make internal consistency test from reliability approaches. The Cronbach Alpha coefficient, which is especially suitable for the index type instruments, is used for the reliability calculations made with the item statistics (Kalaycı, 2010). As a result of the factor analysis, four factors were checked separately for reliability. All the

Cronbach's alpha values are higher than 0,6. Thus, it can be said that the questionnaire scale's reliability and validity is ensured. The averages of the responses to the questions constituting the factor groups, the factor weights, the explanatory weight of the factor and the reliability values (Cronbach's alpha value) are shown in Table 14.

Table 14
Information on Service Quality Factor Analysis

Factor Name	Statements	Mean	Factor Weight	Total Variance Explained (%)	C.Alfa
Responsiveness	S9_I prefer to travel on an intercity trip, the staff are always willing to help passengers.	3,80	0,984	30,151	0,963
	S10_The company I prefer on long distance journeys is never too busy to answer the customers' requests.	3,80	0,961		
	S7_I prefer to have a service to the customers when I prefer to travel on an intercity trip.	3,76	0,947		
	S6_The company employees I prefer on long distance journeys always produce satisfactory solutions to the problems of the passengers.	3,71	0,903		
	S5_The company I prefer on a long distance journey makes it within the time(travel length, times when services will take passengers, etc.) that promised something to do until a certain time.	3,70	0,886		
	S8_I prefer the services of the company that I prefer on long distance journeys (taking the service from the passenger house, loading the baggage, car catering service, cruising time) without any delay.	3,71	0,848		
Tangibles	S2_The physical environment of the company I prefer on long distance journey seems nice. (Post offices, stopping places, buses, shuttles etc.)	4,36	0,902	16,167	0,838
	S3_The employees of the company I chose during the intercity journey (officers in the letter, drivers, assistants) are dressed properly.	4,40	0,874		
	S1_The company I prefer on long distance journeys has modern equipment. (Buses, services, writing houses etc.)	3,88	0,789		

	S4_The service provided by the physical elements of the company I prefer on long distance journey is suitable for the trip.	4,35	0,735		
Reliability	S18_The daily working hours of the company I prefer on long distance journeys (service hours, hours served by post offices, vehicle departure times, etc.) are suitable for each passenger.	2,99	0,919	14,702	0,788
	S16_The employees I prefer on long distance journeys know what the expectations of passengers are.	3,06	0,902		
	S17_The company I prefer in long distance travel, sincerely takes care of the interests of the passengers.	3,00	0,653		
	S15_The company I prefer in long distance travel offers individual services by taking care of their passengers one by one.	3,12	0,639		
Empathy	S13_The company employees I prefer on long distance journeys have enough knowledge to be able to do their jobs well and answer the questions of the customers.	4,65	0,919	12,906	0,790
	S14_The company employees I prefer on intercity trips are kind.	4,54	0,817		
	S12_The company employees I prefer on long distance journeys always show reassuring behaviors and behaviors to the customers during the trip, before and after the journey	4,52	0,812		

5.3. Normality Test

To check the normality of all factors Kolmogorov Smirnov test is used. According to results the significance value of both factors found 0,000 it means test of normality is negative and factors did not distributed normal. Since these values are less than 0.05, we have to use nonparametric test methods for further analysis of variances across groups. So instead of Independent Sample T-test and One-Way Anova tests, Independent Samples Mann-Whitney U test and Independent Samples Kruskal-Wallis tests will be used to analysis of variances across groups.

5.4. Testing of Research Problems

Hypothesis are tested to find the differences between groups by Independent Samples Mann-Whitney U and Independent Samples Kruskal-Wallis tests according to gender, marital status, age, educational status, monthly income, travel purpose and travel sequence.

5.4.1. Differences According to Gender

The hypothesis in the research and their analyses results for the “Gender” variable are listed below Table 15 the hypothesis is analyzed by Mann-Whitney U test. It is executed to assess whether the means for determined factors on the two gender differ.

Independent Samples the Mann-Whitney U could be used when a sample of observed data from each population is available. The collected data from the participants should all be independent of each other. And the variable to be compared is assumed to have a non-normal distribution (Landau & Everitt, 2004, p.39).

