TRAVEL BEHAVIOUR AND VALUE OF TRAVEL TIME FOR INTER-CITY BUS PASSENGERS IN BANGLADESH

by

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A thesis submitted in partial fulfillment of the requirements for the degree of Master of Science in Civil Engineering in the Department of Civil Engineering

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Declaration

This is to certify that the thesis work entitled "Travel Behaviour and Value of Travel Time for Inter-City Bus Passengers in Bangladesh" has been carried out by Md. Mazibur Rahman in the Department of Civil Engineering, Khulna University of Engineering & Technology. Khulna, Bangladesh. The above thesis work or any part of this work has not been submitted anywhere for the award of any degree or diploma.

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This is to certify that the thesis work submitted by Md. Mazibur Rahman entitled "Travel Behaviour and Value of Travel Time for Inter-City Bus Passengers in Bangladesh" has been approved by the board of examiners for the partial fulfillment of the requirements for the degree of Master of Science in Civil Engineering in the Department of Civil Engineering, Khulna University of Engineering & Technology, Khulna, Bangladesh in June 2014.

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Abstract

The concept of value of travel time (VTT) is the most important parameter for transportation demand forecasting, cost-benefit analysis of transportation investments, and feasibility analysis of transport projects. The VTT is an essential concept in transport economics. The aims of this research are to find out the socio-economic status, travel behavior of the inter-city bus passengers, to establish the value of travel time model and estimate the value of travel time in monetary terms of the inter-city bus passengers.

In this study, about 1000 (One thousand) questionnaires were distributed to the AC and Non AC intercity bus passengers in order to collect the necessary data. Based on the collected data, analysis, findings, conclusion and recommendation are provided by using the Logit model technique.

The frequency of male and female passengers was 76.2% and 23.8%, respectively. The low frequency of female passengers may be due to their exposure and disagree to be interviewed. The age group 31-40 years contains the highest frequency of intercity bus passengers. Around 95% of the passengers' ages were below 50 years. The age group 31-40 years contains the highest frequencies for male, 29.37% and age group 21-30 years contains the highest frequencies for female, 10.32%. The passengers in service represent the highest proportion (44.60%) of inter-city bus passengers. Business and student's represent 25.80% and 15.70% of the inter-city passengers, respectively. These three groups of occupation reported 86.10% of the total inter-city bus passengers.

The highest percentage (33.50%) of income group was BDT10001-20000, and it was followed by 23.60% of income group of BDT20001-35000, 23.20% of income group of no income, and 12.10% of income group of BDT5001-10000. The average monthly income of all bus passengers was BDT14450. The average monthly income of AC and Non-AC bus passengers were BDT16458 and BDT 12412, respectively. The distribution of passengers by monthly travel expense for both male and female were 54.9% and 19.4%, respectively, which laid in less than 10% group. The average monthly travel expense of

inter-city bus passengers was BDT1232. The average working days per week of inter-city bus passengers were 4.31. The distributions of passengers by number of working days were 33.13%, 31.75%, and 12.32% per week for 5 days, 6 days, and 7 days, respectively. The distribution of passengers by number of working hours per day were 45.83% had working hours of 8 and it is followed by zero hours (24.40%), less than 8 hours (6.16%), 9 hours (10.12%), 10 hours (11.90%), 11 hours (0.79%) and 12 hours (0.79%) respectively. The highest frequency of passengers (38.29%) had a family size of five members and it is followed by family size of four members (27.58%) and six members (17.06%). The average family size of inter-city bus passengers was 5. The distribution of AC and Non-AC bus passengers was 7.1% and 92.9%, respectively. The distribution of passengers for family trip, work trip, social trip, medical trip, recreation trip and others was 37.30%, 35.52%, 11.71%, 7.51%, 5.16%, and 2.78%, respectively.

The majority of the inter-city bus passengers paid the fare by themselves. The main reasons for choice of current route due to less time and more comfortable. Most of the passengers (56%) mentioned that the service quality of intercity buses were good. The upper and lower limit of Value of Travel Time per hour was BDT 127.87, BDT 106.25, respectively. The value of travel time per hour of service, business, student and others occupation was BDT 107.66, BDT 102.00, BDT 75.50, and BDT113.25, respectively.

The actual values of travel time can be used in different perspectives of applications. The findings of this study may be useful in the sector of transport economics.

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CHAPTER I

Introduction

1.1 General

The Value of travel time refers to the cost of time spent on transport, including waiting as Well as s actual travel. It includes costs to consumers of personal (unpaid) time spent on travel and costs to businesses of paid employee time spent in travel. Value of travel time (VTT) is an important factor in Transportation research. VTT is a critical parameter in transport project appraisals due to its dominating factor in the user benefit. It is also a very important parameter to travel behaviour analysis and traffic assignment. It is common in value of travel time studies to find the differences in VTT between different transport modes. The VTT is an essential concept in transport economics because the time savings evaluated by the VTT often represent the major part of the user benefits. This means that the social value of a public infrastructure plan in transport depends significantly on the value of travel time. VTT is first implied when modeling of travel behaviour was carried out (Wardman, 1998). The concept of VTT within a microeconomic framework was first introduced by Becker (1965), who argued that's the consumer's utility depends not only on the direct consumption of goods, but also on the share of time to different activities, such as work or travel. After Becker's work, DeSerpa (1971) has developed the time allocation model in which the user's utility is maximized with respect to time and goods consumption. Thus the VTT depends on individual characteristics and mode characteristics. The VTT is higher if the disutility of travelling is higher of an individual in a given mode. Several factors such as reliability, chance of seat, crowding, fare, journey time, existence of air conditioning (AC) and Non AC etc. may influence the utility of travelling.

MVA *et al.* (1987) reviewed the value of travel time initially. They reviewed a few studies available against which to compare its results. In the year 1990s, the experimental data collection methods including Stated Preference (SP) survey was introduced in addition to the revealed Preference (RP) methods. National value of time studies have been conducted

in some European countries including Great Britain, The Netherlands, Norway, Sweden, and Finland, including MVA *et al.* (1987), Hensher (2001) and Mackie *et al.* (2003). It is difficult to design empirical experiments and to explain the various results observed from the empirical studies. Until now, empirical studies have shown less consistence results in the variations of VTT, even showing conflicting evidence in the relationship of Value of Travel Time Savings (VTTS) to travel time (Gunn, 2001).

Many researchers have attempted to model people's attitude about various attributes using Revealed Preference (RP) or Stated Preference (SP) data (Adamowicz *et al.*, 1994; Bates, 1982; Kores and Sheldon, 1988; Louviere 1988, Hensher, 1994). RP requires a large sample size and cannot accommodate hypothetical alternatives. SP surveys put on importance over RP due to the requirement of smaller sample size and the ability to accommodate hypothetical alternatives (Hunt, 2001). Multinomial Logit (MNL) modeling has been widely accepted by researchers and practitioners for analyzing SP data (Louviere and Woodworth, (1983). Attributes considered in utility equations, developed by MNL model, have different measuring units. Conversion of these attributes into a common unit enables comparison or estimation of relative importance of each attribute over the other.

In Bangladesh, majority of the population is almost dependent on the bus transport system, creating a vital role in the development of the country. Over the several decades the improvement of bus services is not adequate. The possible improvement in existing service is to be attributed to an increase in fare level (Kumar *et al.*, 2004). Therefore, it is necessary to understand users' opinion for different attributes of travel such as fare, travel distance, discomfort, etc. Currently limited information on SP experiments in the situation of inter-city bus passengers in Bangladesh or other developing counties are available. A study on value of travel time for inter-city passengers in Bangladesh was conducted by Rahman (2000). In that study a Logit model of value of travel time was developed in different bus routes from capital city of Bangladesh to different district head quarters. As per the information collected by using the stated preference technique, the average value of travel time for inter-city bus passengers is BDT 54 per hour. In this study, an attempt has been made to develop a Logit model of value of travel time based on SP techniques in different bus routes in Bangladesh, which is connecting from Khulna (the 3rd largest metropolitan city of Bangladesh) to different divisional head quarters (viz. Dhaka,

Chittagong, Rajshahi, Barisal, and Rangpur). These areas are directly connected by direct bus routes. Travel demands along these routes are largely served by bus service. Moreover, donor agencies are giving more emphasis on incorporating travel time savings in feasibility analysis of transportation projects in developing counties. It can also be mentioned that the study on the VTT for inter-city bus passengers in the south-western region of Bangladesh was not conducted. This study also intends to focus on the socio-economic characteristics of the inter-city bus passengers of the described routes. The findings of this study would be helpful in providing guidelines for economic and balanced transportation planning for the decision makers.

1.2 Objectives

The objectives of this study are as follows:

a) To investigate the socio-economic status and travel behavior of the inter-city bus passengers in divisional Cities of Bangladesh.

b) To calibrate the value of travel time model and estimate the value of travel time in monetary terms for the inter-city bus passengers in Divisional Cities of Bangladesh.

1.3 Scope of the study

Usually in developed countries transport investment assessments quantify the benefits of value of travel time using standard unit values provided by the agency responsible for the development of transport. Although in developing countries economic evaluation procedures identify the importance of value of travel time. Now a day's significant proportion of available public investment is allocated to transport sector in most of the developed and developing countries. The current development trend illustrates that this will increase in future. This is because of the poor service level of the existing transportation facilities, rapid urbanization and high population growth rate to meet travel demand of the country in order to estimate the value of travel time. Moreover, improvements of local infrastructure and services have the potential to bring out large time savings due to modal shifts and more infrastructure investments being made in an attempt to reduce poverty. Therefore, travel time savings must be included in the feasibility study

of the transportation projects in developing countries. Consequently, this study aims to investigate various issues related to the value of travel time in Bangladesh.

1.4 Organization of the Thesis

This dissertation consists of five chapters. Chapter 1 is an introduction chapter where the idea of VTT in general is presented. The research objectives and scopes are also stated in this Chapter. The background and earlier studies on VTT in Bangladesh and other countries are reviewed in Chapter 2 while the research methodology is described in Chapter 3. Analysis of socio-economic information and calibrated model on value of travel time are presented in Chapter 4. Finally, Chapter 5 point out and highlights the conclusions, limitations and recommendations resulting from this research.

CHAPTER II

Review of Literature

2.1 Background

An extensive literature survey concerning value of travel time (VTT) studies and questionnaire survey carried out in Bangladesh and abroad, has been accomplished and some of them are discussed in this chapter. Value of travel time is the single most important factor in transport economics. It is usually constitute a very large share of total benefits in cost benefit analysis of infrastructure projects (Hensher, 2001a, *Mackie et. al.*, 2003.) and cost benefit analyses are in turn a main part of the information provided to decision makers on new projects.

2.2 Current Research on Value of Travel Time

2.2.1 Approaching for Assessment of Value of Travel Time

Most of the former studies relied on revealed preference (RP) approach with most common subject of mode choice by concluding the value of travel time (VTT) from observed choice. In RP, people not only choose the mode based on money-time trade-off, it also includes comfort, privacy and flexibility of departure, etc. This theme was solved by the stated preference approach to estimate the VTT by using questionnaire to ask about travel cost and time alternatives. But the interviewee might not give the accurate answer regarding the questionnaire design. The approaches regarding the value of non-market aspects of travel are based on the idea of willingness to pay cannot directly trade for money such as time savings (Bates and Whelan, 2001).

2.3 Agreement on VTT by early 1990s

2.3.1 VTT Review

The aim of the review commission is to assess the VTT estimates in order to use for the economic benefits in transport infrastructure investments. The largest review of VTT was carried out in UK by MVA Consultancy in association with Institute of Transport Studies at University of Leeds, and Transport Studies Unit of Oxford University (MVA Consultancy *et al.,* 1987*)*. The survey results showed that VTT varied with number of personal and journey characteristics.

In USA, VTT review was conducted by Texas Transportation Institute (TTI). TTI reviewed huge number of studies and concluded that commonly used mode choice approach was used to estimate the VTT (TTI, 1990). In New Zealand, Miller (1989) and Beca Carterner (1991) reviewed large number of VTT studies and concluded that the base value of VTT is about 60% remuneration for driver and passengers. Bates and Glaister (1990) conducted a review of VTT and this was reproduced from MVA Consultancy (1987).

2.3.2 VTT used in Public Agencies

The economic evaluation of the transport projects incorporating VTT since 1960s. Different countries and road jurisdictions used the VTT of British Columbia (1992a) and Waters (1970). The VTT represents about 50% of the wage rate. However, various countries used different values based on travel conditions, user type, trip purpose etc. AASHTO guidelines (AASHTO, 2003) take 50% of the wage rate as the standard value for travel by car or bus.

2.4 Recent Developments in VTT Research

The progress of many research improve the estimates of the VTT, but none of them discarded the previous methodologies. These researches showed that SP method be liable to give lower estimates compare to RP method (Brownstone *et. al.,* 2003).

2.4.1 Stated Preference Studies

Stated preference approach refers to a family of techniques which use individual respondents' statements about their preferences in a set of transport options to estimate utility function. Stated preference approach requires purpose designed surveys for the data collection. In transport, stated preference approach received increasing attention in the United Kingdom from 1979. Some of the first publications on the subject were by Steer and Willumsen (1981) and Sheldon and Steer (1982). Most recently, techniques have been developed which allow stated preference structures to a direct examination of choice processes (Kores *et al.,* 1986*)*. As per the definition of this approach the variables (factors) of interest and the values (levels) of the factors that need to be evaluated by the respondents. In the more recently developed choice experiments, respondents are offered combinations of a few alternatives and are asked to express their choices either by indicating one chosen alternative or by assigning subjective choice probabilities to each of the alternatives. However, most applications of stated preference in transport research are intended to identify estimates of relative utility weights rather than absolute values (Roberts *et al.* 1986). Two studies in USA; Calfee and Winston (1998) and Calfee *et al.* (2001) employed SP approach to find out VTT in varying travel conditions. It was found that VTT ranges from 14 to 26% more than the average wage rate. It can be concluded that SP approach have a tendency to give lower value.

2.4.2 Experiments on Toll Road

Two projects were conducted in USA on VTT. These projects area involved the provision of high speed express lanes under willing to pay the toll. The estimated VTT per hour was 88% of the wage rate (Brownstone *et. al.,* 2003*)*. Results of these studies suggest that median value of RP data are around 50-90% of the average wage rate (Brownstone and Kenneth, 2003).

2.4.3 Estimates and Variability of VTT

Value of time (VOT) and value of reliability (VOR) are extremely difficult to recognize only in RP studies. Brownstone and Small (2003) included the independent variation in

travel time, cost and reliability necessary to differentiate between VOT and VOR. Based on this concept, it was found that VOR should be 95% of the median values (Small *et al.*, 1999).

2.5 VTT for Other Transport Modes

The VTT varies with modes and the value is higher for car compare to rail (Mackie *et al.*, 2001). This is because of comfort, reliability, crowding and other quality effect. It was also found that rail and car have same VTT whereas bus is around half. In order to obtain the reliable estimate of VTT, quality characteristics should be separated from travel time coefficient, which is the main reason of different VTT for different modes.

2.5.1 VTT of Railway

The VTT of railway is conducted in comparison with road VTT. MVA Consultancy (1987) was unable to divide by user type. It shows that the bus users having lower value than car users for urban commuting. The VTTS of business mode (£15.38) is higher than the VTTS of non-Business mode (£12.44) in New York State, USA.

2.5.2 VTT of Air Travel

There are some previous studies from USA based on RP approach that have estimated value of air travel time (De Vany, 1974). Some studies using Canadian RP data (Cole Sherman Consulting, 1990), which show reliable results to previous SP studies. The VTT of Business mode in air travel is about 59% higher than the non-business mode in New York State.

2.6 Current Studies on Value of Travel Time

2.6.1 Trip Length and VTT

Trip length and passengers income are the two main sources of variation in Value of Travel Time. Small time saving is more important for shorter trips than for long ones and

longer journeys will carry greater utility such as discomfort (Axhausen *et al.,* 2008). The distance elasticity is 0.37 and 0.26 in AHCG (1999) reports and Mackie *et al.,* (2001) study, respectively. These values are important when the regions are different.

2.6.2 VTT and Income

Based on economic theory, VTT should increase with income. Many researches indicate that income elasticity is less than unity (MVA *et al.,* 1987). Almost similar trend is found by Gunn and Rohr (1996). But Mackie *et al.,* (2001) found that the income elasticity is 0.72-0.82.

2.6.3 Trip Purpose

The purpose of trip affects the value of travel time. The business trips have higher VTT than non-business trip. Some studies show that the VTT is slightly higher for commuting than leisure (Mackie *et al., 2001*).

2.7 Value of Travel time Studies in Netherlands

This study was conducted by Hague Consulting Group between 1987 and 1989. This study was focused on private cars and public transport users. Binary logit model was used to estimate the model. The major finding was that the VTTS are valued 50% less than loses by the travelers. Income group less than the base show variation for commuting and business travelers. Much variation has seen from base to income group 8000f/month. These values are almost similar to the VTT of UK.

2.8 Value of Travel Time Studies in Sweden

This study was conducted in early of 1990. The VTT of business travelers was initiated and the variation with respect to income, distance and other relevant factors using SP data was carried out. Table 2.1 shows that the VTT are higher for longer trips. Difference between work trips and other trips for longer trips is insignificant.

Table 2.1 Value of Travel Time (Swedish Crowns/hour)

Trip Type	Car	Air	IC Train	LD Bus
Commuting < 50 km	34	-	-	47
Other < 50 km	27	-	-	38
Trips > 50 km	81	88	74	65
Elasticity (< 50km to > 50 km)	1.38	-	-	0.38

2.9 Value of Travel Time Studies in Australia

There was no national study on VTT in Australia. Hensher (1994) used SP techniques on data to estimate VTT from six capital cities in Australia. The VTT was $6.5-$7.2 per person hour for in vehicle time and $3.4-$7.5 per person hour for public transport time. Age, personal income, and car availability influence the VTT. Smith (1999) used SP data to estimate the VTT for different modes. In this study the value of travel time was estimated around 40% to 50% of the wage rate for full time employees. It was also found that VTT increase with increase of income.

2.10 Value of Travel Time Studies in Japan

The VTT of road users was conducted by using the binary and mixed logit models in perspective of expressway and non-expressway route. Personal VTT of home to work and private trips show an increase trend with travel distance and for business trips show decrease from 0 to 30 km. In case of urban business trips marginal utility may decrease with respect to travel time as travel time increases. However, estimated VTT for business trips below 10 km might be inconsistent in other studies.

2.11 Value of Travel Time Studies in India

Raghavachari and Khanna (1976) developed disaggregated behavioral models incorporating mode and trip frequency choice by using the home interview data in Ahmedabad, India. The value of travel time derived from the calibrated model is as

shown in Table 2.2. It is seen that the VTT lies between 10 to 80 percent of the average wage rate of the population of India.

Table 2.2 Value of Travel Time in Ahmedabad, India

Sl No.	Vehicle Owned	Employed Value (Rs./Hr)	Self-employed Value (Rs./Hr)
1.	Car	2.71	5.90
2.	Scooter	3.96	4.70
3.	Bicycle	0.36	0.55
4.	None	0.19	0.50

A survey was carried out by observing passengers modal choice and income for bus passengers in Delhi-Chandigharh, Delhi-Dehradun-Mussoorie, Delhi-Hissar and Senepal-Rohtak routes. Another survey was carried out for car and taxi passengers in the Bombay-Pune, Debradun-Mussoorie and Delhi-Karnal routes. Table 2.3 shows the results of the analysis. The hourly wage rate was derived by assuming 2000 hours of working time per hour (Gopalaswami and Laxminathan, 1980). It is seen that hourly income rate shows variations between different routes. It may therefore be concluded that the average hourly income varies from Rs. 4.5 to Rs. 6.0 and the average wage of a bus passenger is about Rs. 7.0. It was also observed that about 40% of the trips were work oriented and 60% of the trips were non-work trips. This value may be taken as 25 percent of the work trips for planning purpose.

Table 2.3 Value of Time of Bus Passengers in India

Sl No.	Route	Sample Size	Mean Monthly Income (Rs.)	Hourly wage Rate (Rs.)
1.	Delhi-Chandigarh	205 (96)	919.9	5.97
2.	Delhi-Hissar	117 (28)	217.7	4.53
3.	Delhi-Mussoorie	60 (12)	955.0	5.97
4.	Sonapal-Rohtak	48 (22)	570.6	3.42
5.	Delhi-Chandigarh (Deluxe bus)	30 (12)	2142.9	12.83

Note: Figures in brackets indicate the number of travelers on work trip.

Table 2.4 shows the results of the similar survey on car and taxi passengers. It is seen that the hourly wage rate of car and taxi passengers varies from Rs. 8.0 to Rs. 13.0. The work trip proportion is high in Bombay-Pune and Delhi-Karnal routes where the business related traffic is high. The proportion of leisure trip is high on the Dehradun-Mussoosrie route. The value is Rs. 2.5 for leisure time of taxi and car passengers.

Table 2.4 Value of Time of Car/Taxi Passengers

Sl No.	Route	Sample Size	Mean Monthly Income (Rs.)	Hourly wage Rate (Rs.)
1.	Bomaby-Pune (Taxi)	31 (24)	2045	12.27
2.	Dehradun-Mussoosrie (Taxi)	93 (20)	1306	7.83
3.	Delhi-Karnal (Taxi)	17 (10)	2199	13.19

Note: Figures in brackets indicate the number of travelers on work trip

2.12 Value of Travel Time Studies in Bangladesh

The major transport studies that have been conducted to estimate the travel time cost (TTC) are discussed below.

2.12.1 Jamuna Bridge Feasibility Study – 1989

The travel time cost (TTC) for bus passengers was estimated in the feasibility study of the Jamuna multi-purpose bridge. This TTC was based on the average incomes of the passsengers on the Dhaka-Aricha ferry. In this study, it was assumed that the value of non-work time was assumed to be 25 percent of work time. It was found that the average monthly income for passengers in employment time and non-employment time was BDT 1945 and BDT 1160, respectively. It was also assumed that the average working hour per month was 175 hours. Therefore, the TTC in employment time and non-employment time per hour was BDT 11.14 and BDT 1.66, respectively. It was also mentioned that 65% passengers were traveling for business time. As a result, the weighted average of TTC was adjusted and the value became BDT 7.84 per hour.

2.12.2 Road Master Plan – 1992

According to the Road Master Plan (RMP), the average TTC for bus passengers was BDT 10.60 per hour. The economic value for utility and cars were BDT 15.00 and BDT 20.00 per hour, respectively.

2.12.3 Road Materials Standards Study – 1994

The Road Materials Standard Study (RMSS) was based on the RMP works. Table 2.5 shows the TTC of RMSS and IDC of different types of vehicle. The IDC costs and RMSS costs which were adjusted by increase in per capita Gross Domestic Product (GDP).

Table 2.5 Travel Time Cost of RMSS and IDC in BDT

Vehicle type	RMSS 1992	IDC 1996	IDC 1998
Car	23	26	27
Utility	17	19	20
Bus	9	10	11

2.12.4 Dhaka Urban Transport Study Phase 2 (1996)

The Travel Time Cost based on a household interview survey was derived in the Dhaka Urban Transport Study (DUTS-2). This TTC was derived by estimating the average per capita income which was divided the household income by household size. Then it was factored by the number of trips completed by each mode which provides the monthly value. This monthly value was converted to an hourly travel time value. It was assumed that 180 working hours was considered to calculate the hourly travel time value. Table 2.6 shows the passengers travel time cost derived in DUTS-2.

Table 2.6 DUTS-2 Passenger TTC's (BDT)

Bus	Tempo	Car	Auto Rickshaw	Motor Cycle	Bicycle
5.52	4.79	19.17	12.48	12.08	3.51

The estimated TTC in DUTS was based on the assumption of the average household income is distributed equally among the household members. Because of this, the estimated values seem to be underestimates. According to Bangladesh Bureau of Statistics (BBS, 2001), 71% of households have only one wage and 18% have two.

2.12.5 Dhaka Eastern Bypass Study – 1997

The Stated Preferences (SP) technique was used in the Dhaka Eastern Bypass Study (DEP) to estimate the travel time cost. The SP technique was first used in Bangladesh in that study. In that study, 1576 interviews were conducted by the DEP team including 651 number bus passengers, 461 number of car users, 418 number of truck drivers and 46 number of truck operators. The survey locations were main bus stations and foremost arterial routes to the North, East and West of Dhaka city. The DEP used the TTC values of IDC (Table 2.6) as the derived values from the DEP study were very high. Table 2.7 shows the value of travel time of Dhaka Eastern Bypass Study.

Table 2.7 Value of Travel Time per Occupant in Dhaka Eastern Bypass Study

Vehicle Type	Value of Travel Time per Occupant (BDT)
Car Users	74.4
Air Conditioned Coaches	35.6
Chair Coaches	33.6
Ordinary Buses	28.8
Truck Owner	49.1

2.12.6 Time Travel Cost Survey (1997)

In order to apply the identical travel time cost to vehicles throughout Bangladesh, an average TTC value should be derived. The TTC of the Halerow were considered to be high due to the effect of higher than average incomes in the Dhaka area and the nature of the SP. TTC survey was conducted again by the Economics Circle to expand the sample outside the Dhaka area.

A questionnaire survey was conducted based on the Halerow Fox model for compatibility

of the different characteristics of respondents outside Dhaka. The main road survey was conducted at the Aricha ferry crossing to compare with the Jamuna Bridge Feasibility Study and RMP studies. Additional surveys were also conducted in Dhaka, Khulna, Rajshahi and Chittagong to extend the wide coverage. The main road survey interviewed 268 bus passengers in Dhaka, while 909 passengers were interviewed in the feeder road survey. The main road bus fleet consists of air-conditioned luxury buses, chair buses and ordinary buses (large and mini-bus types). The most interesting characteristic is that only eight percent on main road and six percent on feeder roads were the business trips.

On the main road AC buses are only a little bit faster than other buses. This indicates that the higher fares paid for AC and Chair class travel are primarily for comfort and not for improved journey times. On an average most journey on the Feeder roads were one hour duration and the cost of the journey consisted of the fare which included ferry charges. The majority of trips were intercity passenger trips. It may be due to the passengers live and work in the city and go back to home at the weekends. Table 2.8 represents the Travel Time Cost in BDT/hours.

Table 2.8 Average Travel Time Costs

Survey Location	Type of Vehicle	Road Type	TTC (BDT/hr.)
Aricha Ghat	A/C Bus	Main Road	31.4
Aricha Ghat	Chair Bus	Main Road	26.9
Feeder Road	Tempo	F3031/F3032	9.9
Feeder Road	Ordinary Bus	F3031/F3032	13.5
Feeder Road	Ordinary Mini Bus	F3031/F3032	10.5

2.12.7 Feasibility Study of Padma Bridge

The Padma bridge was expected to provide significant travel time savings to drivers especialy among the Capital city (Dhaka) and south west region by about 2 hour for Cars and more than 10 hour for Trucks. The growth rate of traffic was conisdered as 9%. The Travel Time Cost (TTC) and Vehicle Operation Cost (VOC) of bus passengers was

estimated in the feasibility study of Padma multi-purpose bridge. In this study road user's benefit, other direct benefits, wider economy benefits and indirect benefits were considered. The road users benefit was estimated based on vehicle operation cost (VOC) and savings in travel time cost (TTC). These constitute a major part of the quantified benefits. The estimated VOC and TTC benefits were adjusted for the traffic forecast. The value of time was converted into monetary value. It was estimated that savings of travel time costs account for 23% of total benefits. It was also accounted that VOT could increase with uncertainty and delay and waiting time in the economic evaluation was valued 1.5 times in vehicle time. The valuation of wait time can vary from 1.5 to 3.5 times of in vehicle time.

Table 2.9 Road user cost

Item	Truck	Bus	Car	Motorcycle
VOT (BDT per hour)	107	555	145	40
	VOC (BDT/Km)			
Good road condition	17	18	13	2
Good road condition	19	20	14	3
Good road condition	24	36	19	3

Source: "Road User Cost Annual Report for 2004-05", Roads and Highways Department and "Household Income and Expenditure Survey, 2005". BBS

Table 2.10 Travel Time Savings

Destination	Padma Bridge	Paturia Ferry	Savings	Mawa Ferry	Savings
		Khulna			
Time	3hr30min	7hr50min	4hr20min	12hr45min	9hr15min
Distance	170km	240km	70 km	170km	-
		Jessore			
Time	3hr20min	7hromin	4hr40min	12hr55min	9hr35min
Distance	160 km	210 km	50 km	160 km	-

Source: Document of the World Bank. Report No.: 56512-BD

2.13 Modeling Approach of Value of Travel Time

Most approaches to time evaluation have been through revealed preferences, where an implied value of travel time was a by-product of some explanatory mathematical model of travel choice. These values were generally implied by the ratio of estimated coefficients in a linear function. Typically these coefficients were estimated with quite large standard errors. Any ambiguity of individual coefficient estimates yielded by conventional econometric analysis. Consequently the values of time estimated by these revealed preference approaches to real travel choices must be subjected to wide confidence intervals.

The types of models developed for these techniques are stochastic and disaggregate. The basis of the disaggregate models is the individual trip maker rather than zonal aggregates. The crucial assumption of these models is that the decisions are based on the appropriate attributes of the available alternatives, evaluated in terms of the trip maker's preference functions (Bureau of Transport Economics, 1982).

More specifically, if both time and cost of alternative transport decisions are included in the model, the rate of substitution of money for travel time can be determined and interpreted as a value of travel time. The first step usually taken in developing travel choice models is to determine a mathematical function that represents the basic hypotheses and assumptions which are essential for the models. Work in this field has utilized Discrete choice model, discriminant, Probit and Logit analyses.

2.13.1 Becker's Model

Becker (1965) suggested an expanded version of the traditional microeconomic theory of utility maximization which allows for time to enter as a new dimension. The utility function is given in Equation (2.1).

$$U = U(Z) = U(Z_1, Z_2, \ldots, Z_m) \qquad (2.1)$$

Z represent final commodities that enter the utility function.

Income and time constraints enter the model. Total income, which is the sum of wage and unearned income, has to be spent on market goods;

$$\sum p_i x_i = I = V + T_w w_0 \qquad (2.2)$$

Where w_0 is the average wage, p is the price vector of the intermediates, T is the time and V is the unearned income.

2.13.2 DeSepra's Model

DeSepra (1971) specified the utility function as in Equation (2.3).

$$U = UU(\overline{X,T}) = U\ (x_1, x_2, \ldots x_n, t_1, t_2, .. t_n) \qquad (2.3)$$

This formulation differs from Becker's concept, in that utility can be derived from time and goods. The income constraint is identical to Becker's, all income has to be spent on the goods as given in Equation (2.4).

$$Y = \sum_i^n p_i x_i \qquad (2.4)$$

The resource constraint is given in Equation (2.5).

$$T^0 = \sum_i^n T_i \qquad (2.5)$$

2.13.3 Discrete Choice Models

Jara-Diaz (1997) proposed a model for discrete choice, where only one alternative can be chosen from choice set X. Every alternative is associated with different allocation of time and goods.

$$\max U(G, L, W, t_i) \qquad (2.6)$$

$G+C_i = wW,\ L+W+t_i = T,\ L \geq \alpha G$ and iεM. G is the aggregate consumption, L is the leisure, t_i and c_i are the travel time and cost associated with the i-th alternative, w is the wage rate.

W is the working time and α is the consumption time per unit of G. Then the above problem reduces to

$$\text{Max}_w\ U[(wW\text{-}c_i), (T\text{-}W\text{-}t_i), W.t)$$

$$\text{s.t } T\text{-}W\text{-}t_i\text{-}\alpha(wW\text{-}c_i) \geq 0 \qquad (2.7)$$

The expression of value of travel time can be obtained from Equation (2.8).

$$VTT = \frac{\partial V_i/\partial t_i}{\partial V_i/\partial c_i} = w + \frac{(\partial U/\partial W)-(\partial U/\partial t_i)}{(\partial U/\partial G)-a\theta} \qquad (2.8)$$

Where, V_i is the indirect utility function of i-th choice. Jara-Diaz (1997) claims that VTT in Equation (2.8) captures what DeSepra called the value of saving time in a travel activity. It is noted here that all theoretical models which were used to derive the VTT, a high degree of concept was involved. Although the preferences and income were incorporated but other socioeconomic variables were neglected.

2.13.4 Discriminant Analysis

Discriminant analysis (Beesley, 1965) was the earliest techniques used in developing a behavioral model in the situation of transportation sector. It was used to determine a function of user and transport characteristics. The choices analyzed were binary choices, that is the choice involved only two alternative packages. Thus the problem was to determine a set of discriminant functions D_{ij} (where D_{ij} is the discriminate function between travel package i and j that minimized misclassification by the model. The discriminant function used in transport demand modeling to comprises the characteristics of the alternative transport packages and the characteristics of the trip makers. The discriminant function is expressed as in Equation (2.9).

$$Z_{ij} = \sum_{k=1}^{n} \alpha_k (f(X_{ki}, _{kj}) + \sum_{l=1}^{m} \beta_l U_l \qquad (2.9)$$

Where, X_{ki}, X_{kj} = the values of the k^{th} attributes of the i^{th} and j^{th} travel packages; U_l = user attributes; α_k = parameters associated with alternative systems; β_l = parameters associated with user characteristics; $f(X_{ki}, X_{kj})$ = is a function that may take either of the forms $(X_{ki}-X_{kj})$ or (X_{ki}/X_{kj}).

Much criticism has been ranked at discriminant analysis as an effective mechanism for explaining modal choice and the value of travel time (De Donnea, 1972; Hensher, 1973). The more refined statistical techniques of Logit analysis have subsequently been utilized.

2.13.5 Logit analysis

The basic principle of the Logit analysis is the probability of the occurrence of an event or choice varies with respect to a function f(x) as a symmetrical sigmoid curve, which is labeled the 'logistic curve'. Mathematically the Logit model is expressed as in equation (2.10)

$$P_1 = \frac{e^{f(x)}}{1+e^{f(x)}} \tag{2.10}$$

In transport demand analysis this model is used by defining the choice made by an individual trip maker as an event. In a binary choice situation P_1, refers to the probability of trip makers choosing mode 1 in preference to the other. The function f(x) can be expressed in a number of different ways. The model developed by Stopher (1976) was based on the function f(x) expressed in terms of the differences in travel times and travel costs which is given in equation (2.11)

$$f(x) = \alpha_1(C_1 - C_2) + \alpha_2(t_1 - t_2) + \alpha_3 \tag{2.11}$$

Stopher (1976) also demonstrated that the Logit analysis is simpler and quicker to calibrate the model.

2.13.6 Probit Model

The basis of Probit approach is that if members of a population are subjected to a attributes that can range over an infinite scale, the frequency of responses will be normally distributed. Lisco (1967) and Lave (1968) have applied this technique in analysis of modal choice. The elements of the alternative modes in a binary situation and the characteristics of the trip makers are assumed to be attributes, and the choices are the responses. The Probit equation used in the analysis can be represented as by Equation (2.12).

$$Y = \sum_{k=1}^{m}\left(\alpha_k(X_{1k} - X_{2k})\right) + \sum_{l=1}^{n}\left(\beta_l(U_l)\right) \qquad (2.12)$$

Where, X_{1k} and X_{2k} are the values of the k^{th} attribute of modes 1 and 2, respectively; U_l is the user attributes; and Y is the value of the Probit.

The value of the Probit represents the number of standard deviations away from the mean of a normal distribution and the value of time is the ratio of the coefficient of travel time to that of cost.

2.13.7 Regression analysis

Regression analysis is a statistical tool where the relationship between a dependent variable and a set of independent variables are determined. In transport analysis the problem is usually a choice between different modes of transport (e.g. private and public transport). In these cases, the dependent variable will be assigned one of two values:
$Y_i = 1$, if the i^{th} person chooses the train; or $Y_i = 0$, if the i^{th} person chooses the car

The simplest formulation which uses the linear probability function and computes least- squares estimates of the co-efficient of the model is given in Equation (2.13):

$$Y = X_\beta + \varepsilon \qquad (2.13)$$

Where, Y = dependent variable; X_β = dependent variable and ε = standard error

There are many examples of regression analysis in transport planning (Merlin and Barbier, 1962; Stopher, 1966; Gronau, 1970 and Mansfield, 1970), with a number of limitations in the above mentioned models. It has been found that errors in the data and particularly time and cost data will greatly affect the obtained value of travel time obtained. The suggestion of such errors in the value of travel time studies have been examined by Watson (1974) and De Donnea (1971). Watson(1974) found that it was often impossible to determine the direction of bias in the values of time that are caused by errors in the data and concluded that there is no single correct value of travel time, as the definition of 'correct' depends on the context within which the model is built.

2.14 Evaluation of Travel Time in Monetary Terms

In order to determine the value of travel time of passengers in monetary terms, different approaches are available. These are average wage rate approach, revealed preference approach, and stated preference approach. The most scientific approach in determining the value of travel time savings is the selection of time and cost for a journey in a number of alternatives.

2.14.1 Average wage rate approach

The simplest approach for evaluating the value of travel time in monetary terms is the determination of average wage rate of the travel. It is necessary to categories the passengers into different groups because of the different wage rates of different categories of passengers. The different groups are car passengers, bus passengers, bus drivers, truck drivers, and truck helpers. The average wages of two wheeler (motorized and non-motorized) traffic should be considered if the amount is considerable. Also the wage rate of the pedestrian can be determined by similar manner. A sample of passengers of different categories is selected to collect the data of monthly income and estimate the average monthly income. The unemployed children and housewives should include in the sample. In order to include the wage rate for the estimation of value of travel time, the total cost accepted by the employer should be identified. For detailed investigation, the exact percentage of expenditure should be included to the to the wage rate.

2.14.2 Opinion Survey Approach

This method is also known as questionnaire approach. In this method the travelers are asked to evaluate themselves the price they would like to pay for reducing travel duration of different sample. Travelers rating would depend naturally upon the wage rate of the passengers. The travelers are classified into various income groups. This study has the noticeable disadvantage that very often subjective assessment of the individuals will go into the data set and the results will be extensively varied (CRRI, 1977).

2.14.3 Revealed Preference Approach

Revealed preference approach is a method of analyzing choices made by individuals, mostly used for comparing the influence of policies on consumer behaviour. Revealed preference approaches are the most appropriate tool for deriving utilities and estimating models of travel demand. This approach cannot be used in a direct way to evaluate demand under conditions which do not yet exit. In this method, the explanatory variables can be expressed in objectives or engineering units; therefore they are normally restricted to primary service variables (journey time and cost) and in practice rarely be used to evaluate the impact of changes in secondary travel variables. The travelers would be asked at the selected location regarding the origin and destination of the trip, characteristics of the travelers and their journey details such as journey costs, time etc.

2.15 Significance of Value of Travel Time in the Perspective of Bangladesh

In developing countries like Bangladesh, there has been a considerable reluctance to attribute any value at all to time savings. Only working time savings are included in the analysis in most of the cases. Evaluation of travel time savings in developing countries like Bangladesh and its incorporation in economic analysis of transport projects have become an important research topic. Very few studies considered the influence the socio-economic status of the passengers to determine the value of travel time. This study aimed to estimate the value of travel time of intercity bus passengers.

CHAPTER III

Methodology

3.1 General

This chapter presents the research approach, research design, data collection methods, and data analysis method used in this study.

3.2 Questionnaire Survey

The questionnaire was divided into three parts. These are (a) demographics, the questioner item correspondent to age, gender, occupation, monthly income, monthly travel expenses, number of working days per week and family size, (b) Travel characteristics, the related item concern about purpose of trip, fair paid, reasons for choosing current route, quality of service and available alternative mode, and (c) stated preference information of passengers to determine the travel time attribute. The questionnaire was developed based on Benchmarking in European Service of Public Transport survey's tool and previous research that conducted in Jogjakarta, Indonesia (Liden *et al.* 2008). Respondent were asked to provide the information and the opinion regarding the alternative trip option.

3.3 Procedure

Stated preference interview survey was used as a data collection method in this study. Reason for using this type of survey is to obtain the highest possible quality of results. In order to get the realistic data, face to face interview should be conducted by experienced interviewer.

3.4 Sample size

It is essential to select an appropriate size before any questionnaire survey. Too large or too small sample size is not desirable for analysis. Two basic factors are very important

for the success of any questionnaire survey. These are suitable sample size and the nature of the questionnaire.

It is very costly to collect large number of samples. In case of too small sample size, the degree of variability will have outsized. In between the two values, the cost-effective sample size can be obtained. In this study, the analysis involved the determination of value of travel time of inter-city bus passengers in various socio-economic conditions. Robert (1978) mentioned that for interview survey a sample size of approximately 1-2% of the population can be considered as satisfactory.

3.5 Questionnaire Design

The first step in the design of SP exercise is the definition of variables of interest and the values of the factors that need to be evaluated by the respondents. In Bangladesh, journey time, existence of AC/Non-AC, reliability of services, comfort, safety, availability of seats and fare are the factors which influence the choice of individuals for selection a mode or comparison of modes. In this study, journey time, existence of AC/Non-AC and fare are considered. The reliability, comfort, safety and frequency of service are not considered as the transport service and frequency of service are not reliable in most of the times and comfort and safety are difficult to evaluate.

The VTT is measured by means of stated preference experiments with trade of between travel time and travel cost (Bates, 1982). The SP method is developed out of conjoint analysis where attributes are considered jointly. Conjoint is an established approach for understanding and predicting consumer trade-off and choices in marketing research. SP Techniques have largely been used in a wide range of discipline such as transportation (Hensher, 1994), environmental (Adamowicz *et al.,* 1994*)*, and product marketing. Most of the SP studies were carried out using traditional rating-based preference techniques (Hunt, 2001; Praveen and Rao, 2002). In rating based SP studies, numbers are used to represents the preference of individuals. These numbers may not represent the actual or true choice behaviour of individuals due to the lack of strong theoretical foundation consistence with economics (Adamowicz *et al.,* 1994). As stated Choice Methods (SCM) has strong theoretical foundation based on economic theory, they are used

to model the behaviour of individuals. In this study, different choices were proposed using various attributes and presented to the respondent in the form of a choice set. Responses in the form of choices among the given choice alternatives were used to estimate the importance of the attributes.

3.6 Experimental Design

Experimental design (ED) is a strategy of planning, conducting, analyzing and interpreting experiments so that sound and valid conclusions can be drawn efficiently, effectively and economically. It provides the experiments of a greater understanding and power over the experimental process. ED enables traffic engineers to study the effects of several variables affecting the response or output of a certain development (Montgomery, 1988). In the recently developed choice experiments, respondents are offered combinations of a few alternatives (typically two to five) and are asked to express their choices either by indicating one chosen alternative or by assigning subjective choice probabilities to each of the alternatives. The purpose of an experimental design is to define the combinations of the levels of all the factors included in the experiment in such a way that they are completely uncorrelated between the alternatives. Consequently, respondents can only evaluate a limited number of alternatives at a time, typically 9 to 16, so the design including all possible combinations of all levels of each factor (a full factorial design) can only be used if there are very few factors and levels.

When a full factorial design generates too many alternatives, the number can be reduced by adopting a fractional factorial design, so that only a selection of all possible combinations is presented to the respondents. Example of full factorial and fractional factorial designs, both including three factors at two levels are given in Table 3.1. It should be noted that both designs can be used to estimate the direct effects. But the interaction effects can only be estimated if the full factorial design is used (Andersen *et. al.,* 1986). One common factor has to be included in all separate exercise, to enable the utilities from each to be linked. Alternatively a blocked design can be used, in which systematically different exercises are given to different groups of respondents. When the results from all respondents are analyzed together all utilities can be estimated, but for individuals only some of the utilities can be identified (Kroes and Sheldon, 1988).

Table 3.1 Example of Experimental Design

Full Factorial Design	Factor 1	Factor 2	Factor 3
Alternative 1	1	1	1
Alternative 2	1	1	2
Alternative 3	1	2	1
Alternative 4	1	2	2
Alternative 5	2	1	1
Alternative 6	2	1	2
Alternative 7	2	2	1
Alternative 8	2	2	2
Fractional Factorial Design	Factor 1	Factor 2	Factor 3
Alternative 1	1	1	1
Alternative 2	1	2	2
Alternative 3	2	1	2
Alternative 4	2	2	1

In this study, attributes such as journey time, fare, and existence of AC and non-AC were considered for the preparation of choice sets. Existence of AC and Non-AC attributes were coded as an integer scale as shown in Table 3.2. In addition, fractional factorial design was used to produce six choice alternatives.

Table 3.2 Attribute Existence of AC and non-AC Representation

Condition of Existence of AC and Non-AC	Code Number
AC	0
Non-AC	1

3.7 Questionnaire Format

The questionnaires were prepared after considering the entire design issues. The questionnaire sheets contained four parts viz. common trip information, socio-economic information, existing trip information, and stated preference for alternative trip options. Common trip information are origin, destination, mode, trip distance, travel time, and fare. Socio-economic information include age, gender, occupation, monthly income, monthly

travel expenses, number of working days, purpose of the trip, fare paid authority, reasons for choosing current route, quality of the service, and available alternative mode. Preferences data were collected in the form of choices where respondents choose an alternative from alternatives in the choice set. The format of questionnaire for six divisional cities are given in Appendix-A.

3.8 Locations and Period of Survey

The questionnaire survey was conducted for a period of 30 days. Four trained students were recruited to conduct this survey. Data were collected at 7:30 am to 12:30 pm in the morning and 7:30 pm to11:00 pm at night.

The interviewees were selected from the Sonadanga bus terminal, Hotel Royal Ticket Counter and Bangladesh Road Transport Corporation (BRTC) ticket counter of Khulna Metropolitan City. A total of 1000 questionnaires were distributed and 504 completed sheets were collected. The inter-city bus passengers were started their journey from Khulna. The destination cities were five divisional cities in Bangladesh (viz. Dhaka, Chittagong, Rajshahi, Barisal, and Rangpur).

Before undertaking the survey, a total of four interviewers were preliminary selected. In order to make the interviewers well prepared for the questionnaire survey one day comprehensive training program was arranged. The training program was divided into two parts. One part was half-day theory session in order to make the interviewers familiar with aspects of questionnaire survey and another part was half-day practical session in order to introduce the face to face interview method.

The survey stations are included in the questionnaire survey were in front of Hotel Royal, Sonadanga Bus Terminal and BRTC Bus Counter (In front of Khulna New Market). Table 3.3 shows the total number of buses that departure from the selected bus station in Khulna Metropolitan City. The questionnaire forms were designed for collecting data related to trip characteristics, respondents' socioeconomic characteristics and stated preference choice from the choice set.

3.8.1 Sonadanga Bus Terminal

Sonadanga Bus Terminal (SBT) is the central bus terminal of Khulna Metropolitan City. Different type of buses (AC, Non-AC, Local, Express) starts their journey from SBT to different parts of Bangladesh. Table 3.3 shows the total number of buses that departure from the SBT to different parts of Bangladesh.

Table 3.3 Number of buses departure from Sonadanga bus terminal

Origin	Destination	Total number	Origin	Destination	Total number
Khulna	Dhaka	32	Khulna	Chittagong	4
Khulna	Jessore	30	Khulna	Sylhet	2
Khulna	Narail	20	Khulna	Rajshahi	4
Khulna	Satkhira	40	Khulna	Mongla	40
Khulna	Bagerhat	30	Khulna	Faridpur	2
Khulna	Gopalgonj	30	Khulna	Barisal	2
Khulna	Paikgacha	60	Khulna	Bogra	3
Khulna	Koyra	30	Khulna	Rangpur	1
Khulna	Meherpur	6	Khulna	Kushtia	20
Khulna	Shariatpur	10	Khulna	Rajbari	2
Khulna	Pirojpur	30	Khulna	Patuakhali	2

3.8.2 Hotel Royal Ticket Counter

The Hotel Royal Ticket Counter (HRTC) is located at the heart of the city. The passengers of the Central Business Districts (CBD) can easily purchase their tickets from the Hotel Royal Ticket Counter. Different types of buses start for Dhaka, Chittagong, and Sylhet from Hotel Royal ticket counter. Table 3.4 shows the total number of buses that departure from the HRTC to Dhaka, Chittagong, Sylhet etc.

Table 3.4 Number of HRTC buses departure from Khulna

Origin	Destination	Total number	Origin	Destination	Total number
Khulna	Dhaka	14	Khulna	Pathorghata	4
Khulna	Chittagong	4	Khulna	Borguna	4
Khulna	Kuakata	4	Khulna	Bogura	2
Khulna	Barisal	2	Khulna	Satkhira	2

3.8.3 BRTC Ticket Counter

All of the BRTC buses (AC and Non-AC) start their journey from BRTC ticket counter to the different parts of Bangladesh. Table 3.5 shows the number of buses that departure from BRTC ticket counter to different districts of Bangladesh.

Table 3.5 Number of buses departure from BRTC counter

Origin	Destination	Total number	Origin	Destination	Total number
Khulna	Rajshahi	4	Khulna	Kurigram	2
Khulna	Sylhet	2	Khulna	Pabna	5
Khulna	Panchagor	2	Khulna	Bogra	3
Khulna	Mymensing	2	Khulna	Dhaka	4
Khulna	Dinajpur	6	Khulna	Rangpur	3
Khulna	Barisal	4	Khulna	Gopalgonj	30

3.9 Model Calibration and Statistics

The objective of the analyses of stated preference data is to 'decompose the overall preferences into 'part-utilities' attached to each of the attributes used in the stated exercise. In this study it was established that, the relative effect of each attribute on the overall utility which the respondents attach to each option.

A standard procedure for deriving behavioral values of different travel attributes is to use the tradeoff ratio implied by the coefficients of cost and other variables estimated in mode choice models. Such a model usually assumes that the trade-off ratio remains constant for all the members of the population. To overcome the problem, market segmentation approach can be used by categorizing the population among various segments depending on socioeconomic variables (Ortuzar and Willumsen, 1990). Ben-Akiva and Lorman (1985) suggests that the problem of heterogeneity can be overcome by allowing the trade-off ratio to vary along various observed dimensions such as income and age. These approaches have been widely used to evaluate value of time in various countries (Bureau of Transport Economics, 1982). In this study the first approaches is used because of its usefulness in the applications of developing policies for different group (Alam *et al.* 1999).

Random Utility Theory (McFadden, 1974), the basis for several models and theories of decision making in psychology and economics, states that the utility of each element consists of an observed (deterministic) component denoted by V and a random (disturbance) component denoted by ε is given in Equation (3.1).

$$U = V + \varepsilon \tag{3.1}$$

The deterministic part V is again a function of the observed attributes (z) of the choice as faced by the individual, the observed socioeconomic attributes of the individual (S), and a vector of parameters (β), then V can be expressed as Equation (3.2).

$$V = V(z, S, \beta) \tag{3.2}$$

The deterministic component of the utility function can be expressed as Equation (3.3).

$$V_i = pc_1 + qt_1 + rX_1 \tag{3.3}$$

Where V_i is the deterministic component of the utility function; *p, q, r* are the parameters associated with the attributes; and c_1, t_1, and X_1 are the attributes describing the alternative.

Now, the generalized form of utility equation can be written as Equation (3.4).

$$\text{U} = \text{p (Fare)} + \text{q (Travel time)} + \text{r (Existence of AC)} + \varepsilon \tag{3.4}$$

Assuming Gumbel distribution for ε, the probability that an individual chooses i can be given by the MNL model (Ben-Akiva and Lerman, 1985) as shown in Equation (3.5).

$$P_i = \frac{e^{\mu V_i}}{\sum_{k=1}^{m} e^{\mu V_k}} \tag{3.5}$$

Where, m is the number of alternative available to the individual; and μ is the scale parameter

This model is known as logit model and widely used in transportation planning for its flexibility. Both the scale parameter and the parameters of the utility function cannot be determined simultaneously from the model. Usually, it is assumed that the value of μ is 1 and this assumption does not change the relative importance of the parameters of the utility function. The values of the parameters of the utility function can be calibrated by using the "Maximum Likelihood Method".

The variables considered in the model include fare (c), travel time (t), and existence of air-condition in the vehicle (AC). A unit change in the utility value contributed only through change in the travel time would be caused by changing the vehicle travel time by $1/\alpha$. In Stated Preference experiments the values of the variables were kept similar to the values experienced by the respondents in their inter-city trip. The existence of air-conditions in the vehicle was included in the model in the form of dummy variable. The value of dummy variable becomes 1, otherwise it is 0 if air-condition facility exists. The indirect utility function is given in Equation (3.6).

(3.6)

The model coefficients can be used to determine the value of travel time and the monetary values for other attributes.

3.9.1 Parameter Estimation

There are many ways in which the overall utilities can be decomposed into part-utilities. The four most commonly known groups of techniques are:

i) Naive or graphical methods
ii) Monanova
iii) Regression techniques

iv) Logit and Probit models

3.9.1.1 Naïve or graphical method

This is based on the value of a particular feature unrelated to the presence or absence of any other feature, given the class variable. A naive classifier considers each of these features to contribute independently to the probability regardless of the presence or absence of the other features. The Naive or graphical method sometimes worked very well in many complex real-world situations. An advantage of naive or graphical method is that it only requires a small amount of training data to estimate the parameters (means and variances of the variables) necessary for classification. Because independent variables are assumed, only the variances of the variables for each class need to be determined and not the entire covariance matrix. Depending on the precise nature of the probability model, naive or graphical method can be trained very efficiently in a supervised learning setting. In many practical applications, parameter estimation for naive methods uses the method of maximum likelihood; in other words, one can work with the naive without believing in Bayesian probability or using any Bayesian methods. This method does not provide the statistical indications over the quality and the consistency of the results.

3.9.1.2 Monanova

It is a statistical decomposition technique which has been specifically developed to analyze rank order type overall preferences obtained in stated preference experiments. The method uses the principle of 'stress minimization' to arrive at an optional solution with the optimum being the set of part-utilities for which the rank order as predicted by the model corresponds most closely with the actual rank order as given by the respondent. The method uses an iterative algorithm, with the first iteration being the solution as provided by the previously discussed native method. If the part-utilities are able to reproduce exactly the reported rank order, that solution is retained and the algorithm stops. The method is applied to each individual response separately, and does not provide overall goodness of fit statistics about the fit of the model. Also it is very restrictive in terms of alternative specifications of utility, and it is not very well suited for developing predictive models. Therefore, this technique although once often used, has become less population in transport studies.

3.9.1.3 Regression techniques

These are used to determine the relationships among all the variables which include several techniques for modeling and analyzing several variables depending on the relationship between dependent variable and independent variables. Regression analysis used to understand the dependable variable changes with the changes of the independent variable varies when the other independent variables are remains fixed. This method is used for prediction and forecasting to find out which independent variables are related to the dependent variable and also to establish the forms of relationships. This method is widely used in the field of transportation engineering. Many techniques have been developed for carrying out regression analysis. Widely familiar methods are linear regression and ordinary least squares regressions. In this method, regression functions have been defined in terms of finite number of unknown parameters. Regression analysis performance depends on the form of data generating process and how it relates to the regression approach being used. In order to analyze the classical stated preference exercises, ordinary least squares (OLS) technique is used. Now-a-days, weighted least square (WLS) and generalized least square (GLS) have been used to analyze stated preferences obtained in choice experiments.

3.9.1.4 Logit and Probit techniques

A Logit is a unit of measurement to report relative differences between candidate ability estimates and item difficulties. The purpose of the Logit and Probit techniques is used to model a relationship between a dependent variable and one or more independent variables. The dependent variable is a discrete variable that represents a choice, or category, from a set of mutually exclusive choices or categories. For instance, an analyst may wish to model the choice of automobile purchase (from a set of vehicle classes), the choice of travel mode (walk, transit, rail, auto, etc.), the manner of an automobile collision (rollover, rear-end, sideswipe, etc.), or residential location choice (high-density, suburban, exurban, etc.). The independent variables are presumed to affect the choice or category or the choice maker. Pair wise choice experiments can be analyzed directly, rank order responses can be analyzed by transforming of choice sets using a procedure described by Chapman and Staelin (1992). The estimation is typically based on the statistical principle of

likelihood maximization. In this study Logit and Probit analysis was used to calibrate the model.