Table 15
Hypothesis related to gender and their results

Hypothesis Related to Gender	Method	P value	Mean of Groups	Result
H1_{A1} : There are significant differences between the means of responsiveness perception and the participants' genders.	Independent Samples The Mann-Whitney U Test	0,602	Female: 3,72 Male : 3,76	Rejected

H1_{A2} :There are significant differences between the means of tangibles perception and the participants' genders	Independent Samples The Mann-Whitney U Test	0,665	Female: 4,27 Male : 4,23	Rejected
H1_{A3} :There are significant differences between the means of reliability perception and the participants' genders	Independent Samples The Mann-Whitney U Test	0,633	Female: 3,06 Male : 3,03	Rejected
H1_{A4} :There are significant differences between the means of empathy perception and the participants' genders	Independent Samples The Mann-Whitney U Test	0,374	Female: 4,17 Male : 4,13	Rejected

The results of Independent Samples The Mann-Whitney U Test indicate the mean of responsiveness, tangibles, reliability and empathy factors does not show differences according to gender variable. So there are no significance difference between male and female passengers about their of service quality perception of highway transportation.

5.4.2. Differentiation According to Marital Status

The hypothesis in the research and their analyses results for the “marital status” variable are listed below Table 16 The hypothesis is analyzed by Independent Samples Kruskal-Wallis tests.

Independent Samples Kruskal-Wallis tests is executed to assess whether the means for determined factors on the marital status groups differ.

Table 16
Hypothesis related to marital status and their results

Hypothesis Related To Marital Status	Method	P value	Mean of Groups	Result
H1_{B1}: There are significant differences between the means of responsiveness perception and the passengers' marital status.	Independent Samples Kruskal-Wallis test	0,833	Single : 3,75 Married : 3,74 Divorced/ Widov : 4,00	Rejected
H1_{B2}: There are significant differences between the means of tangibles perception and the passengers' marital status.	Independent Samples Kruskal-Wallis test	0,884	Single : 4,24 Married : 4,25 Divorced/ Widov : 4,50	Rejected
H1_{B3}: There are significant differences between the means of reliability perception and the passengers' marital status.	Independent Samples Kruskal-Wallis test	0,191	Single : 3,08 Married : 2,97 Divorced/ Widov : 3,50	Rejected
H1_{B4}: There are significant differences between the means of emphaty perception and the passengers' marital status.	Independent Samples Kruskal-Wallis test	0,755	Single : 4,16 Married : 4,12 Divorced/ Widov : 4,33	Rejected

Independent Samples Kruskal-Wallis test results show that mean of responsiveness, tangibles, reliability and empathy factors does not show differences according to marital status variable.

5.4.3. Differentiation According to Age

The hypothesis in the research and their analyses results for the “age” variable are listed below Table 17 The hypothesis is analyzed by Independent Samples Kruskal-Wallis test.

Independent Samples Kruskal-Wallis test is executed to assess whether the means for determined factors on the age groups differ.

Table 17
Hypothesis related to age and their results

Hypothesis Related to Age	Method	p value	Mean of Groups	Result
H1 _{c1} : There are significant differences between the means of responsiveness perception and the passengers' age.	Independent Samples Kruskal-Wallis test	0,175	20 and younger : 3,71 Between 21-29 : 3,77 Between 30-39 : 3,71 Between 40-49 : 3,74 Between 50-59 : 3,68 60 and older : 3,93	Rejected

H1_{c2}: There are significant differences between the means of tangibles perception and the passengers' age.	Independent Samples Kruskal-Wallis test	0,012	20 and younger : 4,55 Between 21-29 : 4,33 Between 30-39 : 4,18 Between 40-49 : 4,11 Between 50-59 : 4,19 60 and older : 4,13	Accepted
H1_{c3}: There are significant differences between the means of reliability perception and the passengers' age.	Independent Samples Kruskal-Wallis test	0,323	20 and younger : 3,04 Between 21-29 : 3,00 Between 30-39 : 3,06 Between 40-49 : 2,99 Between 50-59 : 3,10 60 and older : 3,17	Rejected
H1_{c4}: There are significant differences between the means of emphaty perception and the passengers' age.	Independent Samples Kruskal-Wallis test	0,565	20 and younger : 4,19 Between 21-29 : 4,24 Between 30-39 : 4,15 Between 40-49 : 4,07 Between 50-59 : 4,13 60 and older : 4,12	Rejected

Second Independent Samples Kruskal-Wallis test results show that the mean of tangibles factor variables differentiate between the age groups so H1C2 hypothesis is accepted. Then to find the differentiating group Tukey test is executed. According to Tukey test result the “20 years and younger” passengers group makes the

difference with their tangible perception of highway transportation services, it is higher than all other age groups.

First, Third and Fourth Independent Samples Kruskal-Wallis test results show that H1C1, H1C3, H1C4 hypothesis are rejected. Therefore, there are no significant difference between the means of age groups about their perception for responsiveness, reliability and empathy factors of highway transportation services.

5.4.4. Differentiation According to Educational Status

The hypothesis in the research and their analyses results for the “Educational Status” variable are listed below Table 18. The hypothesis is analyzed by Independent Samples Kruskal-Wallis. It is executed to assess whether the means for determined factors on the Educational Status groups differ.

Table 18
Hypothesis related to Educational Status and their results

Hypothesis Related to Educational Status	Method	P value	Mean of Groups	Result
H1_{D1}: There are significant differences between the means of responsiveness perception and the passengers' educational status.	Independent Samples Kruskal-Wallis test	0,984	Primary School : 3,68 High School : 3,75 2 y. Graduate Degree : 3,74 4 y. Graduate Degree: 3,76 Master and Higher : 3,77	REJECTED

H1_{D2}: There are significant differences between the means of tangibles perception and the passengers' educational status.	Independent Samples Kruskal-Wallis test	0,714	Primary School : 4,39 High School : 4,23 2 y. Graduate Degree : 4,17 4 y. Graduate Degree: 4,28 Master and Higher : 4,34	REJECTED
H1_{D3}: There are significant differences between the means of reliability perception and the passengers' educational status.	Independent Samples Kruskal-Wallis test	0,618	Primary School : 3,00 High School : 2,99 2 y. Graduate Degree : 3,06 4 y. Graduate Degree: 3,14 Master and Higher : 3,13	REJECTED
H1_{D4}: There are significant differences between the means of empathy perception and the passengers' educational status.	Independent Samples Kruskal-Wallis test	0,461	Primary School : 4,07 High School : 4,21 2 y. Graduate Degree : 4,14 4 y. Graduate Degree: 4,10 Master and Higher : 4,10	REJECTED

Independent Samples Kruskal-Wallis test results show that mean of responsiveness, tangibles, reliability and empathy factors does not show differences according to educational status variable.

5.4.5. Differentiation According to Monthly Income

The hypothesis in the research and their analyses results for the “Monthly Income” variable are listed below Table 19. The hypothesis is analyzed by Independent Samples Kruskal-Wallis. It is executed to assess whether the means for determined factors on the monthly income groups differ.

Table 19
Hypothesis related to monthly income and their results

Hypothesis Related to Monthly Income	Method	P value	Mean of Groups	Result
H1_{E1}: There are significant differences between the means of responsiveness perception and the passengers' monthly income.	Independent Samples Kruskal-Wallis test	0,064	0-1000 TL : 3,61 1001-2000 TL : 3,63 2001-3000 TL : 3,65 3001-4000 TL : 3,83 4001-5000 TL : 3,89 5001 and more : 3,98	REJECTED
H1_{E2}: There are significant differences between the means of tangibles perception and the passengers' monthly income.	Independent Samples Kruskal-Wallis test	0,000	0-1000 TL : 3,67 1001-2000 TL : 3,94 2001-3000 TL : 4,19 3001-4000 TL : 4,27 4001-5000 TL : 4,34 5001 and more : 4,42	ACCEPTED
H1_{E3}: There are significant differences between the means of reliability perception and the passengers' marital status.	Independent Samples Kruskal-Wallis test	0,641	0-1000 TL : 2,90 1001-2000 TL : 3,01 2001-3000 TL : 3,03 3001-4000 TL : 3,07 4001-5000 TL : 3,13 5001 and more : 3,42	REJECTED
H1_{E4}: There are significant differences between the	Independent Samples	0,787	0-1000 TL : 4,01 1001-2000 TL : 4,11	REJECTED