3.9.2 Estimation of the Value of Travel Time and other Attributes

The value of travel time (VTT) of intercity bus passengers and other attributes can be determined as the ratio of the coefficients of the variables obtained from the calibrated coefficients of the utility function. The average value of travel time for the population for which the model has been estimated is given by Equation (3.7).

$$V' = \frac{q}{p} \tag{3.7}$$

The above equation provides a point estimate of the value of travel time. It is assumed that both the value of p and q are randomly distributed for a given level of significance (Garrido and Ortuzar, 1993). The confidence interval can be constructed on the basis of t-statistics for the estimated VTT. The t -statistics for the estimated value of travel time is given in Equation (3.8).

$$t = \frac{q - V_p}{\sqrt{Var(q - V_p)}} \tag{3.8}$$

Equation (3.8) can be rearranged as Equation (3.9).

$$V = V' \times \frac{\left(\frac{t_c}{t_t}\right)}{t^2 - {t_c}^2}\left[(\rho t^2 - t_t t_c) \pm \sqrt{(\rho t^2 - t_t t_c)^2 - (t^2 - {t_c}^2)(t^2 - {t_t}^2)}\right] \tag{3.9}$$

Where, t is the standard normal value for the required significance level; t_t and t_c are the t-statistics of time and cost variables; and p is the correlation coefficient.

The upper and lower bounds of VTT at any given level of significance can be estimated by using the Equation (3.9). The behavioral value of introducing air conditioning can be estimated by using Equation (3.10).

$$V_{AC} = \frac{r_{ac}}{p} \tag{3.10}$$

Where, r_{ac} is the calibrated coefficient of the intercity AC bus passengers function. The upper and lower bounds of these values can be estimated in the same way as determined for the value of travel time.

3.9.3 Statistics

When all parameters are zero then the value of log likelihood function is L(0). In binary choice models, the log likelihood of the most naïve possible model is one in which the choice probabilities are ½ for each of the two alternatives. But in case of maximum, the value of log likelihood function is L(β′). The informal goodness of fit index which measured the fraction of an initial log likelihood value is represented by ρ^2.The value of ρ^2 is defined as $[1 - \{L(\beta')/L(\beta)\}]$. For a binary choice model with an alternative specific constant the value of ρ^2 should lie between 0 and 1. The value of ρ^2 is same as the value of R^2 which is used in Regression techniques. The values of ρ^2 will depend on the type of model being estimated. Likelihood Index [-2{L(0)—L(β′)}], which is a statistic used to test the null hypothesis that all the parameters are zero. It is asymptotically distributed. In case of two-tailed test, the critical values of the t statistics are ± 1.65 and ± 1.96 for the 99% and 95% confidence interval, respectively.

CHAPTER IV

Analysis, Results and Discussions

4.1 General

This section contains the information related to route, trip, respondent's socio-economic characteristics, and finally respondent's preference in the form of "choice". Trip characteristics are origin, destination, purpose, duration of the trip, and fare paid. Socio-economic characteristics of the respondent include age, gender, education, profession, and income. Preference data were collected in the form of choices where respondents choose an alternative from the six alternatives given in the choice set. The information contained in the questionnaires was coded as per coding convention as given in the APPENDIX – B. The coded data were then processed by using the computer to obtain the desired output. The coded information are type of bus (AC or Non AC), gender, age group, occupation, monthly income, monthly travel expenses, number of working days per week, number of working hours per day, family size, purposes of the trip, fare paid by self or office, reasons for choosing current route, quality of the service, and available alternative route. These variables are discussed in the following sections.

4.2 Socio-economic Characteristics

The information obtained from the questionnaire is classified according to their nature. In this section socio-economic characteristics of the collected sample are discussed.

4.2.1 Distribution of Passengers by Gender

A total number of 384 (76.2%) male and 120 (23.8%) female passengers were interviewed. The reasons of low frequency of female passengers may be due to their exposure and disagree to be interviewed. The distribution of passangers by gender is as shown in Figure 4.1.

The distribution of passengers by gender in different districts is as shown in Table 4.1 in details. The highest female passengers were interviewed for Dhaka district (7.54%)

followed by Chittagong (2.78%), Bogra (1.79%), Rangpur (1.59%), Bagerhat (1.59%) and Rajshahi (1.39%). From another point of view, passengers travelling towards Dhaka were 101 (20.04%) of which 63 (12.5%) were male and 38 (7.54%) were female. These values were 61 (11.29%) and 14 (2.78%) for Chittagong district.

Table 4.1 Distribution of passangers by gender with respect to district

District	AC				NON AC				Overall			
	Male		Female		Male		Female		Male		Female	
	f	%	F	%	f	%	f	%	f	%	f	%
Chittagong	1	0.20	0	0.00	60	11.91	14	2.78	60	12.1	14	2.78
Comilla	0	0.00	0	0.00	14	2.78	3	0.60	14	2.78	3	0.60
Feni	0	0.00	0	0.00	6	1.19	2	0.40	6	1.19	2	0.40
Dhaka	21	4.17	14	2.78	42	8.33	24	4.76	63	12.50	38	7.54
Rangpur	0	0.00	0	0.00	33	6.55	8	1.59	33	6.55	8	1.59
Bogra	0	0.00	0	0.00	29	5.75	9	1.79	29	5.75	9	1.79
Jessore	0	0.00	0	0.00	19	3.77	6	1.19	19	3.77	6	1.19
Kushtia	0	0.00	0	0.00	15	2.98	5	0.99	15	2.98	5	0.99
Jhenidah	0	0.00	0	0.00	17	3.37	3	0.60	17	3.37	3	0.60
Natore	0	0.00	0	0.00	8	1.59	1	0.20	8	1.59	1	0.20
Bagerhat	0	0.00	0	0.00	18	3.57	8	1.59	18	3.57	8	1.59
Barisal	0	0.00	0	0.00	47	9.33	7	1.39	47	9.33	7	1.39
Pirojpur	0	0.00	0	0.00	16	3.17	9	1.79	16	3.17	9	1.79
Rajshahi	0	0.00	0	0.00	38	7.54	7	1.39	38	7.54	7	1.39
Total	22	4.37	14	2.78	362	71.83	106	21.03	384	76.19	120	23.81

(Note: "f" stands for frequency)

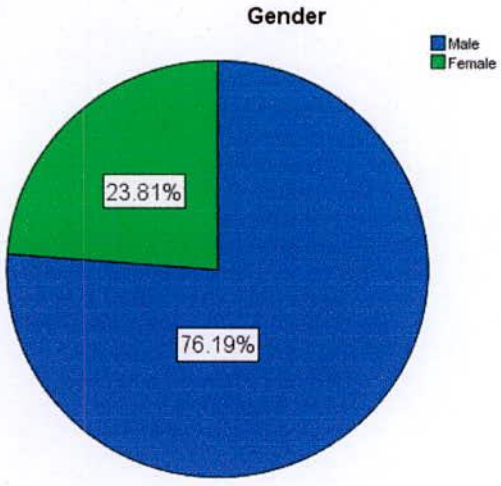

Figure 4.1 Distribution of passangers by gender

4.2.2 Distribution of Passengers by Age

Figure 4.2 shows the relative frequency curve for overall passengers. Passengers of 31-40 years old were the highest users of the inter-city buses. A cumulative frequency curve of these samples is as shown in Figure 4.3. The results revealed that almost 95% of the inter-city bus passengers were below 50 years old. The general distribution of passengers by age group is also shown in Table 4.2. It shows that age of both male and female passengers varied from less than 20 years to above 60 years. The age group 31-40 years contained the highest frequencies for male (29.37%) and age group 21-30 years contained the highest frequencies for female (10.32%).

Table 4.2 Distribution of Passengers by Age Group

Age groups	Male		Female		Overall	
	F	%	f	%	f	%
Younger than 20	13	2.58	8	1.59	21	4.17
21-30	122	24.21	52	10.32	174	34.52
31-40	148	29.37	43	8.53	191	37.90
41-50	75	14.88	13	2.58	88	17.46
51-60	20	3.97	3	0.60	23	4.56
Elder than 60	6	1.19	1	0.20	7	1.39
Total	384	76	120	24	504	100

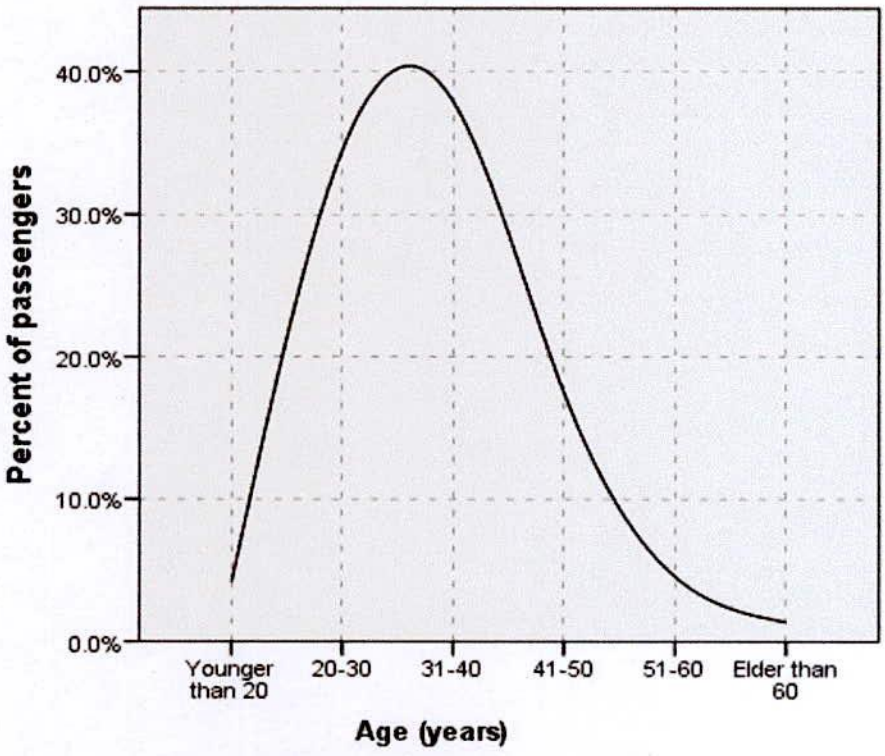

Figure 4.2 Percent of Passengers versus Age

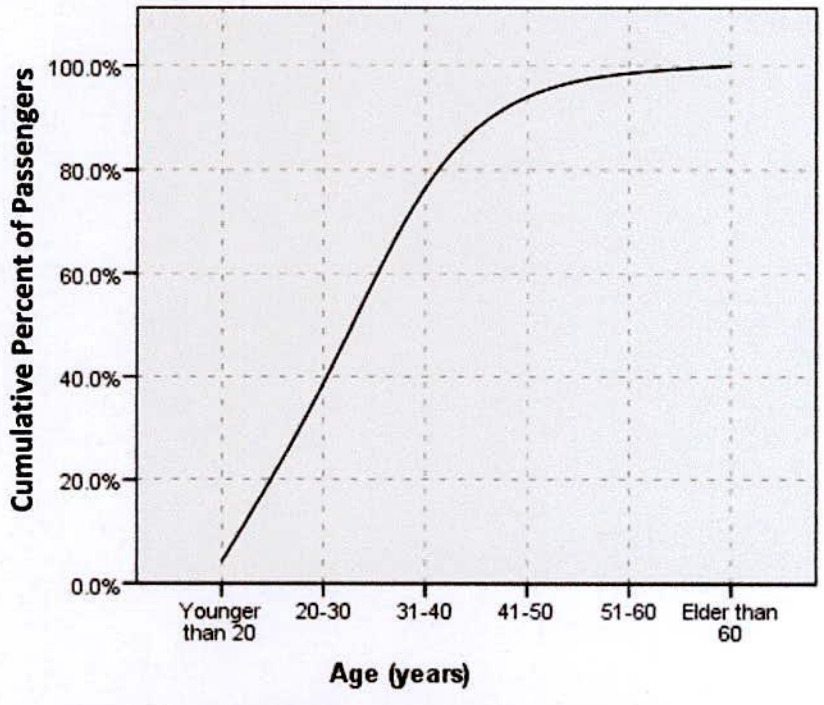

Figure 4.3 Cumulative Percent of Passengers versus Age

4.2.3 Distribution of Passengers by Occupation

The distribution of passengers by occupation is given in Figure 4.4. It is seen that the passengers in service occupation represent the highest proportion (44.60%) of inter-city bus passengers. Business and student's represent 25.80% and 15.70% of the inter-city passengers, respectively. These three groups reported 86.1% of the total inter-city bus passengers. The distribution of male passengers in AC bus was service 1.59%, business 2.18%, student 0.40%, and others 0.20%. In case of Non-AC bus, the percentages of service, business, student, unemployed, and others were 32.14%, 22.02%, 9.72%, 2.38%, and 5.56%, respectively. The distribution of female passengers in AC bus service was service 1.19%, student 0.99%, and unemployed 0.60%. But in case of Non-AC bus passengers, the percentage of service, business, student, unemployed and others were 9.72%, 1.59%, 5.56%, 2.58%, and 3.17%, respectively. These distributions are as shown in Table 4.3.

Table 4.3 Distribution of Passengers by Occupation

Occupation	AC				Non-AC				Overall			
	Male		Female		Male		Female		Male		Female	
	F	%	f	%	f	%	f	%	f	%	f	%
Service	8	1.59	6	1.19	162	32.14	49	9.72	170	33.73	55	10.91
Business	11	2.18	0	0.00	111	22.02	8	1.59	122	24.21	8	1.59
Student	2	0.40	5	0.99	49	9.72	23	4.56	51	10.12	28	5.56
Unemployed	0	0.00	3	0.60	12	2.38	10	1.98	12	2.38	13	2.58
Others	1	0.20	0	0.00	28	5.56	16	3.17	29	5.75	16	3.17
Total	22	4.37	14	2.78	362	71.83	106	21.03	384	76.19	120	23.80

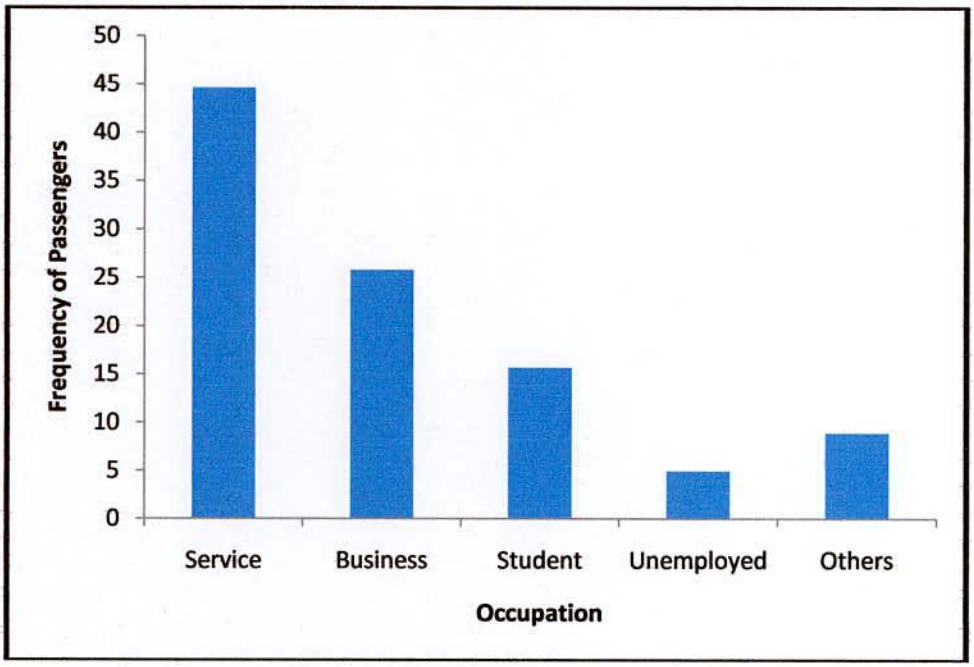

Figure 4.4 Distribution of Passangers by Occupation

4.2.3 Distribution of Passengers by Monthly Income

The distribution of passengers with respect to monthly income is as shown in Table 4.4. The highest frequencies of male passengers in AC bus were 2.2% of monthly income BDT 20001-35000 (2.2%) and Non-AC bus was monthly income BDT 10001-20000 (24.6%). In case of female passengers, 1.6% of AC bus passengers and 9.5% of Non-AC bus passengers had no income. These no income bus passengers (AC and Non-AC) were students and housewives. It also seen that the average monthly income of AC bus and Non-AC bus passengers was BDT22700 and BDT18500, respectively.

The relative frequency curve for overall intercity passengers with respect to monthly income is as shown in Figure 4.5. This curve represents that the highest percentage (33.5%)of income group was BDT10001-20000, and it was followed by 23.6% of income group of BDT20001-35000, 23.2% of income group of BDT zero (no income), and 12.1% of income group of BDT5001-10000. Moreover, the cumulative frequency curve of the bus passengers is as shown in Figure 4.6. This figure represents that the monthly income of almost 95% inter-city bus passengers were below the range BDT2001-35000. The

average monthly income of all bus passengers was BDT14450. The average monthly income of AC and Non-AC bus passengers was BDT16458 and BDT 12412, respectively.

Table 4.4 Distribution of Passengers by Monthly Income

Income Group (BDT)	AC				Non-AC				Overall	
	Male		Female		Male		Female			
	f	%	f	%	f	%	f	%	f	%
None	2	0.4	8	1.6	59	11.7	48	9.5	117	23.2
Below 3000	0	0	0	0	2	0.4	1	0.2	3	0.6
3001-5000	0	0	0	0	10	2.0	3	0.6	13	2.6
5001-10000	2	0.4	0	0	51	10.1	8	1.6	61	12.1
10001-20000	5	1	4	0.8	124	24.6	36	7.1	169	33.5
20001-35000	11	2.2	2	0.4	96	19.0	10	2.0	119	23.6
35001-50000	2	0.4	0	0	17	3.4	0	0	19	3.8
> 50000	0	0	0	0	3	0.6	0	0	3	0.6
Total	22	4.4	14	2.8	362	71.8	106	21	504	100

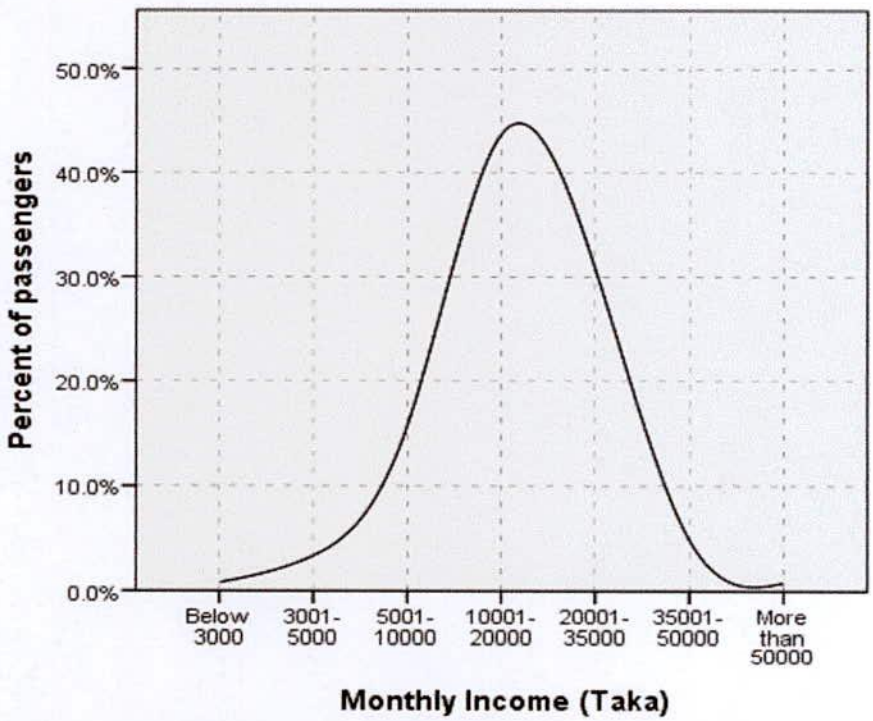

Figure 4.5 Distribution of Passangers versus Monthly Income

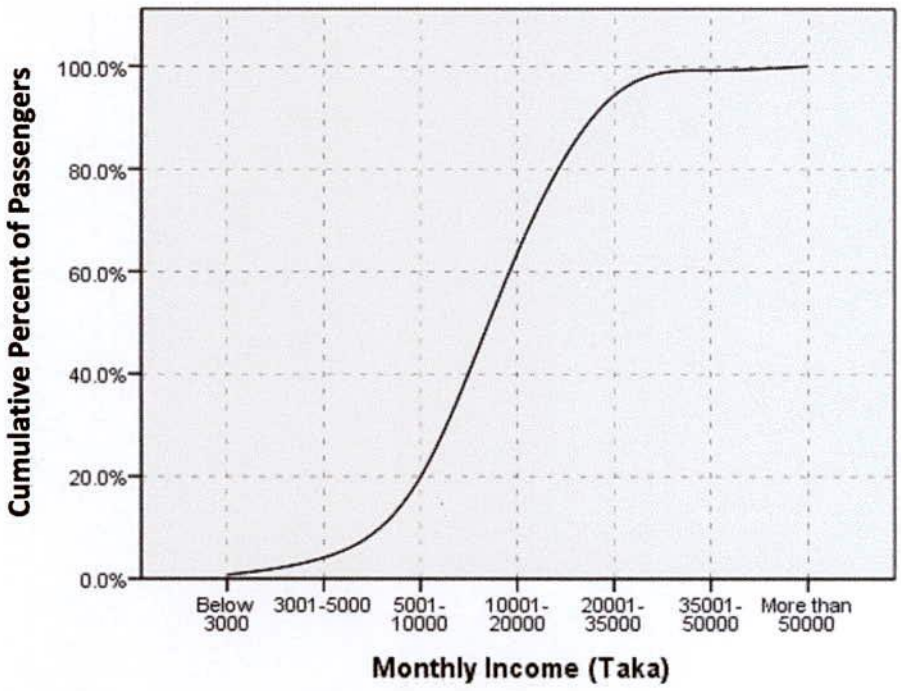

Figure 4.6 Cumulative Distribution of Passangers versus Monthly Income

4.2.5 Distribution of Passengers by Monthly Travel Expense

Figure 4.7 shows the relative frequency curve of monthly travel expense for overall inter-city bus passengers. About 63.2% of inter-city passengers had a monthly travel expense of less than 10% of monthly income. It shows that inter-city bus passengers spent considerable amount of money for travel. In addition, a cumulative relative frequency curves is also shown in Figure 4.8. It is seen that about 95% of the inter-city bus passengers spent around 20% monthly income for their inter-city trips.

The distribution of passengers by monthly travel expense is as shown in Table 4.5. It is seen that the highest frequencies for both male and female are 54.9% and 19.4%, respectively, which lay in less than 10% group. It also revealed that monthly travel expenses of inter-city bus passengers were within the range less than 10% to 30% of monthly income. There were no passengers who had monthly travel expenses more than 30% of monthly income. Also it is interesting to observe that there were no passengers who had zero travel expenses. The average monthly travel expense of inter-city passengers was BDT1232.

Table 4.5 Distribution of Passengers by Travel Expense

Monthly Travel Expense in %	AC				Non-AC				Overall			
	Male		Female		Male		Female		Male		Female	
	f	%	f	%	f	%	F	%	f	%	f	%
0	0	0	0	0	0	0	0	0	0	0	0	0
< 10	13	2.58	12	2.38	264	52.38	86	17.0	277	54.9	98	19.4
10-20	5	0.99	2	0.40	74	14.68	18	3.57	79	15.6	20	3.97
20-30	3	0.60	0	0.00	22	4.37	2	0.40	25	4.96	2	0.40
30-40	1	0.20	0	0.00	2	0.40	0	0.00	3	0.60	0	0.00
40-50	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
> 50	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Total	22	4.37	14	2.78	362	71.83	106	21.0	384	76.1	120	23.8

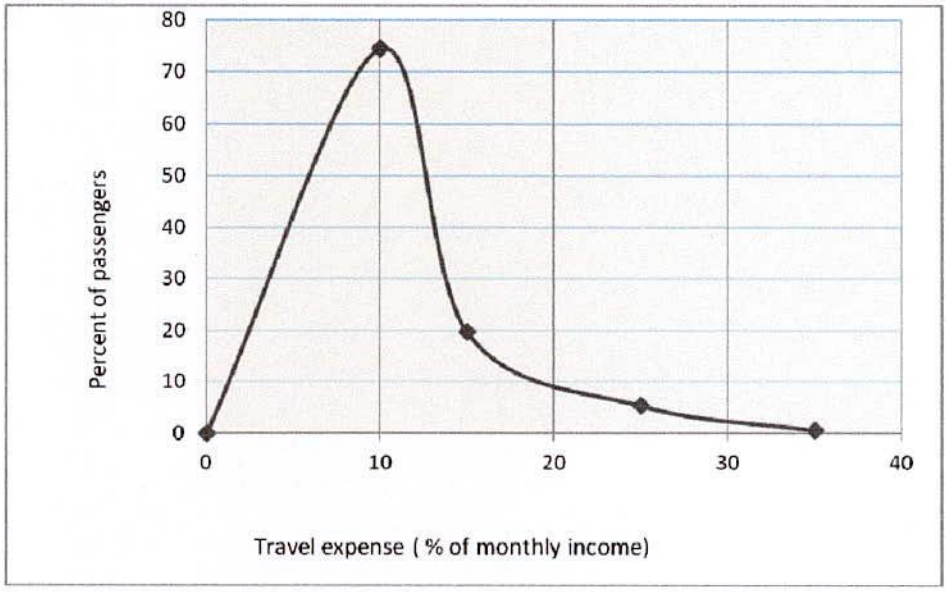

Figure 4.7 Percent of Passengers versus Travel expense

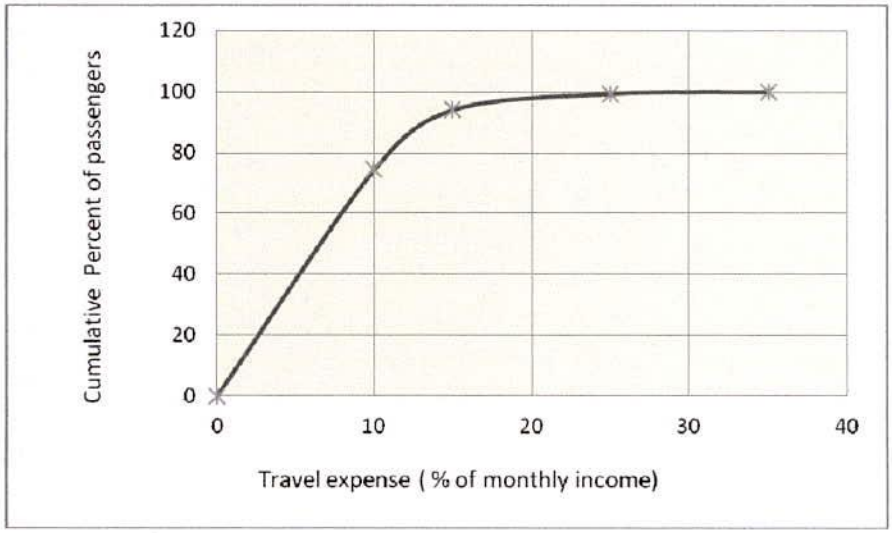

Figure 4.8 Cumulative Percent of Passengers versus Travel expense

4.2.6 Distribution of Passengers by Number of Working Days

Table 4.6 shows the distribution of passengers by number of working days per week. It is shown in Table 4.6 that highest proportion (33.13%) of inter-city passengers had five working days followed by proportion of six working days (31.75%). Table 4.7 shows the distribution of passengers by working days according to the occupation. The inter-city bus passengers of business occupation had six working days was the highest frequency followed by seven working days. In case of service occupation this values varied between 5 and 6. The average working days per week of inter-city passengers were 4.31.

4.2.7 Distribution of Passengers by Number of Working Hours

The distribution of passengers by number of working hours per day is given in Table 4.8. It is seen that working hours of inter-city passengers varied from less than 8 hours to 11 hours and the average working hours of inter-city passenger is 8. Highest proportion (45.83%) had working hours of 8 and it is followed by zero hours (24.39%) and 10 hours (11.9%), respectively. It can be concluded that the occupation of most of the interviewers were government service. The working hours per day including occupation is as shown in Table 4.9.

Table 4.6 Distribution of Passengers by Working Days per Week

Working days (Per week)	AC				Non-AC				Overall			
	Male		Female		Male		Female		Male		Female	
	f	%	f	%	f	%	f	%	f	%	f	%
None	3	0.60	8	1.59	64	12.70	48	9.52	67	13.29	56	11.11
5	13	2.58	4	0.79	119	23.61	31	6.15	132	26.19	35	6.94
6	3	0.60	2	0.40	130	25.79	25	4.96	133	26.39	27	5.36
7	3	0.60	0	0.00	49	9.72	2	0.40	52	10.32	2	0.40
Total	22	4.00	14	3.00	362	72.00	106	21.00	384	76.00	120	24.00

Table 4.7 Distribution of Passengers by Working days with Occupation

Occupation	No. of Working days			
	None	5	6	7
Service	0	138	84	3
Business	0	27	66	37
Student	76	0	3	0
Unemployed	24	0	0	1
Others	23	2	7	13

Table 4.8 Distribution of Passengers by Working hours per day

Working Hours	AC				Non-AC				Overall			
	Male		Female		Male		Female		Male		Female	
	f	%	f	%	f	%	f	%	f	%	f	%
None	3	0.60	8	1.59	64	12.70	48	9.52	67	13.29	56	11.11
< 8	5	0.99	2	0.40	17	3.37	7	1.39	22	4.37	9	1.79
8	12	2.38	3	0.60	171	33.93	45	8.93	183	36.31	48	9.52
9	1	0.20	1	0.20	45	8.93	4	0.79	46	9.13	5	0.99
10	1	0.20	0	0.00	57	11.31	2	0.40	58	11.5	2	0.40
11	0	0.00	0	0.00	4	0.79	0	0.00	4	0.79	0	0.00
12	0	0.00	0	0.00	4	0.79	0	0.00	4	0.79	0	0.00
Total	22	4.37	14	2.78	362	71.83	106	21.03	384	76.19	120	23.8

Table 4.9 Distribution of Passengers by Working hours with respect to occupation (Service vs. Number of working Hours)

Occupation	No. of Working Hours						
	None	< 8	8	9	10	11	12
Service	0	18	159	22	22	0	4
Business	0	12	60	26	29	3	0
Student	76	1	1	0	1	0	0
Unemployed	24	0	0	1	0	0	0
Others	23	0	11	2	8	1	0

4.2.8 Distribution of Passengers by Family

Table 4.10 shows the distribution of passengers by family size. It is seen that the maximum percentage of passengers (38.29%) had a family size of five members and it is followed by family size of four members (27.58%) and six members (17.06%). While in this distribution family size varied from two to ten members, the major proportion (90.47%) consisted of passengers with family size four to eight members. But the average family size of inter-city bus passengers was 5.

Table 4.10 Distribution of Passengers by Family

Family Size	Male		Female		Overall	
	f	%	f	%	f	%
< 4	39	7.74	5	0.99	44.00	8.73
4	97	19.25	42	8.33	139.00	27.58
5	140	27.78	53	10.52	193.00	38.29
6	72	14.29	14	2.78	86.00	17.06
7	18	3.57	2	0.40	20.00	3.97
8	14	2.78	4	0.79	18.00	3.57
9	1	0.20	0	0.00	1.00	0.20
10	3	0.60	0	0.00	3.00	0.60
11	0	0.00	0	0.00	0.00	0.00
12	0	0.00	0	0.00	0.00	0.00
Total	384	76.00	120	24.00	504	100.00

4.3 Travel Characteristics Information

The travel characteristics information i.e. distribution of passengers by type of bus, trip purpose, fare paid, route choice, comment on the quality of the service, and choice of modes are discussed in this section.

4.3.1 Distribution of Passengers by Type of Bus

Figure 4.9 shows the distribution of passengers by bus type. A total number of 468 (92.9%) Non-AC passengers and 36 (7.1%) AC passengers were interviewed.

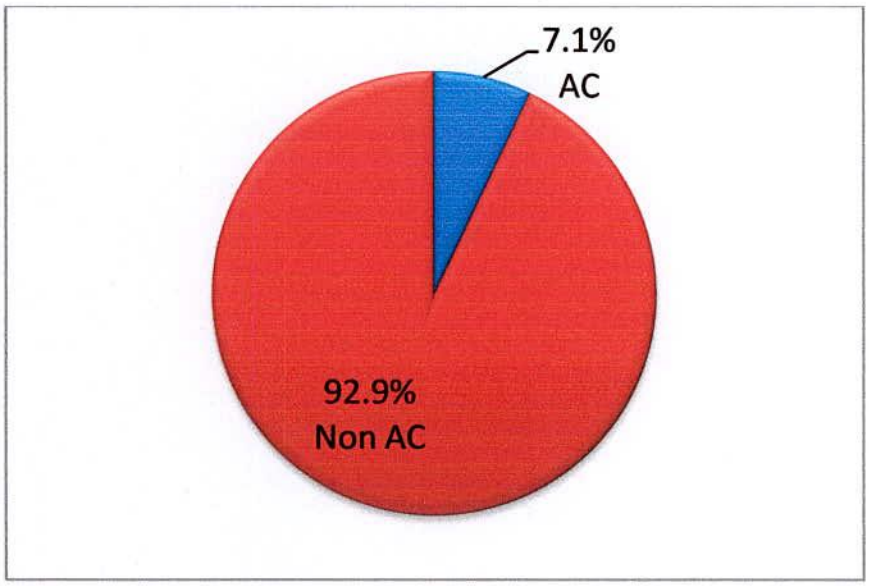

Figure 4.9 Distribution of Passengers by type of Bus

The distribution of passengers by type of bus with respect to bus station is as shown in Table 4.11. It is already mentioned that a total number of 36 (7.14%) number of AC passengers and 468 (92.86%) number of non-AC passengers were interviewed. At Daulatpur, 60 passengers were interviewed in which 1.59% and 10.32% were AC and non-AC passengers, respectively. In case of New Market bus stoppage, 55.16% of non-AC bus passengers and at Fulbarigate bus stoppage 3.17% AC and 25.99% non-AC bus passengers were interviewed. But, only 6.95% of bus passengers were interviewed at Sonadanga bus terminal. At new market bus stoppage, none of the AC bus passengers were interviewed. It may be due to the inter-city AC buses departed through the

Sonadanga route, which was away from new market bus stoppage.

Table 4.11 Distribution of Passengers by type of Bus with respect to Bus station

Bus Stoppage	Class				Overall	
	AC		Non-AC			
	f	%	f	%	f	%
Daulatpur	8	1.59	52	10.32	60	11.90
Fulbarigate	16	3.17	115	22.82	131	25.99
Sonadanga	12	2.38	23	4.56	35	6.95
New market	0	0	278	55.16	278	55.16
Total	36	7.14	468	92.86	504	100

Table 4.12 shows the distribution of passengers by type of bus with respect to district. A total of 101 (20.04%) passengers traveled towards Dhaka followed by 14.68% towards Chittagong, 10.71% towards Barisal, 8.93% towards Rajshahi, 8.13% towards Rangpur, 7.54% towards Bogra and 5.16% towards Bagerhat. In case of Dhaka District, the numbers of AC bus passengers were highest as AC buses were only available in Khulna to Dhaka and Khulna to Chittagong routes.

Table 4.12 Distribution of Passengers by type of Bus with respect to District

District	**AC**		**Non-AC**		**Overall**	
	f	**%**	**f**	**%**	**F**	**%**
Chittagong	1	0.20	74	14.68	75	14.88
Comilla	0	0.00	17	3.37	17	3.37
Feni	0	0.00	8	1.59	8	1.59
Dhaka	35	6.94	66	13.10	101	20.04
Rangpur	0	0.00	41	8.13	41	8.13
Bogra	0	0.00	38	7.54	38	7.54
Jessore	0	0.00	25	4.96	25	4.96
Kushtia	0	0.00	20	3.97	20	3.97
Jhenidah	0	0.00	20	3.97	20	3.97
Natore	0	0.00	9	1.79	9	1.79
Bagerhat	0	0.00	26	5.16	26	5.16
Barisal	0	0.00	54	10.71	54	10.71
Pirojpur	0	0.00	25	4.96	25	4.96
Rajshahi	0	0.00	45	8.93	45	8.93
Total	36	7	468	93	504	100

4.3.2 Distribution of Passengers by Trip Purpose

Table 4.13 shows the distribution of passengers by trip purposes. Results of the passenger's trip purpose revealed that family purpose was the highest frequency (37.30%) and second highest frequency (35.52%) was the work trip followed by social trips (11.71%). The frequency of medical trips and others were 7.51% and 2.78%, respectively. It can be concluded that majority of the interviewers were service holders and visitors. The work trip included service and business trips and social trips included all the social reasons such as invitation, return to the home, visits to relative, etc.

Table 4.13 Distribution of Passengers by Trip Purpose

Trip Purpose	Male		Female		Overall	
	f	%	f	%	f	%
Work	150	29.76	29	5.75	179	35.52
Social	44	8.73	15	2.98	59	11.71
Recreation	23	4.56	3	0.60	26	5.16
Medical	23	4.56	15	2.98	38	7.54
Family Purpose	135	26.79	53	10.52	188	37.30
Others	9	1.79	5	0.99	14	2.78
Total	384	76.00	120	24.00	504	100.00

4.3.3 Distribution of Passengers by Fare Paid

Table 4.14 shows the distribution of passengers by fare paid by self or office. It is seen that 92.28% and 9.72% fare paid by self and office, respectively. It is clear that majority of the inter-city bus passengers paid the fare by themselves and little percentage of passengers used inter-city buses for official purpose. Table 4.15 shows the distribution according to various occupations. Results of the passengers fare paid revealed that fare paid by self and office 35.32% and 9.33%, respectively. For business occupation, fare paid by self and office were 25.60% and 0.20%, respectively. It is also seen that the fare paid by self for students, unemployed and others cases.

Table 4.14 Distribution of Passengers by Fare Paid

Fare Paid	Male		Female		Overall	
	f	%	f	%	f	%
Self	347	68.85	108	21.43	455	90.28
Office	37	7.34	12	2.38	49	9.72
Total	384	76.00	120	24.00	504	100.00

Table 4.15 Distribution of Passengers by Occupation and Fare Paid

Occupation	Fare paid by			
	Self		Office	
	f	%	F	%
Service	178	35.32	47	9.33
Business	129	25.60	1	0.20
Student	79	15.67	0	0.00
Unemployed	25	4.96	0	0.00
Others	45	8.93	0	0.00
Total	455	90.28	49	9.72

4.3.4 Distribution of Passengers by Route Choice

Table 4.16 shows the distribution of passengers according to their causes for choice of current route. Maximum number of passengers 209 (41.47%) choose the current route due to less time. Though, the actual scenario was different. The second highest proportions (25.00%) choose the current route due more comfortable. It may be due to the inter-city bus passengers preferred to get down from transport at the destination. About 24.21% passengers mentioned the other reason. Only 9.33% passengers choose the current routes due to less cost, which indicates that the cost is not less.

Table 4.16 Distribution of Passengers by Route Choice

Cause of Choice	AC		Non-AC		Overall	
	f	%	f	%	f	%
Less Time	15	2.98	194	38.49	209	41.47
Less Cost	0	0.00	47	9.33	47	9.33
More Comfortable	18	3.57	108	21.43	126	25.00
Other	3	0.60	119	23.61	122	24.21
Total	36	7	468	93	504	100

4.3.5 Distribution of Passengers by Comment on the Quality of the Service

The general distribution of passengers by comment on the quality of the inter-city bus service is given in Table 4.17. It reveals that most of the inter-city bus passengers 247 (49.01%) were satisfied with the quality of the service as their rating were 'good'. About 11.31% passengers referred that the service quality was 'poor' and only 18 (3.57%) passengers responded that inter-city bus offered 'very poor' service. About 6.75% passengers mentioned that the quality of the service was 'very good'. It may be due to the fact that the service qualities of few buses of different companies were very good.

Table 4.17 Distribution of Passengers by Comment on the Quality of the Service

Comment on service	**AC**		**Non AC**		**Overall**	
	f	**%**	**f**	**%**	**f**	**%**
Very good	4	0.79	30	5.95	34	6.75
Good	19	3.77	228	45.24	247	49.01
Poor	1	0.20	56	11.11	57	11.31
Very poor	1	0.20	17	3.37	18	3.57
Moderate	11	2.18	137	27.18	148	29.37
Total	36	7.00	468	93.00	504	100.00

4.4 SOME CROSSTABULATIONS OF DATA

In order to examine the contributions of occupation on age, monthly income and monthly travel expenses, this section was carried out.

4.4.1 Distribution of Passengers by Age and Occupation

The distribution of passengers by age and occupation for male and female passengers is given in Table 4.18 and Table 4.19, respectively. Results of the passengers age and occupation revealed that service occupation of age group 31-40 years was the highest frequency (14.09%), followed by the business occupation of age group 31-40 years (11.90%). The frequency of student of age group 15-20 years and unemployed of age group 21-30 were 7.68% and 5.08%, respectively.

Table 4.18 Distribution of Passengers by Age and Occupation for Male Passengers (%)

Age Group (Years)	Occupation (%)				
	Service	Business	Student	Unemployed	Others
< 20	0	0	2.38	0.20	0
20-30	10.91	4.37	7.54	1.19	0.20
31-40	14.09	11.9	0	0.40	2.98
41-50	7.34	6.55	0	0	0.99
51-60	1.39	1.39	0	0.40	0.79
>60	0	0	0.20	0.20	0.79
Total	33.73	24.21	10.12	2.38	5.75

Table 4.19 Distribution of Passengers by Age and Occupation for Female Passengers (%)

Age Group (Years)	Occupation (%)				
	Service	Business	Student	Unemployed	Others
< 20	0	0	1.59	0	0
20-30	3.97	3.00	3.97	1.19	0.60
31-40	5.36	5.00	0	0.79	1.39
41-50	1.39	0	0	0.60	0.79
51-60	0.20	0	0	0	0.40
> 60	0	0	0	0	0
Total	10.91	8.00	5.56	2.58	3.17

4.5 VALUE OF TRAVEL TIME

The results of the analysis of the value of travel time are presented in this section. The model coefficients are determined by using the calibration of model and the behavioral value of different characteristics are described by using the estimated coefficients.

4.5.1 Calibration of the Model

During the survey, 504 samples were collected from different locations in Khulna metropolitan city. The Logit model was used to analyze the data. The analysis was conducted by using the SPSS software. The maximum likelihood method was used to the estimation. The model was calibrated with all the data pooled together. The calibration results of the model for all populations are presented in Table 4.20. It is seen that signs of the parameter estimates are as expected and in agreement with the actual condition of the study area. It is evident from the t-statistics that the estimated parameters are statistically significant at 95% confidence level.

Table 4.20 Coefficient of Logit Model

Variable	Estimated coefficients	Abs t-statistics
Fare (F)	-0.004	13.347
Time (T)	+0.425	14.167
Air-condition (AC)	-0.672	5.947
No. of samples		3024
L (0)	-4192.154	
L (β')	-3756.554	
Percent Correctly Predicted	67.80	
Likelihood Ratio Statistics (ρ^2)	0.032	
Likelihood Index [-2{L(0)-L(β')}]	871.21	

Several alternative models were attempt using various combinations and definitions of attribute variables. Finally, the following model was selected based on signs of the coefficients, statistical significance of the coefficients and predictability of the model as shown in Table 4.20.

$$V = -0.004C + 0.425T - 0.672AC$$

From Table 4.20, it can be seen that signs of the parameter estimates are as expected and in agreement with the actual condition of the study locations. It is evident from the t-statistics that the estimated parameters are statistically significantly different from zero as absolute t-statistics of all the parameters are greater than 1.96 (Louviere *et al.*, 2000). The overall goodness fit is considered using pseudo R^2 (R-squared). Value of R^2 between 0.20 and 0.40 indicates acceptable model fit (Louviere *et al.*, 2000). In this case, the value of R^2 is 0.18 which is close to 0.20. So, it can be concluded that model is acceptable.

4.5.2 Value of Travel Time

Based on the calibrated model developed above, the values of travel attributes can be estimated by using the estimated parameters as shown in Table 4.21. All of these values were estimated at 95% confidence interval. It is found that the upper and lower limits of Value of Travel time per hour are BDT 127.87 and BDT 88.41, respectively and the average value of travel time for the population in this study is BDT 106.25 per hour. It is also found in Table 4.21 that the value of travel time in case of introducing air-condition in the bus is BDT 168.00 per hour. This indicates that the value of travel time for the passengers of AC bus is about 37% higher than the non-AC bus.

Table 4.21 Value of Travel Attributes

Travel Attributes	Behaviour value	Upper limit	Lower limit
Average Value of Travel time (BDT/hour)	106.25	127.87	88.41
Average Value of Introducing Air-condition in the Bus (BDT/trip)		168.00	

4.5.3 Value of Travel Time for Different Socio-Economic Groups

This section presents the behavioral values of the travel attributes described above for different socio-economic groups. Table 4.22 shows the value of travel time for different socio-economic groups by using calibrated Logit model.

As per Table 4.22 that the value of travel time AC and Non-AC buses for male and female passengers was BDT 106.00 and BDT 105.25 per hour, respectively. Consequently, the value of travel time for male and female passengers of intercity bus from Khulna to different divisional cities is nearly equal. It may be due to the number of female passengers are almost near to the male passengers. However, the value of travel time of introducing air-condition was BDT 142.67 per hour and BDT 133.50 per hour for male and female intercity bus passengers, respectively. The value of t-statistics is as given in Appendix-D.

The value of travel time for Non-AC intercity bus passengers was about BDT 108.67 per hour. But in case of AC bus passengers, the value of travel time was BDT 252.50 per hour. The average value of travel time was BDT 106.25 per hour which is slightly less than the value of travel time of the Non-AC intercity bus passengers was BDT 108.67 per hour. But in case of intercity AC bus passengers, the value of travel time per hour was higher than the average value of travel time (BDT 106.25). It may be due to the consideration of the less time and more fare. The value of travel time per hour of service, business, student and others occupation was BDT 107.66, BDT 102.00, BDT 75.50, and BDT113.25, respectively. The value of travel time of intercity bus passengers having service and business occupation was nearly same value of the average value (BDT 106.25). The value of travel time for students was BDT 75.50 per hour, is acceptable as the monthly income of students was low.

It is seen in the result of the questionnaire survey that most of the intercity bus passengers choose the option having less time and more cost. Because of this the value of travel time is relatively high in perspective of Bangladesh. The intercity bus passengers were grouped into different income group (viz. less than BDT 5000, BDT 5001 to BDT 10000, BDT 10001 to BDT 20000, BDT 20001 to BDT 35000, and more than BDT 35000). The value of travel time per hour for income group BDT 5001 to BDT 10000, BDT 10001 to BDT 20000, BDT 20001 to BDT 35000, and more than BDT 35000 was BDT 63.30, BDT 92.80, BDT 93.20, and BDT 133.33, respectively. It is seen that passengers having income more than BDT 35000 have more value of travel time. It may be due to the few number of intercity bus passengers having monthly income more than BDT 35000. It is also seen that there is a linear relation exits between the monthly income and the value of travel time.

The intercity bus passengers were grouped into different age groups (viz. less than 20 years, 20 to 40 years, and more than 40 years). The value of travel time per hour of 20 years, 20 to 40 years and more than 40 years old of the intercity bus passengers was BDT 98.66, BDT 105.33, and BDT 108.00, respectively. It is seen that higher the age groups of the passengers higher the VTT. It can be concluded that the there is a linear relationship between the age group of passengers and the value of travel time.

Table 4.22 Value of Travel Time for Different Socio-Economic Groups

Item	Segments	VTT (BDT/Hr)
Gender	Male	106.00
	Female	105.25
Occupation	Service	107.66
	Business	102.00
	Student	75.50
	Others	113.25
Income	5001-10000	63.30
	10001-20000	92.80
	20001-35000	93.20
	>35000	133.33
Age	Less than 20	98.66
	20 – 40	105.33
	More than 40	108.00
Reasons for choosing current route	Less cost	124.33
Fare Paid by	Self	99.00
	Office	110.00
Trip Purpose	Social	85.00
	Work	109.00
	Recreation	68.25
Monthly Travel Expense	Less than 10%	112.00
Type of Bus Passengers	Non-AC	108.67

The value of travel time was BDT 99.00 per hour when intercity bus passengers pay the bus fare. But in case of the fare paid by the office, the scenario is different. The value of travel time is BDT 110.00 per hour in case of fare of the intercity bus passengers paid by the office. The reason of this may be due to give more concentration on time and air-condition. Another reason may be due to the tendency of spend more money to purchase ticket as it is paid by the office. The value of travel time per hour of the intercity bus passengers whom monthly travel expense less than 10 percent of their monthly income was BDT 112.00. The trip purposes of the intercity bus passengers were social, work, and recreational. The value of travel time per hour for the social, work and recreational trip was BDT 85.00, BDT 109.00, and BDT 68.25, respectively. The results revealed that the value of travel time for work trip was relatively higher than the social trip. In most of the cases the fare paid by the office. It may be the reason of the higher value of travel time of the work trip than the social trip. The value of travel time for recreational purpose was about BDT 68 per hour. It may be the reason of less number of passengers present in the intercity bus passengers for this purpose.

The value of travel time for inter-city bus passengers in different divisional cities is as given in Table 4.23. The estimated value of travel time per hour for inter-city passengers towards Dhaka, Chittagong, Rajshahi, Rangpur, and Barisal city is BDT 106.50, BDT 114.05, BDT 104.14, BDT 100.92, and BDT 75.22, respectively. The highest VTT per hour (BDT114.05) was found for the passengers towards Chittagong is highest and lowest (BDT 75.22) towards Barisal. The value of travel time per hour for inter-city bus passengers towards Chittagong was about 52% more than the inter-city bus passengers towards Barisal.

Table 4.23 Table Value of Travel Time in Different Divisional Cities

District	VTT (BDT/Hr)	Upper limit (BDT/Hr)	Lower Limit (BDT/Hr)
Barisal	75.22	102.06	53.69
Chittagong	114.05	146.84	88.98
Dhaka	106.50	127.63	88.94
Rajshahi	104.14	140.64	76.37
Rangpur	100.92	157.58	67.66

The comparison of value of travel time of this with other studies is shown in Table 4.24. It is seen that the value of travel time of this study is more than the Padma Bridge Feasibility study. It may be due to the increase of fare (cost) and the choice of AC buses of the inter-city bus passengers.

Table 4.24 Comparison of Value of Travel Time of Different Studies

Study	Year	VTT (US$ per Hour)
Jamuna Bridge Feasibility Study	1989	0.245
Road Master Plan Project	1992	0.286
Road Materials & Standards Study	1994	0.561
Dhaka Urban Transport Study Phase 2	1996	0.456
Dhaka Eastern Bypass	1997	0.828
1997 Travel Time Cost Surveys	1997	0.730
Rahman's Study (Questionnaire Survey)	2000	0.964
Padma Bridge Feasibility Study	2005	1.025
This Study (Questionnaire Survey)	2013	1.250

CHAPTER V

Conclusions and Recommendations

5.1 General

To formulate rational improvement strategy for bus transportation in metropolitan cities of Bangladesh, it is essential to understand how users value different attributes of travel. The findings of this study are summarized in this chapter.

5.1.1 Socio-economic and Travel Characteristics

The ratio of male and female inter-city bus passengers according to the questionnaire survey of this study is about 1 to 0.31. In this study the passengers group such as serviceman, businessman, students, housewives etc were chosen. Majority (about 94%) of the chosen intercity bus passengers were below 50 years of age. The average monthly income of the inter-city passengers was BDT 14450. In case of AC and Non-AC intercity bus passengers, the average monthly income was BDT 16458 and BDT 12412, respectively. The average monthly income of the intercity bus passengers is BDT 18965 while the direct income of the intercity bus passengers was considered. But in case of AC and non-AC intercity bus passengers, this value becomes BDT 21600 and BDT 16290, respectively. Hence, the average monthly income of the intercity bus passengers is significant in the context of Bangladesh. Most of the students and unemployed passengers did not have any direct income, which contributes about 21 percent of the total intercity bus passengers. The average monthly travel expense of intercity bus passengers was BDT 1232.00, which is only 8.50% of the average monthly income of all passengers.

The average working days of inter-city bus passengers were 5.7 days per week. The average working hours of inter-city passengers were 8.4 hours per day. About 37%, 35%, and 11% trips were family purpose, work, and social purpose, respectively. In most of the cases, the fare was paid by themselves. The bus passengers choose the current route because of less time consuming and comfortable (about 41%). Moreover, the bus passengers mentioned that the quality of service was good (about 49%). Only 7% mentioned that the quality of service as very good. Most of the passengers prefer to use

bus as mode of transport. Very few passengers prefer to use air as alternatives because of high fare and the unsatisfactory service.

5.1.2 Value of Travel Time

It is seen in this study that the average value of travel time is BDT 106.25 per hour. The average hourly income of intercity bus passengers is BDT 80.00. It can be concluded that the value of travel time is 1.33 times higher than the hourly income. It was observed that most of the interviewees hesitated to inform their actual monthly income during the time of questionnaire survey. But when they filled up the stated preference option then they mentioned the alternatives of higher fare. Because of this the actual income of intercity bus passengers should be more than BDT 80.00 per hour.

In case of introducing air condition in the intercity bus passengers, the value of travel time per trip was about BDT 168.00. The difference of fare between AC and Non-AC bus passengers per trip was around BDT 100.00 to BDT 500.00, respectively. The value of travel time of male and female intercity bus passengers was BDT 106.00 and BDT 105.25 per hour respectively, which is nearly equal to the average value of travel time (BDT 106.25 per hour). But in case of introducing air-condition in intercity buses, the male and female passengers ready to pay BDT 212.25 and BDT 133.50 per trip, respectively. Hence, the male passengers willing to pay about 1.60 times higher fare than the female passengers. The value of travel time of non-AC bus passengers was BDT 108.67 per hour.

The value of travel time of bus passengers having occupation service and students was BDT 107.66 and BDT 75.50 per hour, respectively. Consequently, the value of travel time per hour of income group less than BDT 5000.00, BDT 5001.00 to BDT 10000.00, BDT 10001.00 to BDT 20000.00, BDT 20001.00 to BDT 35000.00 and BDT more than BDT 35000.00 was BDT 63.30, BDT 92.80, BDT 93.20, and BDT 133.33, respectively. The value of travel time of intercity bus passengers of age less than 20 years, 20 to 40 years, and more than 40 years was BDT 98.66, BDT 105.33, and BDT 108.00, respectively.

When the passengers pay the fare by themselves then the value of travel time was BDT 99.00 per hour. Moreover, the value of travel time of the bus passengers who spend their

travel expense less than 10% of monthly income was BDT112.00 per hour. The value of travel time per hour for intercity bus passengers of social trip was BDT 85.00. The intercity bus passengers travelling towards Chittagong is higher value of travel time (BDT 114.05) and lower value towards Barisal (BDT 75.22).

5.1.3 Limitations

The behavioral values of travel attributes are changeable. A large number of data are required to obtain better result. Some of the sample size was insufficient in case of segmentation approach. It was not possible to accumulate data for other districts due to time and fund constraints.