means of empathy perception and the passengers' monthly income.	Kruskal-Wallis test		2001-3000 TL : 4,14 3001-4000 TL : 4,18 4001-5000 TL : 4,19 5001 and more : 4,21	
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Second Independent Samples Kruskal-Wallis test results show that the mean of tangibles factor variables differentiate between the monthly income groups so H1E2 hypothesis is accepted. Then to find the differentiating group Tukey test is executed. According to Tukey test result the “3001-4000 TL” passengers group makes the difference with their tangible perception of highway transportation services, it is higher than 1001-2000 and 2001-3000 groups and it is lower than 4001-5000 tl monthly income group.

First, Third and Fourth Independent Samples Kruskal-Wallis test results show that H1E1, H1E3, H1E4 hypothesis are rejected. Therefore, there are no significant difference between the means of monthly income groups about their perception for responsiveness, reliability and empathy factors of highway transportation services.

5.4.6. Differentiation According to the Purpose of Travel

The hypothesis in the research and their analyses results for the “The purpose of Travel” variable are listed below Table 20. The hypothesis is analyzed by Independent Samples Kruskal-Wallis. It is executed to assess whether the means for determined factors on the purpose of travel groups differ.

Table 20
Hypothesis related to the purpose of travel and their results

Hypothesis Related to the	Method	p	Mean of Groups	Result
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Purpose of Travel		value		
H1_{F1}: There are significant differences between the means of responsiveness perception and the passengers' purpose of travel.	Independent Samples Kruskal-Wallis test	0,368	Work : 3,79 Education : 3,65 Visiting Families : 3,71 Touristic : 3,76 Other : 3,95	REJECTED
H1_{F2}: There are significant differences between the means of tangibles perception and the passengers' purpose of travel.	Independent Samples Kruskal-Wallis test	0,007	Work : 4,29 Education : 4,24 Visiting Families : 4,01 Touristic : 4,42 Other : 4,36	ACCEPTED
H1_{F3}: There are significant differences between the means of reliability perception and the passengers' purpose of travel.	Independent Samples Kruskal-Wallis test	0,861	Work : 3,03 Education : 3,05 Visiting Families : 2,99 Touristic : 3,11 Other : 3,01	REJECTED
H1_{F4}: There are significant differences between the means of empathy	Independent Samples Kruskal-	0,680	Work : 4,09 Education : 4,21	REJECTED

perception and the passengers' purpose of travel.	Wallis test		Visiting Families : 4,16	
			Touristic : 4,16	
			Other : 4,08	

Second Independent Samples Kruskal-Wallis test results show that the mean of tangibles factor variables differentiate between the purpose of travel groups so H1F2 hypothesis is accepted. Then to find the differentiating group Tukey test is executed. According to Tukey test result the “Visiting Families” passengers group makes the difference with their tangible perception of highway transportation services, it is lower than all the other purpose of travel groups.

First, Third and Fourth Independent Samples Kruskal-Wallis test results show that H1F1, H1F3, H1F4 hypothesis are rejected. Therefore, there are no significant difference between the means of the purpose of travel groups about their perception for responsiveness, reliability and empathy factors of highway transportation services.

5.4.7. Differentiation According to the Sequence of Travel

The hypothesis in the research and their analyses results for the “The sequence of Travel” variable are listed below Table 21 The hypothesis is analyzed by Independent Samples Kruskal-Wallis. It is executed to assess whether the means for determined factors on the sequence of travel groups differ.

Table 21
Hypothesis related to the sequence of travel and their results

Hypothesis Related to the Sequence of Travel	Method	p	Mean of Groups	Result
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		value		
H1_{G1}: There are significant differences between the means of responsiveness perception and the passengers' sequence of travel.	Independent Samples Kruskal-Wallis test	0,453	Once a week : 3,89 More than once a week : 3,70 Once a month : 3,71 Once in three months : 3,75 Once a year : 3,75	REJECTED
H1_{G2}: There are significant differences between the means of tangibles perception and the passengers' sequence of travel.	Independent Samples Kruskal-Wallis test	0,722	Once a week : 4,25 More than once a week : 4,27 Once a month : 4,32 Once in three months : 4,22 Once a year : 4,15	REJECTED
H1_{G3}: There are significant differences between the means of reliability perception and the passengers' sequence of travel.	Independent Samples Kruskal-Wallis test	0,607	Once a week : 3,04 More than once a week : 3,13 Once a month : 3,06 Once in three months : 3,03 Once a year : 2,95	REJECTED
H1_{G4}: There are significant differences between the means of empathy	Independent Samples Kruskal-	0,675	Once a week : 4,10 More than once a week : 4,11 Once a month : 4,11	REJECTED

perception and the passengers' sequence of travel.	Wallis test		Once in three months : 4,22 Once a year : 4,20	
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Independent Samples Kruskal-Wallis test results show that mean of responsiveness, tangibles, reliability and empathy factors do not show differences according to the sequence of travel variable.



6.DISCUSSION

As a result of the study, it is seen that customer satisfaction and perception are very important for service providers, in highway passenger transportation which is one of the important sectors in our country. In this context, it has been understood that it is necessary to measure perceived and expected service quality of the customers. With this data, it will be possible to make improvements and improvements to the preferences of the customers. As a result, companies can achieve competitive advantage and profitability.

This research is based on the descriptive screening model and the passenger perception for highway transportation services are examined. For the examination a questionnaire is prepared according to literature. It had two section, personal information form section and Servqual scale statements section. This questionnaire is implemented to 400 people in Tokat and the collected data is analyzed with SPSS 24.0 (Statistical Package for The Social Science).

According to frequency analyses of demographic features of participants; 58% of the were males (234 people), more than half more than half (%64) of the participants are single and %35 of them are married. %27 of the passengers age between 40-49 years old and %10 of passengers age 60 years and older. %36 of the participants has high school degree and more than half of the participants have at least 2 years graduate degree which is approximately the same educational status level in Turkey. Most of the participants(%41) monthly income is between 2001-3000 TL which is the middle level for a family in Turkey. The passengers who were involved in this research are mostly (%50,9) travelling for visiting their families. Touristic, work and educational travel purpose rates are almost at the same percent around %22.

This result could be because this research questionnaire were implemented on weekends this statistic rates were expected. When the travel frequency of the passengers asked it is seen that more than half (%59) of the participants use highway transport at least once a month. Therefore, this transportation frequency rate was good enough for this research to evaluate the service quality perception of highway transportation.

According to factor analyses the scale statements in the second part splitted into 4 factors with reliable and valid data. The factors named “Responsiveness, Tangibles, Reliability and Empathy” Then test of normality for factors is done by Kolmogorov Smirnov test and the distribution found non-normal. Since they are not normal distributed alternative nonparametric tests which are Independent Sample Man-Whitney U-Test and Independent Sample Kruskal Wallis test are used to see if there are significant differences between these 4 factors and the participants’ demographic features.

At all 28 hypothesis are tested based upon the differences between all 4 factors and the other demographic information (gender, marital status, age, educational status, monthly income) including travel purpose and travel sequence.

Based on the stated 4 factor’s level of agree there are found significant differences in only 3 hypotheses according to passengers’ age, monthly income, and purpose of travel but there could no significant difference found in other 25 hypotheses according to gender, marital status, educational status, and monthly income. In addition, the only differentiating factor is tangibles factor for highway transportation service quality.

The groups in variables which show differences according to the tangibles factor level of agree are;

The age group “20 years and younger” passengers which is higher than all the other age groups,

“3001-4000 TL” passengers group which is higher than 1001-2000 and 2001-3000 groups and it is lower than 4001-5000 TL monthly income group.

“Visiting Families” passengers group which is lower than all the other purpose of travel groups.

According to the results of the questionnaire, we can conclude that the age, monthly income level and travel of purpose effects the highway passenger transportation service perception for their tangibles factor. And the age group under 20 years, and 3001-4000 TL” monthly income and the passengers whose purpose is visiting their families are critical in perception level. But for the gender and monthly income variable groups the service quality perception does not differ between groups.