Existing railways and waterways have significant effect on the intercity bus passengers. In this study, rail, water and air passengers were not interviewed. Moreover, travel time savings for commodity or freight was not determined. Consequently, this study is limited to the estimation of value of travel time of intercity bus passengers only.

5.2 Recommendations

This study covers several important aspects; other issues such as effects of comfort, waiting time and service headway can be considered to develop a model. Data were collected in intercity bus passengers from Khulna to five divisional cities i.e. Dhaka, Chittagong, Rajshahi, Barisal, and Rangpur. Similar studies should be carried out in other districts. Also seasonal variation on value of travel time should be carried out. Moreover, the value of travel time for rural bus users should be carried out in future.

REFERENCES

1 AASHTO (2003): User Benefit Analysis for Highways, Washington, DC: USA.

2 Alam, J. B., Jaigirdar, M. A. and Rahman, M. H. (1999). "Analysis of Behavioral Value of Travel Attributes and Their Implications on Urban Transport Policy", Journal of Civil Engineering, The Institution of Engineers, Bangladesh.

3 Andersen, P.B., Moller, J. and Sheldon, R.J. (1986). "Marketing DSB Rail Services Using a Stated Preference Approach." Presented in the PTRC Summer Annual Meeting, Brighton.

4 Adamowicz, W. L., Louviere, J., and William, M. (1994). "Combining Stated and Revealed Methods for Valuing Environmental Amenities." Journal of Environmental Economics and Management, Vol. 26, pp. 271-292.

5 AHCG Accent Marketing & Research and Hague Consulting Group (1999). "The Value of Travel Time on UK Roads," The Hague, Netherlands.

6 Axhausen, K.W. (2008). Accessibilities: Long-term perspectives, Journal of Land-Use and Transportation, 1 (2) 5-22

7 Ben - Akiva, M. and Lerman, S. R. (1985). "Discrete Choice Analysis Theory and Application to Travel Demand", MIT Press, USA.

8 Becker, G. A. (1965). "Theory of the Allocation Time." The Economic Journal, Vol. 75, pp. 493-517.

9 Beca Carter Hollings & Ferner Ltd (1991): "The Value of Travel Time Savings", Working Paper No. 2 by I.H. Bone, prepared for Transit New Zealand.

10 Beessley, M. E. (1965): "The Value of Time Spent in Travelling: Some New Evidence", Economica, 32, 174-85.

11 Bates, J. (1982). "Stated Preferences Technique for the Analysis of Transportation Behavoir", The Proceedings of World Conference of Transportation, Hamburg, W. Germany, pp. 252-265.

12 Bates, J. and Glaister, S. (1990). "The valuation of time savings for urban transport appraisal for developing counties: a review report", prepared for the World Bank Washington, D.C

13 Bates, J. and Whelan, G. (2001). "Size and sign of time savings", Working Paper, Institute of Transport Studies, University of Leeds, Leeds, UK.

14 Bates J. J. and Roberts M. (1986). "Value of time research: Summary of

methodology and findings", 14th PTRC Summer Annual Meeting, University of Sussex, 14-18 July, 1986. Brighton.

15 Brownstone, D., Ghosh, A., Golob, T.F., Kazimi, C., Van Amelsfort, D., (2003). "Drivers willingness-to-pay to reduce travel time: evidence from the San Diego", I-15 Congestion Pricing Project, Transportation Research A 37, pp.373–387.

16 Brownstone, D. and Kenneth, A. (2003). "Valuing Time and Reliability: Assessing the Evidence from Road Pricing Demonstrations," Transportation Research Part A (2003), pp. 279-293.

17 Bureau of Transport Economics (1982). "The Value of Travel Time Savings in Public Sector Evaluation", Australian Government Publishing Service, Canberra, Australia

18 Calfee, J. and Winston, C. (1998). "The value of automobile travel time: implications for congestion policy", Journal of Public Economics 69, pp. 83–102.

19 Calfee, J., Winston, C., and Stempski, R. (2001). "Econometric issues in estimating consumer preferences from stated preference data: a case study of the value of automobile travel time", Review of Economics and Statistics 83, pp. 699–707.

20 Chapman, A. and Staelin, R. (1992). "Exploiting Rank Ordered Choice Set Data within the Stochastic Utility Model", Journal of Marketing Research, Vol. 19, pp. 288- 301.

21 Cole, Sherman Inc. (1990): "Attitudinal Survey: Trade off Analysis," Excerpt from Draft Report prepared for VIA Rail Canada.

22 CRRI (Central Road Research Institute) (1977). "Road User Cost Study in India", Draft Inception Report, New Delhi.

23 DeSepra, A. C. (1971). "Theory of Economics of Time", The Economic Journal, Vol. 81, pp.828-846

24 De Vany (1974). "The Value of Travel Time Savings in Public Sector Evaluation", Australian Government Publishing Service, Canberra, Australia

25 De Donnea, F.X. (1972). "Consumer Behaviour, Transport Mode Choice and Value of Time: Some Micro-Economic Models", Regional and Urban Economics, Vol. 1(4), pp. 355-382.

26 Garrido, R.A. and Ortúzar, J. de D. (1993). "The Chilean value of time study: methodological developments", Proceedings 21st PTRC Summer Annual Meeting, University of Manchester Institute of Science and Technology, England, pp. 13-17

27 Gronau, R. (1970). "The Effect of Traveling Time on the Demand for Passenger Transportation," Journal of Political Economy, University of Chicago Press, vol. 78(2), pp. 377-94

28 Gunn, H.F. and Rohr, C. (1996). The 1985-1996 Dutch Value of Time Studies. Paper presented at PTRC International Conference on the Value of Time.

29 Gunn, H. (2001). "Spatial and Temporal Transferability of Relationships between Travel Demand, Trip Cost, and Travel Time," Transportation Research, Vol. 37E (2-3), pp. 163-189.

30 Hensher, D.A. (1973). "Valuation of travel time: an alternative procedure," Third Conference of Economists, Economic Society of Australia and New Zealand, Adelaide, Australia

31 Hensher, D. A. (1994). "Stated Preference Analysis of Travel Choices," The State of Practice, Transportation, Vol. 21 (2), pp. 107-133.

32 Hensher, D.A. (2001). "Measurement of Valuation of Travel Time Savings," Journal of Transportation Economics and Policy, Vol. 35(1), pp. 71-98.

33 Hensher, D. A. and Brewer, A.M. (2001). "Transport an economics and management Perspective", Oxford: Oxford University Press.

34 Hunt, J. D. (2001). "A Stated Preference Analysis of Sensitivities to Elements of Transportation and Urban Form," Paper presented at 80th Annual Meeting of the Transportation Research Board, National Research Council, Washington, D.C., U.S.A.

35 Jara Diaz, S. (1997). The goods/Activities Framework for Discrete Travel Choices: Indirect Utility and Value of Time.8th IATBR Meeting, Austin, Texas

36 Kores, E. P. and Sheldon, R. J. (1988). "Stated Preference Methods: An Introduction." Journal of Transportation Economics and Policy, Vol. 22, pp. 11-25

37 Kores, E.P., Sheldon, R.J., and Beswick, M. (1986). "Stated Preference Micro-Simulation Models from Qualitative Inputs to Estimate Market Shares in Intercity Travel," Proceedings of the ESOMAR Congress, Monte Carlo.

38 Kumar, C.V., Basu, D., and Maitra, B. (2004). "Modeling Generalized Cost of Travel for Rural Bus Users: A Case Study," Journal of Public Transportation, Vol. 7, pp. 59-72.

39 Lave, C.A. (1968). "The demand for urban mass transport," The Review of Economics and Statistics.

40 Lisco, T. (1967). "The Value of Commuters Travel time: A Study in Urban Transportation," PhD Thesis, Department of Economics, University of Chicago, USA.

41 Liden, S.B., Fellesson, M., Haglund, L. and Sutomo, H. (2008). "Bringing the Customer into Public Transport Development - A Pilot Study of Service Quality in Public Transportation in Indonesia", Hong Kong.

42 Louviere. J. and Woodworth, G. (1983). "Design and Analysis of Simulated Consumer Choice for Allocation Experiments," Journal of Marketing Research, Vol. 20(4), pp. 350-367.

43 Louviere, J.J. (1988). "Conjoint Analysis Modeling of Stated Preferences: A review of theory, methods, recent developments and external validity." Journal of Transportation Economics and Policy, Vol. 22 (1), pp. 93-119.

44 Mansfield, N.W. (1970). "The Value of Time on Recreation Trips: The Results of Some Further Studies," HEU Ministry of Transport, UK.

45 Mackie, P.J., Jara-Diaz, S., and Fowkes, A.S. (2003). "The Value of Travel Time Savings in Evaluation." Transportation Research, Vol. 37E (2-3), pp. 91-106.

46 Merlin, P. and Barbier M. (1965). "Study of modal split between car and public transport cited in W.E. Hotchkiss, 1973, The Value of Time in Relation to Transport, Economic Society of Australia and New Zealand, NSW Branch Economic Monograph No 338.

47 Mackie, P.J., Jara-Diaz, S., and Fowkes, A.S. (2001). "The Value of Travel Time Evaluation. Transportation Research," Vol. 37E (2-3), pp.91-106

48 MVA Consultancy, ITS University of Leeds, TSU University of Oxford (1987). "Value of Travel Time Savings," Policy Journal, Newbery, Berks'

49 Miller, T. R. (1989). "The Value of Time and the Benefits of Time Savings," Federal Highway Administration of the US Department of Transportation, Washington D.C., USA

50 McFadden, D. (1974). "Conditional Logit Analysis of Qualitative Choice

Behaviour," Frontiers in Econometrics, New York: Academic Press, pp. 105-142.

51 Ortuzar, J.de D. and Willumsen, L. G. (1990). "Modeling Transport", Chichester, John Wiley & Sons.

52 Praveen, K. S., and Rao, K. V. K. (2002). "Estimation of Passenger Demand on a Proposed Passenger Water Transport System." Proceedings of Transport Planning and Methodologies for Developing Countries, IIT Bombay, Mumbai, India.

53 Rahman, M.M. (2000). Socio-economic Status, Travel Behaviour, and Value of Travel Time for Intercity Bus Passengers in Bangladesh. Master's Thesis, Department of Civil Engineering, BUET, Dhaka.

54 Raghavachari, R. and Khanna, S. K. (1976). "Development of Disaggregated Behavioral Models — A Case Study of Indian City", Proceedings of the Australian Road Research Board, Volume-8, Melbourne, Australia

55 Robert, S. (1978) "Design Issues of Stated Preference".

56 Sheldon, R. J. and Steer, J.K. (1982). "The Use of Conjoint Analysis in Transport Research", Paper presented to the PTRC summer annual meeting, Warwick.

57 Small, K.A., Noland, R., Chu, X. and Lewis, D. (1999). "Valuation of Travel-Time Savings and Predictability in Congested Conditions for Highway User-Cost Estimation", National Cooperative Highway Research Program. Report 431, Transportation Research Board, Washington D.C., USA

58 Steer, J. K. and Willumsen, L. (1981). "An Investigation of passenger Preference Structures", Paper presented to the PTRC summer annual meeting, Warwick.

59 Stopher, P.R. (1966). "Predicting travel mode choice for the work journey", Traffic Engineering and Control, Vol. 9(9).

60 Stopher, P.R. (1976). "Derivations of values of time from travel demand models", TRR, No. 587.

61 Srinivasan, N.S. and Goel, H. C. (1968). "Cost Benefit Analysis of Road-Rail Grade Crossing in Delhi", Journal of the Indian Road Congress, Vol. 30.

62 Smith, B. (1999). "The Goods/Leisure Trade-Off and the Value of Travel Time Savings," Road & Transport Research, 8(3), pp. 74-78.

63 Texas Transportation Institute (1990). "Value of Time and Discomfort Costs", Progress Report on Literature review and Assessment of Procedures and Data, Technical Memorandum for NCHRP, pp. 7-12.

64 Walters, W. (1970). "The Economics of road user charges", World Bank staff occasional paper no.-5, The Jones Hopkins Press, Baltimore, USA.

65 Watson, Peter. (1974). "Problems Associates with time and cost data used in travel choice modeling and valuation of time", Highway research report, No.369, Washington, D.C., USA.

66 Wardman, M. (1998). "Comparison of Revealed Preference and Stated Preferences Models of Travel Behaviour", Journal of Transport Economics and Policy, Vol. 22, pp.71-91.

APPENDIX A

Department of Civil Engineering

Khulna University of Engineering & Technolog

This questionnaire is a part of M.Sc. Engineering (Civil) thesis of Khulna University of Engineering & Technology (KUET) on the study of Travel behaviour and value of travel time for intercity bus passengers in Bangladesh. Your cooperation to fill up this form will be highly appreciated.

Interview No: _____Date: _____Location of Interview: _____Travel Mode: _____Route:

A. COMMON TRIP INFORMATION

DHAKA

Bus			Rail			
AC	Non AC		Local		Express	
Private	BRTC	Private	1st Class	Eco. Class	1st Class	Eco. Class

2. Trip Origin: _____3. Trip Destination: _____4. Trip Distance (Km): _____

5. Approximate Travel Time required on current route (Hrs): _____ 6. Fare required (Tk.) _____

B. SOCIOECONOMIC INFORMATION

1. Sex: Male/Female

2. Age Group :

> 20	20-30	31-40	41-50	51-60	> 61

3. Occupation: Service/Business/Student/Unemployed/Others (:)

4. Monthly Income :	> 3000	3001-5000	5001-10000	10000-20000	20001-35000	35001-50000	> 50000

5. Monthly Travel Expenses	< 10%	10-20%	20-30%	30-40%	40-50%/	> 50% of monthly income

6. No. of Working Days: 5/6/7 per Week

7. No. of Working Hours: <8/ 8/9/10/11/12 per Day

8. Family Size: <4 /4 /5 /6 /7 /8 /9 /10 /11 /12

C. EXISTING TRIP INFORMATION

1. Purpose of the Trip: Work / Social / Recreation / Medical /Family Purpose/ Others (: Specify)
2. Fare paid by: Self / Office
3. Reasons for Choosing Current Route: Less Time/ Less Cost/ More Comfortable/ No Other Alternatives
4. Quality of the Service: Very good / Good / Poor / Very Poor/ Moderate
5. Width of the road: Sufficient/Insufficient
6. Available alternative modes

Bus		Rail		Water		Air		No alternatives
Time:	Fare:	Time:	Fare:	Time:	Fare:	Time:	Fare:	

D. STATED PREFERENCE FOR ALTERNATIVE TRIP OPTIONS

Option:1	Fare (BDT)	Time (Hrs)	AC/Non AC	Stated Choice
Choice 1	900	7.5	AC	
Choice 2	800	8.5	AC	
Option:2	Fare (BDT)	Time (Hrs)	AC/Non AC	Stated Choice
Choice 1	850	8	AC	
Choice 2	750	9	AC	
Option:3	Fare (BDT)	Time (Hrs)	AC/Non AC	Stated Choice
Choice 1	900	7.5	AC	
Choice 2	500	7.5	Non AC	
Option:4	Fare (BDT)	Time (Hrs)	AC/Non AC	Stated Choice
Choice 1	500	7.5	Non AC	
Choice 2	400	8.5	Non AC	
Option:5	Fare (BDT)	Time (Hrs)	AC/Non AC	Stated Choice
Choice 1	450	8	Non AC	
Choice 2	350	9	Non AC	
Option:6	Fare (BDT)	Time (Hrs)	AC/Non AC	Stated Choice
Choice 1	1000	7	AC	
Choice 2	550	7	Non AC	

Department of Civil Engineering
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Interview No: _____Date: _____Location of Interview: _____Travel Mode: _____Route:

A. COMMON TRIP INFORMATION

CHITTAGONG

Bus			Rail			
AC	Non AC		Local		Express	
Private	BRTC	Private	1st Class	Eco. Class	1st Class	Eco. Class

2. Trip Origin: _____3. Trip Destination: _____4. Trip Distance (Km): _____

5. Approximate Travel Time required on current route (Hrs): _____ 6. Fare required (Tk.) _____

B. SOCIOECONOMIC INFORMATION

1. Sex: Male/Female

2. Age Group :

> 20	20-30	31-40	41-50	51-60	> 61

3. Occupation: Service/Business/Student/Unemployed/Others (:)

4. Monthly Income :	> 3000	3001-5000	5001-10000	10000-20000	20001-35000	35001-50000	> 50000

5. Monthly Travel Expenses	< 10%	10-20%	20-30%	30-40%	40-50%/	> 50% of monthly income

6. No. of Working Days: 5/6/7 per Week

7. No. of Working Hours: <8/ 8/9/10/11/12 per Day

8. Family Size: <4 /4 /5 /6 /7 /8 /9 /10 /11 /12

C. EXISTING TRIP INFORMATION

1. Purpose of the Trip: Work / Social / Recreation / Medical /Family Purpose/ Others (: Specify)
2. Fare paid by: Self / Office
3. Reasons for Choosing Current Route: Less Time/ Less Cost/ More Comfortable/ No Other Alternatives
4. Quality of the Service: Very good / Good / Poor / Very Poor/ Moderate
5. Width of the road: Sufficient/Insufficient
6. Available alternative modes

Bus		Rail		Water		Air		No alternatives
Time:	Fare:	Time:	Fare:	Time:	Fare:	Time:	Fare:	

D. STATED PREFERENCE FOR ALTERNATIVE TRIP OPTIONS

Option:1	Fare (BDT)	Time (Hrs)	AC/Non AC	Stated Choice
Choice 1	1400	11.5	AC	
Choice 2	1300	12.5	AC	
Option:2	Fare (BDT)	Time (Hrs)	AC/Non AC	Stated Choice
Choice 1	1350	12	AC	
Choice 2	1250	13	AC	
Option:3	Fare (BDT)	Time (Hrs)	AC/Non AC	Stated Choice
Choice 1	1400	11.5	AC	
Choice 2	850	11.5	Non AC	
Option:4	Fare (BDT)	Time (Hrs)	AC/Non AC	Stated Choice
Choice 1	850	11.5	Non AC	
Choice 2	750	12.5	Non AC	
Option:5	Fare (BDT)	Time (Hrs)	AC/Non AC	Stated Choice
Choice 1	800	12	Non AC	
Choice 2	700	13	Non AC	
Option:6	Fare (BDT)	Time (Hrs)	AC/Non AC	Stated Choice
Choice 1	1450	11	AC	
Choice 2	900	11	Non AC	

Department of Civil Engineering
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Interview No: _____Date: _____Location of Interview: _____Travel Mode: _____Route:_____

A. COMMON TRIP INFORMATION

RANGPUR

Bus			Rail			
AC	Non AC		Local		Express	
Private	BRTC	Private	1st Class	Eco. Class	1st Class	Eco. Class

2. Trip Origin: _____3. Trip Destination: _____4. Trip Distance (Km): _____

5. Approximate Travel Time required on current route (Hrs): _____ 6. Fare required (Tk.) _____

B. SOCIOECONOMIC INFORMATION

1. Sex: Male/Female

2. Age Group :

> 20	20-30	31-40	41-50	51-60	> 61

3. Occupation: Service/Business/Student/Unemployed/Others (:)

4. Monthly Income :	> 3000	3001-5000	5001-10000	10000-20000	20001-35000	35001-50000	> 50000

5. Monthly Travel Expenses	< 10%	10-20%	20-30%	30-40%	40-50%/	> 50% of monthly income

6. No. of Working Days: 5/6/7 per Week

7. No. of Working Hours: <8/ 8/9/10/11/12 per Day

8. Family Size: <4 /4 /5 /6 /7 /8 /9 /10 /11 /12

C. EXISTING TRIP INFORMATION

1. Purpose of the Trip: Work / Social / Recreation / Medical /Family Purpose/ Others (: Specify)
2. Fare paid by: Self / Office
3. Reasons for Choosing Current Route: Less Time/ Less Cost/ More Comfortable/ No Other Alternatives
4. Quality of the Service: Very good / Good / Poor / Very Poor/ Moderate
5. Width of the road: Sufficient/Insufficient
6. Available alternative modes

Bus		Rail		Water		Air		No alternatives
Time:	Fare:	Time:	Fare:	Time:	Fare:	Time:	Fare:	

D. STATED PREFERENCE FOR ALTERNATIVE TRIP OPTIONS

Option:1	Fare (BDT)	Time (Hrs)	AC/Non AC	Stated Choice
Choice 1	850	8	AC	
Choice 2	750	9	AC	
Option:2	Fare (BDT)	Time (Hrs)	AC/Non AC	Stated Choice
Choice 1	800	8.5	AC	
Choice 2	700	9.5	AC	
Option:3	Fare (BDT)	Time (Hrs)	AC/Non AC	Stated Choice
Choice 1	850	8	AC	
Choice 2	550	8	Non AC	
Option:4	Fare (BDT)	Time (Hrs)	AC/Non AC	Stated Choice
Choice 1	550	9	Non AC	
Choice 2	450	10	Non AC	
Option:5	Fare (BDT)	Time (Hrs)	AC/Non AC	Stated Choice
Choice 1	500	9.5	Non AC	
Choice 2	400	10.5	Non AC	
Option:6	Fare (BDT)	Time (Hrs)	AC/Non AC	Stated Choice
Choice 1	900	7	AC	
Choice 2	600	7	Non AC	

Department of Civil Engineering
Khulna University of Engineering & Technology

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Interview No: _____Date: _____Location of Interview: _____Travel Mode: _____Route:_____

A. COMMON TRIP INFORMATION

BARISAL

Bus			Rail			
AC	Non AC		Local		Express	
Private	BRTC	Private	1st Class	Eco. Class	1st Class	Eco. Class

2. Trip Origin: _____3. Trip Destination: _____4. Trip Distance (Km): _____

5. Approximate Travel Time required on current route (Hrs): _____ 6. Fare required (Tk.) _____

B. SOCIOECONOMIC INFORMATION

1. Sex: Male/Female

2. Age Group :

> 20	20-30	31-40	41-50	51-60	> 61

3. Occupation: Service/Business/Student/Unemployed/Others (:)

4. Monthly Income :	> 3000	3001-5000	5001-10000	10000-20000	20001-35000	35001-50000	> 50000

5. Monthly Travel Expenses	< 10%	10-20%	20-30%	30-40%	40-50%/	> 50% of monthly income

6. No. of Working Days: 5/6/7 per Week

7. No. of Working Hours: <8/ 8/9/10/11/12 per Day

8. Family Size: <4 /4 /5 /6 /7 /8 /9 /10 /11 /12

C. EXISTING TRIP INFORMATION

1. Purpose of the Trip: Work / Social / Recreation / Medical /Family Purpose/ Others (: Specify)
2. Fare paid by: Self / Office
3. Reasons for Choosing Current Route: Less Time/ Less Cost/ More Comfortable/ No Other Alternatives
4. Quality of the Service: Very good / Good / Poor / Very Poor/ Moderate
5. Width of the road: Sufficient/Insufficient
6. Available alternative modes

Bus		Rail		Water		Air		No alternatives
Time:	Fare:	Time:	Fare:	Time:	Fare:	Time:	Fare:	

D. STATED PREFERENCE FOR ALTERNATIVE TRIP OPTIONS

Option:1	Fare (BDT)	Time (Hrs)	AC/Non AC	Stated Choice
Choice 1	400	4.00	AC	
Choice 2	300	4.50	AC	
Option:2	Fare (BDT)	Time (Hrs)	AC/Non AC	Stated Choice
Choice 1	350	4.25	AC	
Choice 2	250	4.75	AC	
Option:3	Fare (BDT)	Time (Hrs)	AC/Non AC	Stated Choice
Choice 1	400	4.00	AC	
Choice 2	180	4.00	Non AC	
Option:4	Fare (BDT)	Time (Hrs)	AC/Non AC	Stated Choice
Choice 1	160	4.25	Non AC	
Choice 2	140	4.75	Non AC	
Option:5	Fare (BDT)	Time (Hrs)	AC/Non AC	Stated Choice
Choice 1	150	4.50	Non AC	
Choice 2	130	5.00	Non AC	
Option:6	Fare (BDT)	Time (Hrs)	AC/Non AC	Stated Choice
Choice 1	450	3.50	AC	
Choice 2	200	3.50	Non AC	

Department of Civil Engineering

Khulna University of Engineering & Technology

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Interview No: _____Date: _____Location of Interview: _____Travel Mode: _____Route:_____

A. COMMON TRIP INFORMATION

RAJSHAHI

Bus			Rail			
AC	Non AC		Local		Express	
Private	BRTC	Private	1st Class	Eco. Class	1st Class	Eco. Class

2. Trip Origin: _____3. Trip Destination: _____4. Trip Distance (Km): _____

5. Approximate Travel Time required on current route (Hrs): _____ 6. Fare required (Tk.) _____

B. SOCIOECONOMIC INFORMATION

1. Sex: Male/Female

2. Age Group :

> 20	20-30	31-40	41-50	51-60	> 61

3. Occupation: Service/Business/Student/Unemployed/Others (:)

4. Monthly Income :	> 3000	3001-5000	5001-10000	10000-20000	20001-35000	35001-50000	> 50000

5. Monthly Travel Expenses	< 10%	10-20%	20-30%	30-40%	40-50%/	> 50% of monthly income

6. No. of Working Days: 5/6/7 per Week

7. No. of Working Hours: <8/ 8/9/10/11/12 per Day

8. Family Size: <4 /4 /5 /6 /7 /8 /9 /10 /11 /12

C. EXISTING TRIP INFORMATION

1. Purpose of the Trip: Work / Social / Recreation / Medical /Family Purpose/ Others (: Specify)
2. Fare paid by: Self / Office
3. Reasons for Choosing Current Route: Less Time/ Less Cost/ More Comfortable/ No Other Alternatives
4. Quality of the Service: Very good / Good / Poor / Very Poor/ Moderate
5. Width of the road: Sufficient/Insufficient
6. Available alternative modes

Bus		Rail		Water		Air		No alternatives
Time:	Fare:	Time:	Fare:	Time:	Fare:	Time:	Fare:	

D. STATED PREFERENCE FOR ALTERNATIVE TRIP OPTIONS

Option:1	Fare (BDT)	Time (Hrs)	AC/Non AC	Stated Choice
Choice 1	800	6.5	AC	
Choice 2	700	7.5	AC	
Option:2	Fare (BDT)	Time (Hrs)	AC/Non AC	Stated Choice
Choice 1	750	7.0	AC	
Choice 2	650	8.0	AC	
Option:3	Fare (BDT)	Time (Hrs)	AC/Non AC	Stated Choice
Choice 1	800	6.5	AC	
Choice 2	300	6.5	Non AC	
Option:4	Fare (BDT)	Time (Hrs)	AC/Non AC	Stated Choice
Choice 1	300	6.5	Non AC	
Choice 2	200	7.5	Non AC	
Option:5	Fare (BDT)	Time (Hrs)	AC/Non AC	Stated Choice
Choice 1	250	7.0	Non AC	
Choice 2	170	8.0	Non AC	
Option:6	Fare (BDT)	Time (Hrs)	AC/Non AC	Stated Choice
Choice 1	850	6.0	AC	
Choice 2	350	6.0	Non AC	

APPENDIX - B

(Coding Convention)

Gender	
Male	1
Female	0
Age	
Younger than 20	1
20-30	2
31-40	3
41-50	4
51-60	5
Elder than 60	6
Occupation	
Service	1
Business	2
Student	3
Unemployed	4
Others	5
Monthly Income (BDT)	
None	0
Below 3000	1
3001-5000	2
5001-10000	3
10001-20000	4
20001-35000	5
35001-50000	6
More than 50000	7
Monthly Travel Expense (%)	
< 10	1
10-20	2
20-30	3
30-40	4
40-50	5
>50	6
Working Days (No.)	
None	0
5	1
6	2
7	3

Family Size	
less than 4	1
4	2
5	3
6	4
7	5
8	6
9	7
10	8
11	9
12	10
Trip Purpose	
Work	1
Social	2
Recreation	3
Medical	4
Family Purpose	5
Others	6
Fare Paid By	
Self	1
Office	2
Reason of Choosing Current Route	
Less Time	1
Less Cost	2
More Comfortable	3
Other	4
Service Quality	
Very good	1
Good	2
Poor	3
Very poor	4
Moderate	5
Road Width	
Sufficient	1
Insufficient	2
AC/Non-AC	
AC	1
Non-AC	0

APPENDIX C

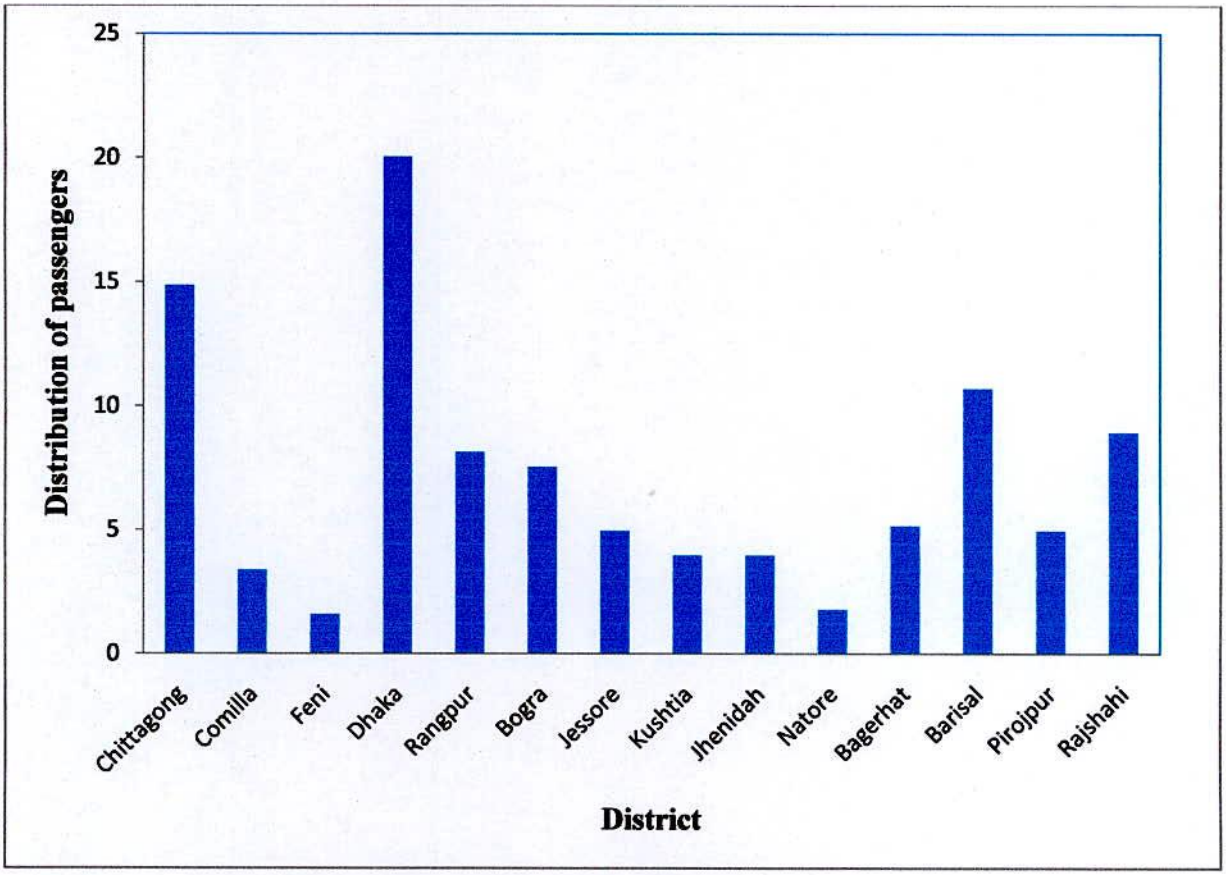

Figure C1: Distribution of Passengers in different Districts of Bangladesh

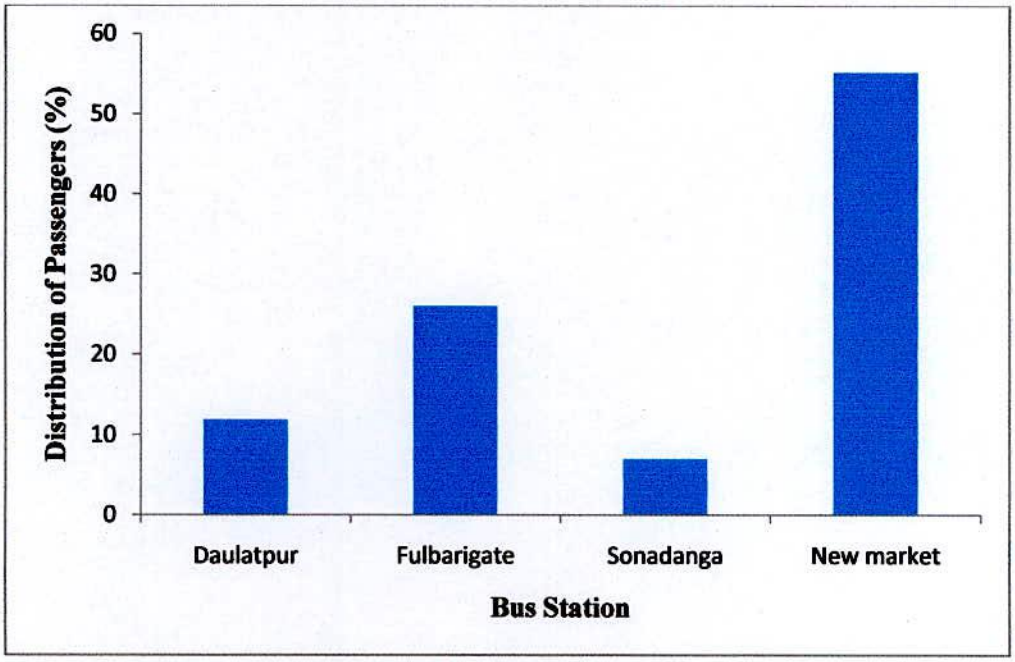

Figure C2: Distribution of Passengers by Bus Station

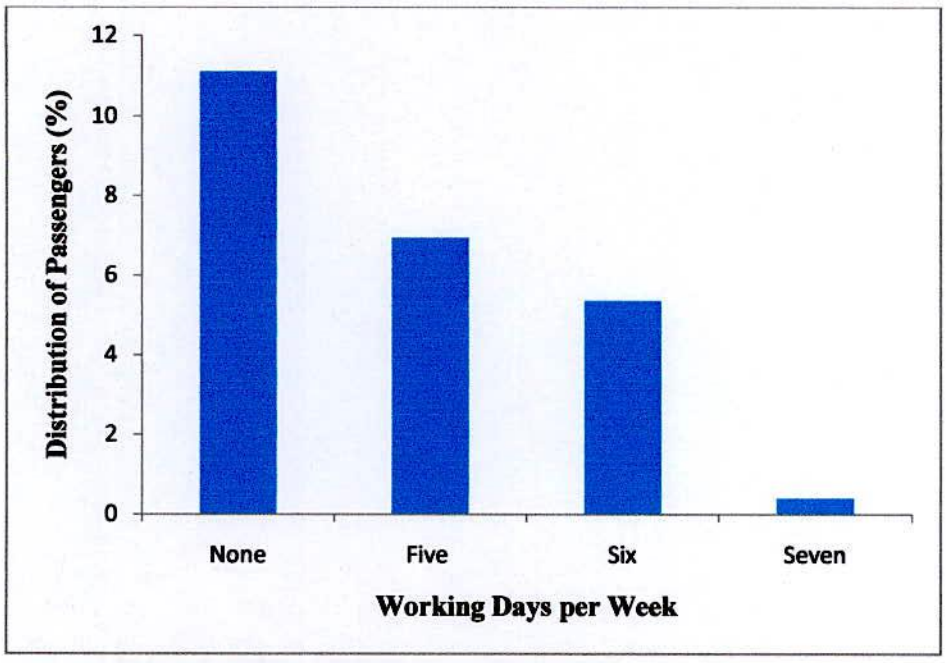

Figure C3: Distribution of Passengers by Working Days per Week

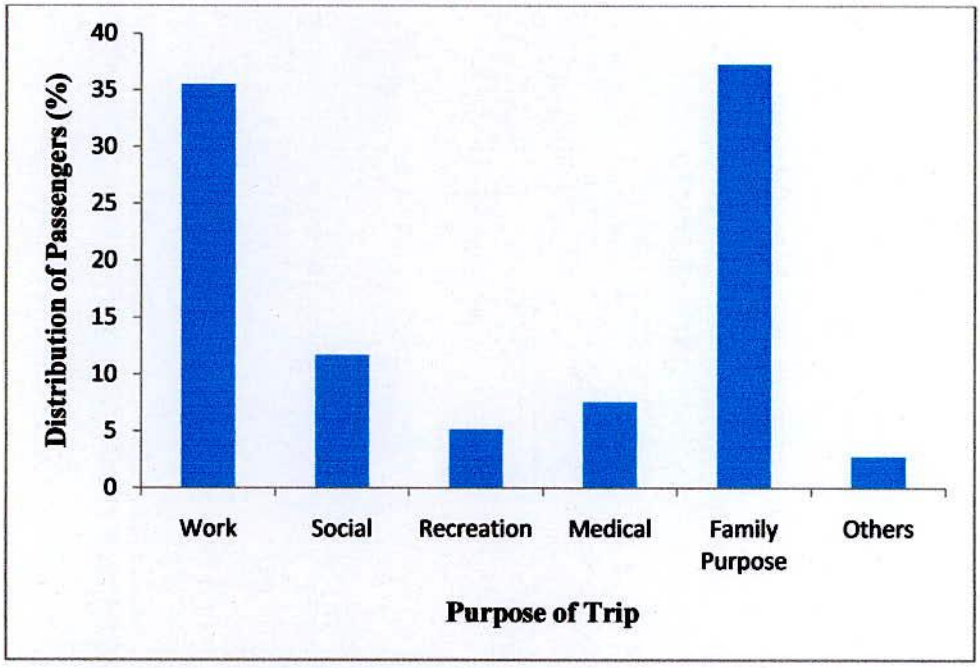

Figure C4: Distribution of Passengers by Purpose of the Trip

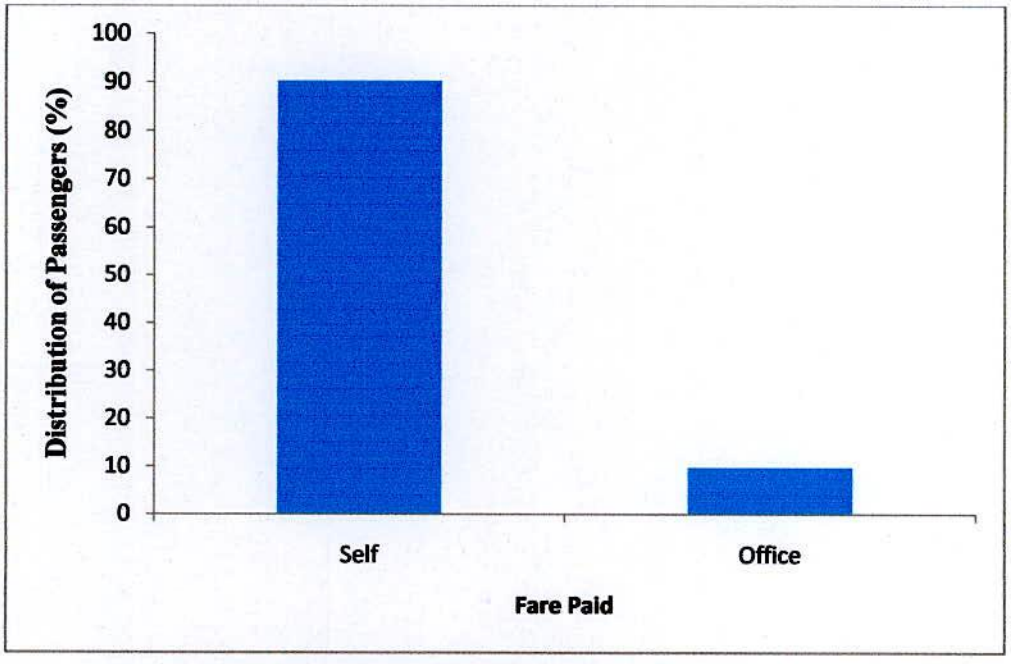

Figure C5: Distribution of Passengers by Fare Paid

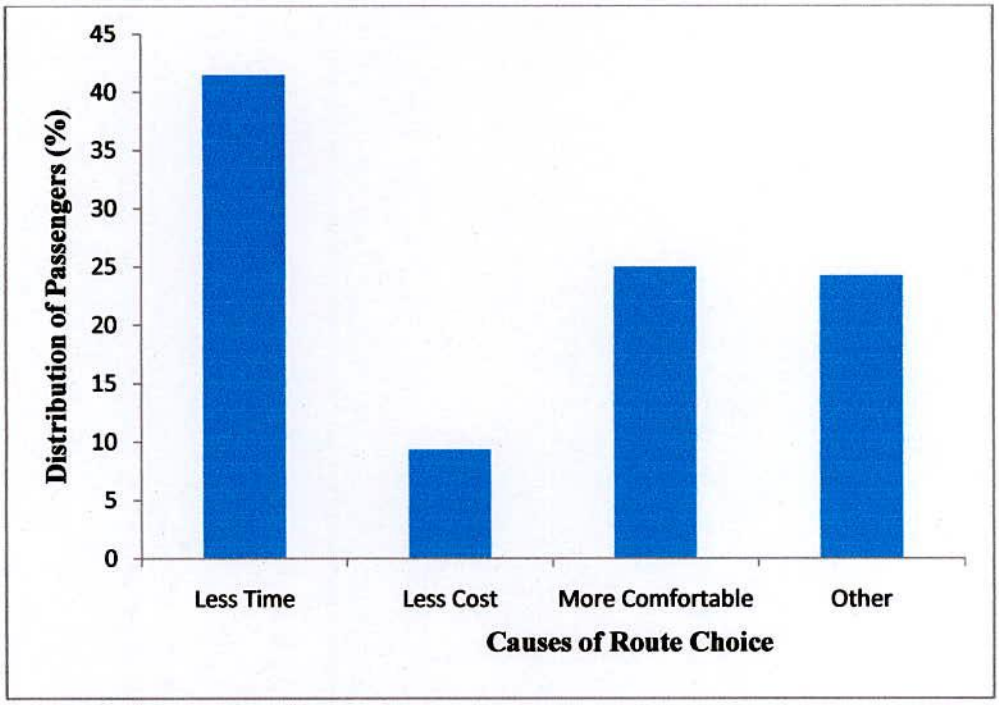

Figure C6: Distribution of Passengers by Causes of Route Choice

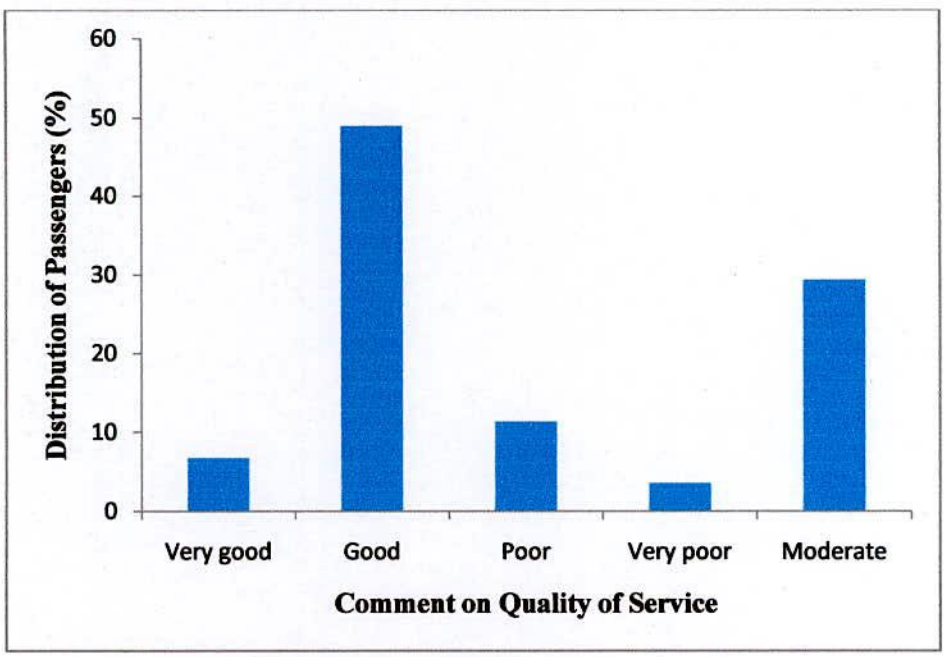

Figure C7: Distribution of Passengers by Comment on Quality of Service

APPENDIX D

Results of Statistical Analysis

Dhaka

Independent variable	Estimated coefficient	Standard Error	t-statistics	Percent Correctly Predicted	Number of Observations
Cost	-0.010	9.259×10^{-4}	-10.800	78.5	594
Time	1.065	0.094	11.329		
Air-Condition	-2.270	0.299	-7.415		

Chittagong

Independent variable	Estimated coefficient	Standard Error	t-statistics	Percent Correctly Predicted	Number of Observations
Cost	-0.0074	8.197×10^{-4}	-9.028	64.7	600
Time	0.844	0.089	9.483		
Air-Condition	-2.895	0.380	-7.618		

Rajshahi

Independent variable	Estimated coefficient	Standard Error	t-statistics	Percent Correctly Predicted	Number of Observations
Cost	-0.0068	8.390×10^{-4}	-8.057	65.0	588
Time	0.704	0.085	8.282		
Air-Condition	-2.417	0.344	-7.026		

Barisal

Independent variable	Estimated coefficient	Standard Error	t-statistics	Percent Correctly Predicted	Number of Observations
Cost	-0.009	0.001	-9.000	80.5	630
Time	0.677	0.095	7.126		
Air-Condition	-1.521	0.232	-2.245		

Rangpur

Independent variable	Estimated coefficient	Standard Error	t-statistics	Percent Correctly Predicted	Number of Observations
Cost	-0.003	5.933×10^{-4}	-5.572	65.7	594
Time	0.330	0.055	6.000		
Air-Condition	-1.053	0.229	-4.598		

Male

Independent variable	Estimated coefficient	Standard Error	t-statistics	Percent Correctly Predicted	Number of Observations
Cost	-0.003	3.216×10^{-4}	-9.328	59.3	2304
Time	+0.318	0.032	9.937		
Air-Condition	-0.584	0.124	-4.709		

Female

Independent variable	Estimated coefficient	Standard Error	t-statistics	Percent Correctly Predicted	Number of Observations
Cost	-0.004	0.001	-4.000	73.0	684
Time	0.421	0.061	6.900		
Air-Condition	-0.534	0.235	-2.267		

Service

Independent variable	Estimated coefficient	Standard Error	t-statistics	Percent Correctly Predicted	Number of Observations
Cost	-0.003	4.307×10^{-4}	-6.965	59.3	1350
Time	+0.323	0.043	+7.512		
Air-Condition	-0.325	0.163	-1.994		

Business

Independent variable	Estimated coefficient	Standard Error	t-statistics	Percent Correctly Predicted	Number of Observations
Cost	-0.004	0.001	-4.000	53.3	780
Time	+0.408	0.060	+6.800		
Air-Condition	-0.840	0.234	-3.589		

Student

Independent variable	Estimated coefficient	Standard Error	t-statistics	Percent Correctly Predicted	Number of Observations
Cost	-0.003	0.001	-3.000	68.8	462
Time	+0.227	0.056	+4.053		
Air-Condition	-0.415	0.261	-1.590		

Others

Independent variable	Estimated coefficient	Standard Error	t-statistics	Percent Correctly Predicted	Number of Observations
Cost	-0.004	0.001	-4.000	68.3	420
Time	+0.453	0.082	+5.524		
Air-Condition	-0.578	0.296	-1.953		

Social

Independent variable	Estimated coefficient	Standard Error	t-statistics	Percent Correctly Predicted	Number of Observations
Cost	-0.004	0.001	-4.000	55.4	354
Time	+0.344	0.087	+3.954		
Air-Condition	-0.600	0.342	-1.754		

Work

Independent variable	Estimated coefficient	Standard Error	t-statistics	Percent Correctly Predicted	Number of Observations
Cost	-0.003	4.69×10^{-4}	-6.396	52.7	1056
Time	+0.327	0.048	+6.812		
Air-Condition	-0.467	0.185	-2.524		

Recreational

Independent variable	Estimated coefficient	Standard Error	t-statistics	Percent Correctly Predicted	Number of Observations
Cost	-0.003	0.001	-3.000	57.3	216
Time	+0.189	0.062	+3.048		
Air-Condition	-0.284	0.124	-2.290		

Income BDT 5001 to BDT 10000

Independent variable	Estimated coefficient	Standard Error	t-statistics	Percent Correctly Predicted	Number of Observations
Cost	-0.003	0.001	-3.000	64.9	554
Time	+0.205	0.049	+4.184		
Air-Condition	-0.349	0.188	-1.856		

Income BDT 10001 to BDT 20000

Independent variable	Estimated coefficient	Standard Error	t-statistics	Percent Correctly Predicted	Number of Observations
Cost	-0.005	0.001	-5.000	62.2	984
Time	+0.466	0.055	+8.473		
Air-Condition	-0.545	0.159	-3.428		

Income BDT 20001 to BDT 35000

Independent variable	Estimated coefficient	Standard Error	t-statistics	Percent Correctly Predicted	Number of Observations
Cost	-0.003	0.001	-3.000	58.4	984
Time	+0.279	0.049	+5.694		
Air-Condition	-0.445	0.188	-2.367		

Income More than BDT 35000

Independent variable	Estimated coefficient	Standard Error	t-statistics	Percent Correctly Predicted	Number of Observations
Cost	-0.003	0.001	-3.000	72.0	354
Time	+0.400	0.092	+4.347		
Air-Condition	-0.461	0.325	-1.418		

Younger than 20 years

Independent variable	Estimated coefficient	Standard Error	t-statistics	Percent Correctly Predicted	Number of Observations
Cost	-0.003	0.001	-3.000	58.4	984
Time	+0.295	0.049	+6.200		
Air-Condition	-0.432	0.188	-2.298		

Age 20 to 40 years

Independent variable	Estimated coefficient	Standard Error	t-statistics	Percent Correctly Predicted	Number of Observations
Cost	-0.003	3.288×10^{-4}	-9.124	60.3	2202
Time	+0.316	0.033	+9.575		
Air-Condition	-0.399	0.125	+3.192		

More than 40 years

Independent variable	Estimated coefficient	Standard Error	t-statistics	Percent Correctly Predicted	Number of Observations
Cost	-0.004	0.001	-4.000	57.3	672
Time	+0.432	0.062	+6.968		
Air-Condition	-0.833	0.244	-3.414		

Office

Independent variable	Estimated coefficient	Standard Error	t-statistics	Percent Correctly Predicted	Number of Observations
Cost	-0.003	$2.997*10^{-4}$	10.010	66.3	2730
Time	+0.330	0.030	11.000		
Air-Condition	-0.399	0.116	3.439		

Self

Independent variable	Estimated coefficient	Standard Error	t-statistics	Percent Correctly Predicted	Number of Observations
Cost	-0.004	0.001	-4.000	58.0	288
Time	+0.396	0.091	+4.352		
Air-Condition	-0.475	0.353	-1.345		

Less Cost

Independent variable	Estimated coefficient	Standard Error	t-statistics	Percent Correctly Predicted	Number of Observations
Cost	-0.003	0.001	-3.000	77.0	272
Time	+0.373	0.108	+3.454		
Air-Condition	-0.504	0.179	-2.816		

Less than 10%

Independent variable	Estimated coefficient	Standard Error	t-statistics	Percent Correctly Predicted	Number of Observations
Cost	-0.003	$3.34x10^{-4}$	-8.982	60.1	2250
Time	+0.336	0.033	+10.182		
Air-Condition	-0.398	0.123	-3.236		

Others

Independent variable	Estimated coefficient	Standard Error	t-statistics	Percent Correctly Predicted	Number of Observations
Cost	-0.002	3.89 x 10-4	-5.141	66.1	1596
Time	+0.274	0.038	+7.210		
Air-Condition	-0.347	0.147	-2.360		

Non-AC

Independent variable	Estimated coefficient	Standard Error	t-statistics	Percent Correctly Predicted	Number of Observations
Cost	-0.003	3.010×10^{-4}	-9.967	67.7	2808
Time	+0.326	0.030	+10.867		
Air-Condition	-0.397	0.113	-3.513		