This research result provides an idea of how this quality of service is perceived by participants with different demographic characteristics. In this respect, it is to assist them in the improvement measures / innovations which should be taken for the quality of service quality of the companies which are making highway passenger transportation. In addition, this study Parasuraman, Zeithaml, and Berry was developed by Service Quality Scale (Servqual) in highway passenger transport sector in Turkey is tested for reliability and validity.

For this research, the main limitation was getting enough reply number for the questionnaires. Therefore, for further research it could be limited to one-highway

transportation companies' service quality. If one company of highway transportation is selected the research could be more widely implemented instead of Tokat. This limitation will ease of collecting and getting detailed data for the questionnaire.



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SUFFIX A

APPENDIXES

Dear Participant,

The aim of this questionnaire is to collect data for MBA thesis which is being executed with “.....” consultancy.

Participation in the survey is voluntary. Answering the questions thoroughly is of great importance in terms of ensuring healthy outcomes.

Participants are not required to provide any information that would reveal their identity. We emphasize that the answers you give in this questionnaire will be confidential, will be used only for this academic study, and we will give you the necessary care to ensure that none of the answers is shared with any of the institution or person. Thank you in advance for your participation.

.....

Graduate Student

A. Personal Information Form

1. Gender?

(1) Female

(2) Male

2. Marital Status ?

(1) Single

(2) Married

(3) Divorced/Widow

3. Age?

(1) 20 and younger (2) Between 20-29 (3) Between 30-39

(4) Between 40-49 (5) Between 50-59 (6) 60 and older

4. Educational Status?

(1) Primary School

(2) High School

(3) 2 years Graduate Degree (4) 4 years Graduate Degree

(5) Master Degree or higher

5. Monthly income?

(1) 0-1000 TL (2) 1001-2000 TL (3) 2001-3000 TL

(4) 3001-4000 TL (5) 4001-5000 TL (6) 5001 and more

6. What is your purpose of travel ?

(1) Work

(2) Education

(3) Visiting Families

(4) Touristic

(5) Other

7. How often do you use highway passenger transportation ?

(1) Once a week

(2) More than once a week

(3) Once a month

(4) Once in three months

(5) Once a year

B. Below are various judgments of Highway Passenger Transportation Service.

Please indicate to what degree these judgments do you attend.

1=Strongly Disagree 2=Disagree 3=Not Sure 4=Agree 5=Strongly Agree					
	1	2	3	4	5
1. The company I prefer on long distance journeys has modern equipment (Buses, services, waiting houses etc.)					
2. The physical environment of the company I prefer on long distance journey seems nice. (Post offices, stopping places, buses, shuttles etc.)					
3. The employees of the company I chose during the intercity journey (officers in the letter, drivers, and assistants) are dressed properly.					
4. The service provided by the physical elements of the company I prefer on long distance journey is suitable for the trip.					
5. The company I prefer on a long distance journey makes it within the time (travel length, times when services will take passengers, etc.) that promised something to do until a certain time.					
6. The company employees I prefer on long distance journeys always produce satisfactory solutions to the problems of the passengers.					
7. I prefer to have a service to the customers when I prefer to travel on an intercity trip.					
8. I prefer the services of the company that I prefer on long distance journeys (taking the service from the passenger house, loading the baggage, car catering service, and cruising time) without any delay.					
9. I prefer to travel on an intercity trip; the staff are always willing to help passengers.					

10. The company I prefer on long distance journeys is never too busy to answer the customers' requests.					
11. The company employees I prefer on long distance trips will perform the right service in the first time without error.					
12. The company employees I prefer on long distance journeys always show reassuring behaviors and behaviors to the customers during the trip, before and after the journey.					
13. The company employees I prefer on long distance journeys have enough knowledge to be able to do their jobs well and answer the questions of the customers.					
14. The company employees I prefer on intercity trips are kind.					
15. The company I prefer in long distance travel offers individual services by taking care of their passengers one by one.					
16. The employees I prefer on long distance journeys know what the expectations of passengers are.					
17. The company I prefer in long distance travel sincerely takes care of the interests of the passengers.					
18. The daily working hours of the company I prefer on long distance journeys (service hours, hours served by post offices, vehicle departure times, etc.) are suitable for each passenger.					

Thank you for your participation.