APPENDIX E

STATED PREFERENCE OF QUESTIONNAIRE SURVEY

	01_choice	02_choice	03_choice	04_choice	05_choice	06_choice	01_fare	02_fare	03_fare	04_fare	05_fare	06_fare	01_time	02_time	03_time	04_time	05_time	06_time	01_AC	02_AC	03_AC	04_AC	05_AC	06_AC
1	Choice_2	Choice_2	Choice_2	Choice_1	Choice_1	Choice_2	1300	1250	850	850	800	900	12.5	13	11.5	11.5	12	11	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
2	Choice_2	Choice_2	Choice_2	Choice_1	Choice_1	Choice_2	1300	1250	850	850	800	900	12.5	13	11.5	11.5	12	11	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
3	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	1300	1250	850	750	700	900	12.5	13	11.5	12.5	13	11	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
4	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	1300	1250	850	750	700	900	12.5	13	11.5	12.5	13	11	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
5	Choice_1	Choice_1	Choice_1	Choice_1	Choice_1	Choice_1	1400	1350	1400	850	800	1450	11.5	12	11.5	11.5	12	11	AC	AC	AC	Non_AC	Non_AC	AC
6	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	1300	1250	850	750	700	900	12.5	13	11.5	12.5	13	11	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
7	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	1300	1250	850	750	700	900	12.5	13	11.5	12.5	13	11	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
8	Choice_1	Choice_1	Choice_1	Choice_1	Choice_1	Choice_1	1400	1350	1400	850	800	1450	11.5	12	11.5	11.5	12	11	AC	AC	AC	Non_AC	Non_AC	AC
9	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	1300	1250	850	750	700	900	12.5	13	11.5	12.5	13	11	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
10	Choice_2	Choice_2	Choice_2	Choice_1	Choice_1	Choice_2	1300	1250	850	850	800	900	12.5	13	11.5	11.5	12	11	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
11	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	1300	1250	850	750	700	900	12.5	13	11.5	12.5	13	11	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
12	Choice_1	Choice_1	Choice_1	Choice_1	Choice_1	Choice_1	1400	1350	1400	850	800	1450	11.5	12	11.5	11.5	12	11	AC	AC	AC	Non_AC	Non_AC	AC
13	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	1300	1250	850	750	700	900	12.5	13	11.5	12.5	13	11	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
14	Choice_2	Choice_2	Choice_2	Choice_1	Choice_1	Choice_2	1300	1250	850	850	800	900	12.5	13	11.5	11.5	12	11	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
15	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	1300	1250	850	750	700	900	12.5	13	11.5	12.5	13	11	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
16	Choice_2	Choice_2	Choice_1	Choice_2	Choice_2	Choice_1	1300	1250	1400	750	700	1450	12.5	13	11.5	12.5	13	11	AC	AC	AC	Non_AC	Non_AC	AC
17	Choice_1	Choice_1	Choice_2	Choice_1	Choice_1	Choice_2	1400	1350	850	850	800	800	11.5	12	11.5	11.5	12	11	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
18	Choice_1	Choice_1	Choice_2	Choice_1	Choice_1	Choice_1	1400	1350	850	850	800	800	11.5	12	11.5	11.5	12	11	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
19	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	1300	1250	850	750	700	900	12.5	13	11.5	12.5	13	11	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
20	Choice_1	Choice_1	Choice_2	Choice_2	Choice_2	Choice_2	1400	1350	850	750	700	900	11.5	12	11.5	12.5	13	11	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
21	Choice_2	Choice_2	Choice_2	Choice_1	Choice_1	Choice_2	1300	1250	850	850	800	900	12.5	13	11.5	11.5	12	11	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
22	Choice_2	Choice_2	Choice_2	Choice_1	Choice_1	Choice_2	1300	1250	850	850	800	900	12.5	13	11.5	11.5	12	11	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
23	Choice_2	Choice_2	Choice_2	Choice_1	Choice_1	Choice_2	1300	1250	850	850	800	900	12.5	13	11.5	11.5	12	11	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
24	Choice_2	Choice_2	Choice_2	Choice_1	Choice_1	Choice_2	1300	1250	850	850	800	900	12.5	13	11.5	11.5	12	11	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
25	Choice_1	Choice_1	Choice_1	Choice_1	Choice_1	Choice_1	1400	1350	1400	850	800	1450	11.5	12	11.5	11.5	12	11	AC	AC	AC	Non_AC	Non_AC	AC
26	Choice_2	Choice_2	Choice_2	Choice_1	Choice_1	Choice_2	1300	1250	850	850	800	900	12.5	13	11.5	11.5	12	11	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
27	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	1300	1250	850	750	700	900	12.5	13	11.5	12.5	13	11	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
28	Choice_2	Choice_2	Choice_2	Choice_1	Choice_1	Choice_2	1300	1250	850	850	800	900	12.5	13	11.5	11.5	12	11	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
29	Choice_1	Choice_1	Choice_2	Choice_1	Choice_1	Choice_2	1400	1350	850	850	800	800	11.5	12	11.5	11.5	12	11	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
30	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	1300	1250	850	750	700	900	12.5	13	11.5	12.5	13	11	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
31	Choice_1	Choice_1	Choice_1	Choice_1	Choice_1	Choice_1	1400	1350	1400	850	800	1450	11.5	12	11.5	11.5	12	11	AC	AC	AC	Non_AC	Non_AC	AC
32	Choice_2	Choice_2	Choice_2	Choice_1	Choice_1	Choice_2	1300	1250	850	850	800	900	12.5	13	11.5	11.5	12	11	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
33	Choice_2	Choice_2	Choice_1	Choice_1	Choice_1	Choice_1	1300	1250	1400	850	800	1450	12.5	13	11.5	11.5	12	11	AC	AC	AC	Non_AC	Non_AC	AC
34	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	1300	1250	850	750	700	900	12.5	13	11.5	12.5	13	11	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
35	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	1300	1250	850	750	700	900	12.5	13	11.5	12.5	13	11	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
36	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	1300	1250	850	750	700	900	12.5	13	11.5	12.5	13	11	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
37	Choice_2	Choice_2	Choice_2	Choice_1	Choice_1	Choice_2	1300	1250	850	850	800	900	12.5	13	11.5	11.5	12	11	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
38	Choice_1	Choice_1	Choice_1	Choice_1	Choice_1	Choice_1	1400	1350	1400	850	800	1450	11.5	12	11.5	11.5	12	11	AC	AC	AC	Non_AC	Non_AC	AC
39	Choice_2	Choice_2	Choice_2	Choice_1	Choice_1	Choice_2	1300	1250	850	850	800	900	12.5	13	11.5	11.5	12	11	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
40	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	1300	1250	850	750	700	900	12.5	13	11.5	12.5	13	11	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
41	Choice_2	Choice_2	Choice_2	Choice_1	Choice_1	Choice_2	1300	1250	850	850	800	900	12.5	13	11.5	11.5	12	11	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
42	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	1300	1250	850	750	700	900	12.5	13	11.5	12.5	13	11	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
43	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	1300	1250	850	750	700	900	12.5	13	11.5	12.5	13	11	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
44	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	1300	1250	850	750	700	900	12.5	13	11.5	12.5	13	11	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
45	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	1300	1250	850	750	700	900	12.5	13	11.5	12.5	13	11	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
46	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	1300	1250	850	750	700	900	12.5	13	11.5	12.5	13	11	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
47	Choice_2	Choice_2	Choice_2	Choice_1	Choice_1	Choice_2	1300	1250	850	850	800	900	12.5	13	11.5	11.5	12	11	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
48	Choice_1	Choice_1	Choice_1	Choice_1	Choice_1	Choice_1	1400	1350	1400	850	800	1450	11.5	12	11.5	11.5	12	11	AC	AC	AC	Non_AC	Non_AC	AC
49	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	1300	1250	850	750	700	900	12.5	13	11.5	12.5	13	11	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
50	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	1300	1250	850	750	700	900	12.5	13	11.5	12.5	13	11	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
51	Choice_2	Choice_2	Choice_2	Choice_1	Choice_1	Choice_2	1300	1250	850	850	800	900	12.5	13	11.5	11.5	12	11	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
52	Choice_2	Choice_2	Choice_2	Choice_1	Choice_1	Choice_2	1300	1250	850	850	800	900	12.5	13	11.5	11.5	12	11	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
53	Choice_2	Choice_2	Choice_2	Choice_1	Choice_1	Choice_2	1300	1250	850	850	800	900	12.5	13	11.5	11.5	12	11	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
54	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	1300	1250	850	750	700	900	12.5	13	11.5	12.5	13	11	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
55	Choice_2	Choice_2	Choice_2	Choice_1	Choice_1	Choice_2	1300	1250	850	850	800	900	12.5	13	11.5	11.5	12	11	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
56	Choice_1	Choice_1	Choice_1	Choice_1	Choice_1	Choice_1	1400	1350	1400	850	800	1450	11.5	12	11.5	11.5	12	11	AC	AC	AC	Non_AC	Non_AC	AC
57	Choice_1	Choice_1	Choice_1	Choice_1	Choice_1	Choice_1	1400	1350	1400	850	800	1450	11.5	12	11.5	11.5	12	11	AC	AC	AC	Non_AC	Non_AC	AC

STATED PREFERENCE OF QUESTIONNAIRE SURVEY

	01_choice	02_choice	03_choice	04_choice	05_choice	06_choice	01_fare	02_fare	03_fare	04_fare	05_fare	06_fare	01_time	02_time	03_time	04_time	05_time	06_time	01_ac	02_ac	03_ac	04_ac	05_ac	06_ac
58	Choice_1	Choice_1	Choice_1	Choice_1	Choice_1	Choice_1	1400	1350	1400	850	800	1450	11.5	12	11.5	11.5	12	11	AC	AC	AC	Non_AC	Non_AC	AC
59	Choice_2	Choice_2	Choice_2	Choice_1	Choice_1	Choice_2	1300	1250	850	850	800	900	12.5	13	11.5	11.5	12	11	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
60	Choice_2	Choice_2	Choice_2	Choice_1	Choice_1	Choice_2	1300	1250	850	850	800	900	12.5	13	11.5	11.5	12	11	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
61	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	1300	1250	850	750	700	900	12.5	13	11.5	12.5	13	11	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
62	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	1300	1250	850	750	700	900	12.5	13	11.5	12.5	13	11	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
63	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	1300	1250	850	750	700	900	12.5	13	11.5	12.5	13	11	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
64	Choice_2	Choice_2	Choice_2	Choice_1	Choice_1	Choice_2	1300	1250	850	850	800	900	12.5	13	11.5	11.5	12	11	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
65	Choice_2	Choice_2	Choice_2	Choice_1	Choice_1	Choice_2	1300	1250	850	850	800	900	12.5	13	11.5	11.5	12	11	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
66	Choice_2	Choice_2	Choice_2	Choice_1	Choice_1	Choice_2	1300	1250	850	850	800	900	12.5	13	11.5	11.5	12	11	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
67	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	1300	1250	850	750	700	900	12.5	13	11.5	12.5	13	11	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
68	Choice_2	Choice_2	Choice_2	Choice_1	Choice_1	Choice_2	1300	1250	850	850	800	900	12.5	13	11.5	11.5	12	11	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
69	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	1300	1250	850	750	700	900	12.5	13	11.5	12.5	13	11	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
70	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	1300	1250	850	750	700	900	12.5	13	11.5	12.5	13	11	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
71	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	1300	1250	850	750	700	900	12.5	13	11.5	12.5	13	11	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
72	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	1300	1250	850	750	700	900	12.5	13	11.5	12.5	13	11	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
73	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	1300	1250	850	750	700	900	12.5	13	11.5	12.5	13	11	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
74	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	1300	1250	850	750	700	900	12.5	13	11.5	12.5	13	11	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
75	Choice_2	Choice_2	Choice_2	Choice_1	Choice_1	Choice_2	1300	1250	850	850	800	900	12.5	13	11.5	11.5	12	11	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
76	Choice_2	Choice_2	Choice_2	Choice_1	Choice_1	Choice_2	1300	1250	850	850	800	900	12.5	13	11.5	11.5	12	11	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
77	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	1300	1250	850	750	700	900	12.5	13	11.5	12.5	13	11	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
78	Choice_1	Choice_1	Choice_1	Choice_1	Choice_1	Choice_1	1400	1350	1400	850	800	1450	11.5	12	11.5	11.5	12	11	AC	AC	AC	Non_AC	Non_AC	AC
79	Choice_1	Choice_1	Choice_2	Choice_2	Choice_2	Choice_2	1400	1350	850	750	700	900	11.5	12	11.5	12.5	13	11	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
80	Choice_1	Choice_1	Choice_1	Choice_1	Choice_1	Choice_1	1400	1350	1400	850	800	1450	11.5	12	11.5	11.5	12	11	AC	AC	AC	Non_AC	Non_AC	AC
81	Choice_2	Choice_2	Choice_2	Choice_1	Choice_1	Choice_2	1300	1250	850	850	800	900	12.5	13	11.5	11.5	12	11	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
82	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	1300	1250	850	750	700	900	12.5	13	11.5	12.5	13	11	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
83	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	1300	1250	850	750	700	900	12.5	13	11.5	12.5	13	11	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
84	Choice_1	Choice_1	Choice_1	Choice_1	Choice_1	Choice_1	1400	1350	1400	850	800	1450	11.5	12	11.5	11.5	12	11	AC	AC	AC	Non_AC	Non_AC	AC
85	Choice_1	Choice_1	Choice_1	Choice_1	Choice_1	Choice_1	1400	1350	1400	850	800	1450	11.5	12	11.5	11.5	12	11	AC	AC	AC	Non_AC	Non_AC	AC
86	Choice_1	Choice_1	Choice_1	Choice_1	Choice_1	Choice_1	1400	1350	1400	850	800	1450	11.5	12	11.5	11.5	12	11	AC	AC	AC	Non_AC	Non_AC	AC
87	Choice_2	Choice_2	Choice_2	Choice_1	Choice_1	Choice_2	1300	1250	850	850	800	900	12.5	13	11.5	11.5	12	11	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
88	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	1300	1250	850	750	700	900	12.5	13	11.5	12.5	13	11	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
89	Choice_1	Choice_1	Choice_1	Choice_1	Choice_1	Choice_1	1400	1350	1400	850	800	1450	11.5	12	11.5	11.5	12	11	AC	AC	AC	Non_AC	Non_AC	AC
90	Choice_2	Choice_2	Choice_2	Choice_1	Choice_1	Choice_2	1300	1250	850	850	800	900	12.5	13	11.5	11.5	12	11	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
91	Choice_1	Choice_1	Choice_1	Choice_1	Choice_1	Choice_1	1400	1350	1400	850	800	1450	11.5	12	11.5	11.5	12	11	AC	AC	AC	Non_AC	Non_AC	AC
92	Choice_1	Choice_1	Choice_1	Choice_1	Choice_1	Choice_1	1400	1350	1400	850	800	1450	11.5	12	11.5	11.5	12	11	AC	AC	AC	Non_AC	Non_AC	AC
93	Choice_2	Choice_2	Choice_1	Choice_1	Choice_1	Choice_1	1300	1250	1400	850	800	1450	12.5	13	11.5	11.5	12	11	AC	AC	AC	Non_AC	Non_AC	AC
94	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	1300	1250	850	750	700	900	12.5	13	11.5	12.5	13	11	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
95	Choice_2	Choice_2	Choice_2	Choice_1	Choice_1	Choice_2	1300	1250	850	850	800	900	12.5	13	11.5	11.5	12	11	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
96	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	1300	1250	850	750	700	900	12.5	13	11.5	12.5	13	11	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
97	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	1300	1250	850	750	700	900	12.5	13	11.5	12.5	13	11	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
98	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	1300	1250	850	750	700	900	12.5	13	11.5	12.5	13	11	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
99	Choice_1	Choice_1	Choice_1	Choice_1	Choice_1	Choice_1	1400	1350	1400	850	800	1450	11.5	12	11.5	11.5	12	11	AC	AC	AC	Non_AC	Non_AC	AC
100	Choice_1	Choice_1	Choice_1	Choice_1	Choice_1	Choice_1	1400	1350	1400	850	800	1450	11.5	12	11.5	11.5	12	11	AC	AC	AC	Non_AC	Non_AC	AC
101	Choice_2	Choice_2	Choice_1	Choice_2	Choice_2	Choice_1	800	750	900	400	350	1000	8.5	9	7.5	8.5	9	7	AC	AC	AC	Non_AC	Non_AC	AC
102	Choice_1	Choice_1	Choice_1	Choice_1	Choice_1	Choice_1	900	850	900	500	450	1000	7.5	8	7.5	7.5	8	7	AC	AC	AC	Non_AC	Non_AC	AC
103	Choice_1	Choice_1	Choice_1	Choice_1	Choice_1	Choice_1	900	850	900	500	450	1000	7.5	8	7.5	7.5	8	7	AC	AC	AC	Non_AC	Non_AC	AC
104	Choice_1	Choice_1	Choice_1	Choice_1	Choice_1	Choice_1	900	850	900	500	450	1000	7.5	8	7.5	7.5	8	7	AC	AC	AC	Non_AC	Non_AC	AC
105	Choice_1	Choice_1	Choice_1	Choice_1	Choice_1	Choice_1	900	850	900	500	450	1000	7.5	8	7.5	7.5	8	7	AC	AC	AC	Non_AC	Non_AC	AC
106	Choice_2	Choice_2	Choice_1	Choice_2	Choice_2	Choice_1	800	750	900	400	350	1000	8.5	9	7.5	8.5	9	7	AC	AC	AC	Non_AC	Non_AC	AC
107	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	800	750	500	400	350	550	8.5	9	7.5	8.5	9	7	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
108	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	800	750	500	400	350	550	8.5	9	7.5	8.5	9	7	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
109	Choice_1	Choice_1	Choice_1	Choice_1	Choice_1	Choice_1	900	850	900	500	450	1000	7.5	8	7.5	7.5	8	7	AC	AC	AC	Non_AC	Non_AC	AC
110	Choice_2	Choice_2	Choice_1	Choice_2	Choice_2	Choice_1	800	750	900	400	350	1000	8.5	9	7.5	8.5	9	7	AC	AC	AC	Non_AC	Non_AC	AC
111	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	800	750	500	400	350	550	8.5	9	7.5	8.5	9	7	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
112	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	800	750	500	400	350	550	8.5	9	7.5	8.5	9	7	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
113	Choice_1	Choice_1	Choice_1	Choice_1	Choice_1	Choice_1	900	850	900	500	450	1000	7.5	8	7.5	7.5	8	7	AC	AC	AC	Non_AC	Non_AC	AC
114	Choice_2	Choice_2	Choice_1	Choice_2	Choice_2	Choice_1	800	750	900	400	350	1000	8.5	9	7.5	8.5	9	7	AC	AC	AC	Non_AC	Non_AC	AC

STATED PREFERENCE OF QUESTIONNAIRE SURVEY

	01_choice	02_choice	03_choice	04_choice	05_choice	06_choice	01_fare	02_fare	03_fare	04_fare	05_fare	06_fare	01_time	02_time	03_time	04_time	05_time	06_time	01_ac	02_ac	03_ac	04_ac	05_ac	06_ac
115	Choice_1	Choice_1	Choice_2	Choice_2	Choice_2	Choice_2	900	850	850	750	700	900	7.5	8	11.5	12.5	13	11	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
116	Choice_2	Choice_2	Choice_2	Choice_1	Choice_1	Choice_2	800	750	500	600	450	550	8.5	9	7.5	7.5	8	7	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
117	Choice_2	Choice_2	Choice_2	Choice_1	Choice_1	Choice_2	800	750	500	600	450	550	8.5	9	7.5	7.5	8	7	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
118	Choice_2	Choice_2	Choice_2	Choice_1	Choice_1	Choice_2	800	750	500	600	450	550	8.5	9	7.5	7.5	8	7	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
119	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	800	750	500	400	350	550	8.5	9	7.5	8.5	9	7	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
120	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	800	750	500	400	350	550	8.5	9	7.5	8.5	9	7	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
121	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	800	750	500	400	350	550	8.5	9	7.5	8.5	9	7	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
122	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	800	750	500	400	350	550	8.5	9	7.5	8.5	9	7	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
123	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	800	750	500	400	350	550	8.5	9	7.5	8.5	9	7	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
124	Choice_1	Choice_1	Choice_2	Choice_1	Choice_1	Choice_2	900	850	500	600	450	550	7.5	8	7.5	8.5	9	7	AC	AC	AC	Non_AC	Non_AC	Non_AC
125	Choice_2	Choice_2	Choice_2	Choice_1	Choice_1	Choice_2	800	750	500	600	450	550	8.5	9	7.5	7.5	8	7	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
126	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	800	750	500	400	350	550	8.5	9	7.5	8.5	9	7	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
127	Choice_1	Choice_1	Choice_1	Choice_1	Choice_1	Choice_1	900	850	900	500	450	1000	7.5	8	7.5	7.5	8	7	AC	AC	AC	Non_AC	Non_AC	AC
128	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	800	750	500	400	350	550	8.5	9	7.5	8.5	9	7	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
129	Choice_2	Choice_2	Choice_2	Choice_1	Choice_2	Choice_2	800	750	500	500	350	550	8.5	9	7.5	7.5	9	7	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
130	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	800	750	500	400	350	550	8.5	9	7.5	8.5	9	7	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
131	Choice_2	Choice_2	Choice_2	Choice_1	Choice_1	Choice_2	800	750	500	600	450	550	8.5	9	7.5	7.5	8	7	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
132	Choice_1	Choice_1	Choice_2	Choice_1	Choice_1	Choice_2	900	850	500	600	450	550	7.5	8	7.5	8.5	9	7	AC	AC	AC	Non_AC	Non_AC	Non_AC
133	Choice_2	Choice_2	Choice_2	Choice_1	Choice_1	Choice_2	800	750	500	600	450	550	8.5	9	7.5	7.5	8	7	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
134	Choice_2	Choice_2	Choice_1	Choice_2	Choice_2	Choice_1	800	750	900	400	350	1000	8.5	9	7.5	8.5	9	7	AC	AC	AC	Non_AC	Non_AC	AC
135	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	800	750	500	400	350	550	8.5	9	7.5	8.5	9	7	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
136	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	800	750	500	400	350	550	8.5	9	7.5	8.5	9	7	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
137	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	800	750	500	400	350	550	8.5	9	7.5	8.5	9	7	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
138	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	800	750	500	400	350	550	8.5	9	7.5	8.5	9	7	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
139	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	800	750	500	400	350	550	8.5	9	7.5	8.5	9	7	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
140	Choice_2	Choice_2	Choice_1	Choice_2	Choice_2	Choice_1	800	750	900	400	350	1000	8.5	9	7.5	8.5	9	7	AC	AC	AC	Non_AC	Non_AC	AC
141	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	800	750	500	400	350	550	8.5	9	7.5	8.5	9	7	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
142	Choice_1	Choice_1	Choice_1	Choice_2	Choice_2	Choice_1	900	850	900	400	350	1000	7.5	8	7.5	8.5	9	7	AC	AC	AC	Non_AC	Non_AC	AC
143	Choice_1	Choice_1	Choice_2	Choice_1	Choice_1	Choice_2	900	850	500	600	450	550	7.5	8	7.5	8.5	9	7	AC	AC	AC	Non_AC	Non_AC	Non_AC
144	Choice_2	Choice_2	Choice_1	Choice_1	Choice_1	Choice_1	800	750	900	500	450	1000	8.5	9	7.5	7.5	8	7	AC	AC	AC	Non_AC	Non_AC	AC
145	Choice_1	Choice_1	Choice_1	Choice_2	Choice_2	Choice_1	900	850	900	400	350	1000	7.5	8	7.5	8.5	9	7	AC	AC	AC	Non_AC	Non_AC	AC
146	Choice_1	Choice_1	Choice_1	Choice_1	Choice_1	Choice_1	900	850	900	500	450	1000	7.5	8	7.5	7.5	8	7	AC	AC	AC	Non_AC	Non_AC	AC
147	Choice_2	Choice_2	Choice_1	Choice_2	Choice_2	Choice_1	800	750	900	400	350	1000	8.5	9	7.5	8.5	9	7	AC	AC	AC	Non_AC	Non_AC	AC
148	Choice_2	Choice_2	Choice_1	Choice_2	Choice_2	Choice_1	800	750	900	400	350	1000	8.5	9	7.5	8.5	9	7	AC	AC	AC	Non_AC	Non_AC	AC
149	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	800	750	500	400	350	550	8.5	9	7.5	8.5	9	7	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
150	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	800	750	500	400	350	550	8.5	9	7.5	8.5	9	7	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
151	Choice_2	Choice_2	Choice_1	Choice_2	Choice_2	Choice_1	800	750	900	400	350	1000	8.5	9	7.5	8.5	9	7	AC	AC	AC	Non_AC	Non_AC	AC
152	Choice_2	Choice_2	Choice_1	Choice_2	Choice_2	Choice_1	800	750	900	400	350	1000	8.5	9	7.5	8.5	9	7	AC	AC	AC	Non_AC	Non_AC	AC
153	Choice_2	Choice_2	Choice_1	Choice_2	Choice_2	Choice_1	800	750	900	400	350	1000	8.5	9	7.5	8.5	9	7	AC	AC	AC	Non_AC	Non_AC	AC
154	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	800	750	500	400	350	550	8.5	9	7.5	8.5	9	7	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
155	Choice_2	Choice_2	Choice_1	Choice_2	Choice_2	Choice_1	800	750	900	400	350	1000	8.5	9	7.5	8.5	9	7	AC	AC	AC	Non_AC	Non_AC	AC
156	Choice_2	Choice_2	Choice_1	Choice_2	Choice_2	Choice_1	800	750	900	400	350	1000	8.5	9	7.5	8.5	9	7	AC	AC	AC	Non_AC	Non_AC	AC
157	Choice_2	Choice_2	Choice_1	Choice_2	Choice_2	Choice_1	800	750	900	400	350	1000	8.5	9	7.5	8.5	9	7	AC	AC	AC	Non_AC	Non_AC	AC
158	Choice_2	Choice_2	Choice_1	Choice_2	Choice_2	Choice_1	800	750	900	400	350	1000	8.5	9	7.5	8.5	9	7	AC	AC	AC	Non_AC	Non_AC	AC
159	Choice_1	Choice_1	Choice_1	Choice_1	Choice_1	Choice_1	900	850	900	500	450	1000	7.5	8	7.5	7.5	8	7	AC	AC	AC	Non_AC	Non_AC	AC
160	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	800	750	500	400	350	550	8.5	9	7.5	8.5	9	7	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
161	Choice_2	Choice_2	Choice_2	Choice_1	Choice_1	Choice_2	800	750	500	600	450	550	8.5	9	7.5	7.5	8	7	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
162	Choice_2	Choice_2	Choice_2	Choice_1	Choice_1	Choice_2	800	750	500	600	450	550	8.5	9	7.5	7.5	8	7	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
163	Choice_2	Choice_2	Choice_2	Choice_1	Choice_1	Choice_2	800	750	500	600	450	550	8.5	9	7.5	7.5	8	7	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
164	Choice_2	Choice_2	Choice_2	Choice_1	Choice_1	Choice_2	800	750	500	600	450	550	8.5	9	7.5	7.5	8	7	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
165	Choice_1	Choice_1	Choice_2	Choice_1	Choice_1	Choice_2	900	850	500	600	450	550	7.5	8	7.5	8.5	9	7	AC	AC	AC	Non_AC	Non_AC	Non_AC
166	Choice_1	Choice_1	Choice_1	Choice_1	Choice_1	Choice_1	900	850	900	500	450	1000	7.5	8	7.5	7.5	8	7	AC	AC	AC	Non_AC	Non_AC	AC
167	Choice_2	Choice_2	Choice_2	Choice_1	Choice_1	Choice_2	800	750	500	600	450	550	8.5	9	7.5	7.5	8	7	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
168	Choice_2	Choice_2	Choice_2	Choice_1	Choice_1	Choice_2	800	750	500	600	450	550	8.5	9	7.5	7.5	8	7	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
169	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	800	750	500	400	350	550	8.5	9	7.5	8.5	9	7	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
170	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	800	750	500	400	350	550	8.5	9	7.5	8.5	9	7	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
171	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	800	750	500	400	350	550	8.5	9	7.5	8.5	9	7	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC

STATED PREFERENCE OF QUESTIONNAIRE SURVEY

	01_choice	02_choice	03_choice	04_choice	05_choice	06_choice	01_fare	02_fare	03_fare	04_fare	05_fare	06_fare	01_time	02_time	03_time	04_time	05_time	06_time	01_ac	02_ac	03_ac	04_ac	05_ac	06_ac
172	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	800	750	500	400	350	550	8.5	9	7.5	8.5	9	7	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
173	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	800	750	500	400	350	550	8.5	9	7.5	8.5	9	7	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
174	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	800	750	500	400	350	550	8.5	9	7.5	8.5	9	7	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
175	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	800	750	500	400	350	550	8.5	9	7.5	8.5	9	7	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
176	Choice_2	Choice_2	Choice_1	Choice_2	Choice_2	Choice_1	800	750	900	400	350	1000	8.5	9	7.5	8.5	9	7	AC	AC	AC	Non_AC	Non_AC	AC
177	Choice_2	Choice_2	Choice_2	Choice_1	Choice_1	Choice_2	800	750	500	600	450	550	8.5	9	7.5	7.5	8	7	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
178	Choice_1	Choice_1	Choice_2	Choice_1	Choice_1	Choice_2	900	850	500	600	450	550	7.5	8	7.5	8.5	9	7	AC	AC	AC	Non_AC	Non_AC	Non_AC
179	Choice_2	Choice_2	Choice_2	Choice_1	Choice_1	Choice_2	800	750	500	600	450	550	8.5	9	7.5	7.5	8	7	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
180	Choice_1	Choice_1	Choice_1	Choice_1	Choice_1	Choice_1	900	850	900	500	450	1000	7.5	8	7.5	7.5	8	7	AC	AC	AC	Non_AC	Non_AC	AC
181	Choice_2	Choice_2	Choice_2	Choice_1	Choice_1	Choice_2	800	750	500	600	450	550	8.5	9	7.5	7.5	8	7	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
182	Choice_2	Choice_2	Choice_2	Choice_1	Choice_1	Choice_2	800	750	500	600	450	550	8.5	9	7.5	7.5	8	7	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
183	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	800	750	500	400	350	550	8.5	9	7.5	8.5	9	7	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
184	Choice_2	Choice_2	Choice_2	Choice_1	Choice_1	Choice_2	800	750	500	600	450	550	8.5	9	7.5	7.5	8	7	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
185	Choice_2	Choice_2	Choice_2	Choice_1	Choice_1	Choice_2	800	750	500	600	450	550	8.5	9	7.5	7.5	8	7	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
186	Choice_2	Choice_2	Choice_2	Choice_1	Choice_1	Choice_2	800	750	500	600	450	550	8.5	9	7.5	7.5	8	7	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
187	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	800	750	500	400	350	550	8.5	9	7.5	8.5	9	7	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
188	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	800	750	500	400	350	550	8.5	9	7.5	8.5	9	7	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
189	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	800	750	500	400	350	550	8.5	9	7.5	8.5	9	7	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
190	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	800	750	500	400	350	550	8.5	9	7.5	8.5	9	7	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
191	Choice_2	Choice_2	Choice_2	Choice_1	Choice_1	Choice_2	800	750	500	600	450	550	8.5	9	7.5	7.5	8	7	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
192	Choice_1	Choice_1	Choice_1	Choice_1	Choice_1	Choice_1	900	850	900	500	450	1000	7.5	8	7.5	7.5	8	7	AC	AC	AC	Non_AC	Non_AC	AC
193	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	800	750	500	400	350	550	8.5	9	7.5	8.5	9	7	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
194	Choice_1	Choice_1	Choice_1	Choice_1	Choice_1	Choice_1	900	850	900	500	450	1000	7.5	8	7.5	7.5	8	7	AC	AC	AC	Non_AC	Non_AC	AC
195	Choice_1	Choice_1	Choice_1	Choice_1	Choice_1	Choice_1	900	850	900	500	450	1000	7.5	8	7.5	7.5	8	7	AC	AC	AC	Non_AC	Non_AC	AC
196	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	800	750	500	400	350	550	8.5	9	7.5	8.5	9	7	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
197	Choice_1	Choice_1	Choice_1	Choice_1	Choice_1	Choice_1	900	850	900	500	450	1000	7.5	8	7.5	7.5	8	7	AC	AC	AC	Non_AC	Non_AC	AC
198	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	800	750	500	400	350	550	8.5	9	7.5	8.5	9	7	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
199	Choice_1	Choice_1	Choice_1	Choice_1	Choice_1	Choice_1	900	850	900	500	450	1000	7.5	8	7.5	7.5	8	7	AC	AC	AC	Non_AC	Non_AC	AC
200	Choice_2	Choice_2	Choice_1	Choice_1	Choice_1	Choice_1	1300	1250	1400	850	800	1450	12.5	13	11.5	11.5	12	11	AC	AC	AC	Non_AC	Non_AC	AC
201	Choice_2	Choice_2	Choice_2	Choice_1	Choice_1	Choice_2	800	750	500	600	450	550	8.5	9	7.5	7.5	8	7	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
202	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	750	700	550	450	400	600	9	9.5	8	10	10.5	7	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
203	Choice_1	Choice_1	Choice_2	Choice_1	Choice_1	Choice_2	850	800	550	550	500	600	8	8.5	8	9	9.5	7	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
204	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	750	700	550	450	400	600	9	9.5	8	10	10.5	7	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
205	Choice_1	Choice_1	Choice_1	Choice_1	Choice_1	Choice_1	850	800	850	550	500	900	8	8.5	8	9	9.5	7	AC	AC	AC	Non_AC	Non_AC	AC
206	Choice_1	Choice_1	Choice_2	Choice_1	Choice_1	Choice_2	850	800	550	550	500	600	8	8.5	8	9	9.5	7	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
207	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	750	700	550	450	400	600	9	9.5	8	10	10.5	7	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
208	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	750	700	550	450	400	600	9	9.5	8	10	10.5	7	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
209	Choice_1	Choice_1	Choice_2	Choice_1	Choice_1	Choice_2	850	800	550	550	500	600	8	8.5	8	9	9.5	7	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
210	Choice_1	Choice_1	Choice_1	Choice_1	Choice_1	Choice_1	850	800	850	550	500	900	8	8.5	8	9	9.5	7	AC	AC	AC	Non_AC	Non_AC	AC
211	Choice_1	Choice_1	Choice_2	Choice_1	Choice_1	Choice_2	850	800	550	550	500	600	8	8.5	8	9	9.5	7	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
212	Choice_1	Choice_1	Choice_2	Choice_1	Choice_1	Choice_2	850	800	550	550	500	600	8	8.5	8	9	9.5	7	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
213	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	750	700	550	450	400	600	9	9.5	8	10	10.5	7	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
214	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	750	700	550	450	400	600	9	9.5	8	10	10.5	7	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
215	Choice_1	Choice_1	Choice_2	Choice_1	Choice_1	Choice_2	850	800	550	550	500	600	8	8.5	8	9	9.5	7	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
216	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	750	700	550	450	400	600	9	9.5	8	10	10.5	7	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
217	Choice_1	Choice_1	Choice_2	Choice_1	Choice_1	Choice_2	850	800	550	550	500	600	8	8.5	8	9	9.5	7	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
218	Choice_1	Choice_1	Choice_2	Choice_1	Choice_1	Choice_2	850	800	550	550	500	600	8	8.5	8	9	9.5	7	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
219	Choice_1	Choice_1	Choice_2	Choice_1	Choice_1	Choice_2	850	800	550	550	500	600	8	8.5	8	9	9.5	7	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
220	Choice_1	Choice_1	Choice_1	Choice_1	Choice_1	Choice_1	850	800	850	550	500	900	8	8.5	8	9	9.5	7	AC	AC	AC	Non_AC	Non_AC	AC
221	Choice_1	Choice_1	Choice_2	Choice_1	Choice_1	Choice_2	850	800	550	550	500	600	8	8.5	8	9	9.5	7	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
222	Choice_1	Choice_1	Choice_2	Choice_1	Choice_1	Choice_2	850	800	550	550	500	600	8	8.5	8	9	9.5	7	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
223	Choice_1	Choice_1	Choice_2	Choice_1	Choice_1	Choice_2	850	800	550	550	500	600	8	8.5	8	9	9.5	7	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
224	Choice_1	Choice_1	Choice_2	Choice_1	Choice_1	Choice_2	850	800	550	550	500	600	8	8.5	8	9	9.5	7	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
225	Choice_1	Choice_1	Choice_2	Choice_1	Choice_1	Choice_2	850	800	550	550	500	600	8	8.5	8	9	9.5	7	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
226	Choice_1	Choice_1	Choice_2	Choice_1	Choice_1	Choice_2	850	800	550	550	500	600	8	8.5	8	9	9.5	7	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
227	Choice_1	Choice_1	Choice_1	Choice_1	Choice_1	Choice_1	850	800	850	550	500	900	8	8.5	8	9	9.5	7	AC	AC	AC	Non_AC	Non_AC	AC
228	Choice_1	Choice_1	Choice_1	Choice_1	Choice_1	Choice_1	850	800	850	550	500	900	8	8.5	8	9	9.5	7	AC	AC	AC	Non_AC	Non_AC	AC

STATED PREFERENCE OF QUESTIONNAIRE SURVEY

	01_choice	02_choice	03_choice	04_choice	05_choice	06_choice	01_fare	02_fare	03_fare	04_fare	05_fare	06_fare	01_time	02_time	03_time	04_time	05_time	06_time	01_ac	02_ac	03_ac	04_ac	05_ac	06_ac
229	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	750	700	550	450	400	600	9	9.5	8	10	10.5	7	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
230	Choice_1	Choice_1	Choice_2	Choice_1	Choice_1	Choice_2	850	800	550	550	500	600	8	8.5	8	9	9.5	7	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
231	Choice_1	Choice_1	Choice_1	Choice_1	Choice_1	Choice_1	850	800	850	550	500	900	8	8.5	8	9	9.5	7	AC	AC	AC	Non_AC	Non_AC	AC
232	Choice_1	Choice_1	Choice_2	Choice_1	Choice_1	Choice_2	850	800	550	550	500	600	8	8.5	8	9	9.5	7	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
233	Choice_1	Choice_1	Choice_2	Choice_1	Choice_1	Choice_2	850	800	550	550	500	600	8	8.5	8	9	9.5	7	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
234	Choice_1	Choice_1	Choice_1	Choice_1	Choice_1	Choice_1	850	800	850	550	500	900	8	8.5	8	9	9.5	7	AC	AC	AC	Non_AC	Non_AC	AC
235	Choice_1	Choice_1	Choice_1	Choice_1	Choice_1	Choice_1	850	800	850	550	500	900	8	8.5	8	9	9.5	7	AC	AC	AC	Non_AC	Non_AC	AC
236	Choice_1	Choice_1	Choice_2	Choice_1	Choice_1	Choice_2	850	800	550	550	500	600	8	8.5	8	9	9.5	7	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
237	Choice_1	Choice_1	Choice_2	Choice_1	Choice_1	Choice_2	850	800	550	550	500	600	8	8.5	8	9	9.5	7	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
238	Choice_1	Choice_1	Choice_2	Choice_1	Choice_1	Choice_2	850	800	550	550	500	600	8	8.5	8	9	9.5	7	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
239	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	750	700	550	450	400	600	9	9.5	8	10	10.5	7	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
240	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	750	700	550	450	400	600	9	9.5	8	10	10.5	7	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
241	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	750	700	550	450	400	600	9	9.5	8	10	10.5	7	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
242	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	750	700	550	450	400	600	9	9.5	8	10	10.5	7	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
243	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	750	700	550	450	400	600	9	9.5	8	10	10.5	7	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
244	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	750	700	550	450	400	600	9	9.5	8	10	10.5	7	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
245	Choice_1	Choice_1	Choice_2	Choice_1	Choice_1	Choice_2	850	800	550	550	500	600	8	8.5	8	9	9.5	7	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
246	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	750	700	550	450	400	600	9	9.5	8	10	10.5	7	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
247	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	750	700	550	450	400	600	9	9.5	8	10	10.5	7	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
248	Choice_1	Choice_1	Choice_1	Choice_1	Choice_1	Choice_1	850	800	850	550	500	900	8	8.5	8	9	9.5	7	AC	AC	AC	Non_AC	Non_AC	AC
249	Choice_1	Choice_1	Choice_1	Choice_1	Choice_1	Choice_1	850	800	850	550	500	900	8	8.5	8	9	9.5	7	AC	AC	AC	Non_AC	Non_AC	AC
250	Choice_1	Choice_1	Choice_1	Choice_1	Choice_1	Choice_1	850	800	850	550	500	900	8	8.5	8	9	9.5	7	AC	AC	AC	Non_AC	Non_AC	AC
251	Choice_1	Choice_1	Choice_2	Choice_1	Choice_1	Choice_2	850	800	550	550	500	600	8	8.5	8	9	9.5	7	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
252	Choice_1	Choice_1	Choice_2	Choice_1	Choice_1	Choice_2	850	800	550	550	500	600	8	8.5	8	9	9.5	7	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
253	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	750	700	550	450	400	600	9	9.5	8	10	10.5	7	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
254	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	750	700	550	450	400	600	9	9.5	8	10	10.5	7	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
255	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	750	700	550	450	400	600	9	9.5	8	10	10.5	7	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
256	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	750	700	550	450	400	600	9	9.5	8	10	10.5	7	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
257	Choice_1	Choice_1	Choice_2	Choice_1	Choice_1	Choice_2	850	800	550	550	500	600	8	8.5	8	9	9.5	7	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
258	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	750	700	550	450	400	600	9	9.5	8	10	10.5	7	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
259	Choice_1	Choice_1	Choice_1	Choice_1	Choice_1	Choice_1	850	800	850	550	500	900	8	8.5	8	9	9.5	7	AC	AC	AC	Non_AC	Non_AC	AC
260	Choice_1	Choice_1	Choice_1	Choice_1	Choice_1	Choice_1	850	800	850	550	500	900	8	8.5	8	9	9.5	7	AC	AC	AC	Non_AC	Non_AC	AC
261	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	750	700	550	450	400	600	9	9.5	8	10	10.5	7	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
262	Choice_1	Choice_1	Choice_2	Choice_1	Choice_1	Choice_2	850	800	550	550	500	600	8	8.5	8	9	9.5	7	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
263	Choice_1	Choice_1	Choice_2	Choice_1	Choice_1	Choice_2	850	800	550	550	500	600	8	8.5	8	9	9.5	7	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
264	Choice_1	Choice_1	Choice_1	Choice_1	Choice_1	Choice_1	850	800	850	550	500	900	8	8.5	8	9	9.5	7	AC	AC	AC	Non_AC	Non_AC	AC
265	Choice_1	Choice_1	Choice_2	Choice_1	Choice_1	Choice_2	850	800	550	550	500	600	8	8.5	8	9	9.5	7	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
266	Choice_1	Choice_1	Choice_1	Choice_1	Choice_1	Choice_1	850	800	850	550	500	900	8	8.5	8	9	9.5	7	AC	AC	AC	Non_AC	Non_AC	AC
267	Choice_1	Choice_1	Choice_2	Choice_1	Choice_1	Choice_2	850	800	550	550	500	600	8	8.5	8	9	9.5	7	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
268	Choice_1	Choice_1	Choice_2	Choice_1	Choice_1	Choice_2	850	800	550	550	500	600	8	8.5	8	9	9.5	7	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
269	Choice_1	Choice_1	Choice_2	Choice_1	Choice_1	Choice_2	850	800	550	550	500	600	8	8.5	8	9	9.5	7	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
270	Choice_1	Choice_1	Choice_2	Choice_1	Choice_1	Choice_2	850	800	550	550	500	600	8	8.5	8	9	9.5	7	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
271	Choice_2	Choice_1	Choice_2	Choice_1	Choice_1	Choice_2	750	800	550	550	500	600	9	8.5	8	9	9.5	7	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
272	Choice_2	Choice_1	Choice_2	Choice_1	Choice_1	Choice_2	750	800	550	550	500	600	9	8.5	8	9	9.5	7	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
273	Choice_1	Choice_1	Choice_2	Choice_1	Choice_1	Choice_2	850	800	550	550	500	600	8	8.5	8	9	9.5	7	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
274	Choice_1	Choice_1	Choice_2	Choice_1	Choice_1	Choice_2	850	800	550	550	500	600	8	8.5	8	9	9.5	7	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
275	Choice_1	Choice_1	Choice_2	Choice_1	Choice_1	Choice_2	850	800	550	550	500	600	8	8.5	8	9	9.5	7	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
276	Choice_1	Choice_1	Choice_2	Choice_1	Choice_1	Choice_2	850	800	550	550	500	600	8	8.5	8	9	9.5	7	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
277	Choice_1	Choice_1	Choice_2	Choice_1	Choice_1	Choice_2	850	800	550	550	500	600	8	8.5	8	9	9.5	7	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
278	Choice_1	Choice_1	Choice_2	Choice_1	Choice_1	Choice_2	850	800	550	550	500	600	8	8.5	8	9	9.5	7	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
279	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	750	700	550	450	400	600	9	9.5	8	10	10.5	7	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
280	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	750	700	550	450	400	600	9	9.5	8	10	10.5	7	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
281	Choice_1	Choice_1	Choice_1	Choice_1	Choice_1	Choice_1	850	800	850	550	500	900	8	8.5	8	9	9.5	7	AC	AC	AC	Non_AC	Non_AC	AC
282	Choice_1	Choice_1	Choice_2	Choice_1	Choice_1	Choice_2	850	800	550	550	500	600	8	8.5	8	9	9.5	7	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
283	Choice_1	Choice_1	Choice_2	Choice_1	Choice_1	Choice_2	850	800	550	550	500	600	8	8.5	8	9	9.5	7	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
284	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	750	700	550	450	400	600	9	9.5	8	10	10.5	7	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
285	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	750	700	550	450	400	600	9	9.5	8	10	10.5	7	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC

STATED PREFERENCE OF QUESTIONNAIRE SURVEY

	01_choice	02_choice	03_choice	04_choice	05_choice	06_choice	01_fare	02_fare	03_fare	04_fare	05_fare	06_fare	01_time	02_time	03_time	04_time	05_time	06_time	01_ac	02_ac	03_ac	04_ac	05_ac	06_ac
286	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	750	700	550	450	400	600	9	9.5	8	10	10.5	7	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
287	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	750	700	550	450	400	600	9	9.5	8	10	10.5	7	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
288	Choice_2	Choice_2	Choice_2	Choice_1	Choice_1	Choice_2	750	700	550	550	500	600	9	9.5	8	9	9.5	7	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
289	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	750	700	550	450	400	600	9	9.5	8	10	10.5	7	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
290	Choice_2	Choice_2	Choice_2	Choice_1	Choice_1	Choice_2	750	700	550	550	500	600	9	9.5	8	9	9.5	7	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
291	Choice_1	Choice_1	Choice_1	Choice_1	Choice_1	Choice_1	850	800	850	550	500	900	8	8.5	8	9	9.5	7	AC	AC	AC	Non_AC	Non_AC	AC
292	Choice_1	Choice_1	Choice_2	Choice_1	Choice_1	Choice_2	850	800	550	550	500	600	8	8.5	8	9	9.5	7	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
293	Choice_1	Choice_1	Choice_2	Choice_1	Choice_1	Choice_2	850	800	550	550	500	600	8	8.5	8	9	9.5	7	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
294	Choice_1	Choice_1	Choice_2	Choice_1	Choice_1	Choice_2	850	800	550	550	500	600	8	8.5	8	9	9.5	7	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
295	Choice_1	Choice_1	Choice_2	Choice_1	Choice_1	Choice_2	850	800	550	550	500	600	8	8.5	8	9	9.5	7	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
296	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	750	700	550	450	400	600	9	9.5	8	10	10.5	7	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
297	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	750	700	550	450	400	600	9	9.5	8	10	10.5	7	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
298	Choice_1	Choice_1	Choice_2	Choice_1	Choice_1	Choice_2	850	800	550	550	500	600	8	8.5	8	9	9.5	7	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
299	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	750	700	550	450	400	600	9	9.5	8	10	10.5	7	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
300	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	750	700	550	450	400	600	9	9.5	8	10	10.5	7	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
301	Choice_1	Choice_1	Choice_1	Choice_1	Choice_1	Choice_1	850	800	850	550	500	900	8	8.5	8	9	9.5	7	AC	AC	AC	Non_AC	Non_AC	AC
302	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	300	250	180	140	130	200	4.5	4.75	4	4.75	5	3.5	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
303	Choice_1	Choice_1	Choice_2	Choice_1	Choice_1	Choice_2	400	350	180	160	150	200	4	4.25	4	4.25	4.5	3.5	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
304	Choice_1	Choice_1	Choice_2	Choice_1	Choice_1	Choice_2	400	350	180	160	150	200	4	4.25	4	4.25	4.5	3.5	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
305	Choice_1	Choice_1	Choice_1	Choice_1	Choice_1	Choice_1	400	350	400	160	150	450	4	4.25	4	4.25	4.5	3.5	AC	AC	AC	Non_AC	Non_AC	AC
306	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	300	250	180	140	130	200	4.5	4.75	4	4.75	5	3.5	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
307	Choice_1	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	400	250	180	140	130	200	4	4.75	4	4.75	5	3.5	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
308	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	300	250	180	140	130	200	4.5	4.75	4	4.75	5	3.5	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
309	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	300	250	180	140	130	200	4.5	4.75	4	4.75	5	3.5	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
310	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	300	250	180	140	130	200	4.5	4.75	4	4.75	5	3.5	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
311	Choice_2	Choice_1	Choice_2	Choice_2	Choice_2	Choice_2	300	350	180	140	130	200	4.5	4.25	4	4.75	5	3.5	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
312	Choice_2	Choice_1	Choice_2	Choice_2	Choice_2	Choice_2	300	350	180	140	130	200	4.5	4.25	4	4.75	5	3.5	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
313	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	300	250	180	140	130	200	4.5	4.75	4	4.75	5	3.5	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
314	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	300	250	180	140	130	200	4.5	4.75	4	4.75	5	3.5	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
315	Choice_1	Choice_1	Choice_1	Choice_1	Choice_1	Choice_2	400	350	400	160	150	200	4	4.25	4	4.25	4.5	3.5	AC	AC	AC	Non_AC	Non_AC	Non_AC
316	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	300	250	180	140	130	200	4.5	4.75	4	4.75	5	3.5	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
317	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	300	250	180	140	130	200	4.5	4.75	4	4.75	5	3.5	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
318	Choice_2	Choice_2	Choice_2	Choice_1	Choice_1	Choice_2	300	250	180	160	150	200	4.5	4.75	4	4.25	4.5	3.5	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
319	Choice_2	Choice_2	Choice_2	Choice_1	Choice_1	Choice_2	300	250	180	160	150	200	4.5	4.75	4	4.25	4.5	3.5	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
320	Choice_2	Choice_2	Choice_2	Choice_1	Choice_1	Choice_1	300	250	180	160	150	450	4.5	4.75	4	4.25	4.5	3.5	AC	AC	Non_AC	Non_AC	Non_AC	AC
321	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	300	250	180	140	130	200	4.5	4.75	4	4.75	5	3.5	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
322	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	300	250	180	140	130	200	4.5	4.75	4	4.75	5	3.5	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
323	Choice_2	Choice_2	Choice_2	Choice_1	Choice_1	Choice_2	300	250	180	160	150	200	4.5	4.75	4	4.25	4.5	3.5	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
324	Choice_2	Choice_2	Choice_2	Choice_1	Choice_1	Choice_2	300	250	180	160	150	200	4.5	4.75	4	4.25	4.5	3.5	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
325	Choice_2	Choice_2	Choice_2	Choice_1	Choice_1	Choice_2	300	250	180	160	150	200	4.5	4.75	4	4.25	4.5	3.5	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
326	Choice_1	Choice_1	Choice_2	Choice_1	Choice_1	Choice_2	400	350	180	160	150	200	4	4.25	4	4.25	2.5	3.5	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
327	Choice_2	Choice_2	Choice_2	Choice_1	Choice_1	Choice_2	300	250	180	160	150	200	4.5	4.75	4	4.25	4.5	3.5	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
328	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	300	250	180	140	130	200	4.5	4.75	4	4.75	5	3.5	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
329	Choice_1	Choice_1	Choice_2	Choice_1	Choice_1	Choice_2	400	350	180	160	150	200	4	4.25	4	4.25	4.5	3.5	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
330	Choice_1	Choice_1	Choice_2	Choice_1	Choice_1	Choice_2	400	350	180	160	150	200	4	4.25	4	4.25	4.5	3.5	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
331	Choice_2	Choice_2	Choice_2	Choice_1	Choice_1	Choice_2	300	250	180	160	150	200	4.5	4.75	4	4.25	4.5	3.5	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
332	Choice_1	Choice_1	Choice_2	Choice_1	Choice_1	Choice_2	400	350	180	160	150	200	4	4.25	4	4.25	4.5	3.5	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
333	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	300	250	180	140	130	200	4.5	4.75	4	4.75	5	3.5	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
334	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	300	250	180	140	130	200	4.5	4.75	4	4.75	5	3.5	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
335	Choice_1	Choice_1	Choice_2	Choice_1	Choice_1	Choice_2	400	350	180	160	150	200	4	4.25	4	4.25	4.5	3.5	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
336	Choice_1	Choice_1	Choice_2	Choice_1	Choice_1	Choice_2	400	350	180	160	150	200	4	4.25	4	4.25	4.5	3.5	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
337	Choice_1	Choice_1	Choice_1	Choice_1	Choice_1	Choice_1	400	350	400	160	150	450	4	4.25	4	4.25	4.5	3.5	AC	AC	AC	Non_AC	Non_AC	AC
338	Choice_1	Choice_1	Choice_1	Choice_1	Choice_1	Choice_2	400	350	400	160	150	200	4	4.25	4	4.25	4.5	3.5	AC	AC	AC	Non_AC	Non_AC	Non_AC
339	Choice_1	Choice_1	Choice_1	Choice_1	Choice_1	Choice_1	400	350	400	160	150	450	4	4.25	4	4.25	4.5	3.5	AC	AC	AC	Non_AC	Non_AC	AC
340	Choice_1	Choice_1	Choice_1	Choice_1	Choice_1	Choice_1	400	350	400	160	150	450	4	4.25	4	4.25	4.5	3.5	AC	AC	AC	Non_AC	Non_AC	AC
341	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	300	250	180	140	130	200	4.5	4.75	4	4.75	5	3.5	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
342	Choice_2	Choice_2	Choice_2	Choice_1	Choice_1	Choice_2	300	250	180	160	150	200	4.5	4.75	4	4.25	4.5	3.5	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC

STATED PREFERENCE OF QUESTIONNAIRE SURVEY

	01_choice	02_choice	03_choice	04_choice	05_choice	06_choice	01_fare	02_fare	03_fare	04_fare	05_fare	06_fare	01_time	02_time	03_time	04_time	05_time	06_time	01_ac	02_ac	03_ac	04_ac	05_ac	06_ac
343	Choice_1	Choice_1	Choice_1	Choice_1	Choice_1	Choice_1	400	350	400	160	150	450	4	4.25	4	4.25	4.5	3.5	AC	AC	AC	Non_AC	Non_AC	AC
344	Choice_1	Choice_1	Choice_2	Choice_1	Choice_1	Choice_2	400	350	180	160	150	200	4	4.25	4	4.25	4.5	3.5	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
345	Choice_1	Choice_1	Choice_2	Choice_1	Choice_1	Choice_2	400	350	180	160	150	200	4	4.25	4	4.25	4.5	3.5	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
346	Choice_1	Choice_1	Choice_2	Choice_1	Choice_1	Choice_2	400	350	180	160	150	200	4	4.25	4	4.25	4.5	3.5	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
347	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	300	250	180	140	130	200	4.5	4.75	4	4.75	5	3.5	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
348	Choice_1	Choice_1	Choice_2	Choice_1	Choice_1	Choice_2	400	350	180	160	150	200	4	4.25	4	4.25	4.5	3.5	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
349	Choice_1	Choice_1	Choice_2	Choice_1	Choice_1	Choice_2	400	350	180	160	150	200	4	4.25	4	4.25	4.5	3.5	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
350	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	300	250	180	140	130	200	4.5	4.75	4	4.75	5	3.5	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
351	Choice_1	Choice_1	Choice_2	Choice_1	Choice_1	Choice_2	400	350	180	160	150	200	4	4.25	4	4.25	4.5	3.5	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
352	Choice_1	Choice_1	Choice_1	Choice_1	Choice_1	Choice_1	400	350	400	160	150	450	4	4.25	4	4.25	4.5	3.5	AC	AC	AC	Non_AC	Non_AC	AC
353	Choice_1	Choice_1	Choice_1	Choice_1	Choice_1	Choice_1	400	350	400	160	150	450	4	4.25	4	4.25	4.5	3.5	AC	AC	AC	Non_AC	Non_AC	AC
354	Choice_1	Choice_1	Choice_1	Choice_1	Choice_1	Choice_1	400	350	400	160	150	450	4	4.25	4	4.25	4.5	3.5	AC	AC	AC	Non_AC	Non_AC	AC
355	Choice_2	Choice_2	Choice_2	Choice_1	Choice_1	Choice_1	300	250	180	160	150	450	4.5	4.75	4	4.25	4.5	3.5	AC	AC	Non_AC	Non_AC	Non_AC	AC
356	Choice_2	Choice_2	Choice_2	Choice_1	Choice_1	Choice_2	300	250	180	160	150	200	4.5	4.75	4	4.25	4.5	3.5	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
357	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	300	250	180	140	130	200	4.5	4.75	4	4.75	5	3.5	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
358	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	300	250	180	140	130	200	4.5	4.75	4	4.75	5	3.5	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
359	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	300	250	180	140	130	200	4.5	4.75	4	4.75	5	3.5	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
360	Choice_2	Choice_2	Choice_2	Choice_1	Choice_1	Choice_2	300	250	180	160	150	200	4.5	4.75	4	4.25	4.5	3.5	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
361	Choice_1	Choice_1	Choice_2	Choice_1	Choice_1	Choice_2	400	350	180	160	150	200	4	4.25	4	4.25	4.5	3.5	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
362	Choice_1	Choice_1	Choice_2	Choice_1	Choice_1	Choice_2	400	350	180	160	150	200	4	4.25	4	4.25	4.5	3.5	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
363	Choice_1	Choice_1	Choice_2	Choice_1	Choice_1	Choice_2	400	350	180	160	150	200	4	4.25	4	4.25	4.5	3.5	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
364	Choice_1	Choice_1	Choice_2	Choice_1	Choice_1	Choice_2	400	350	180	160	150	200	4	4.25	4	4.25	4.5	3.5	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
365	Choice_1	Choice_1	Choice_2	Choice_1	Choice_1	Choice_2	400	350	180	160	150	200	4	4.25	4	4.25	4.5	3.5	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
366	Choice_1	Choice_1	Choice_2	Choice_1	Choice_1	Choice_2	400	350	180	160	150	200	4	4.25	4	4.25	4.5	3.5	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
367	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	300	250	180	140	130	200	4.5	4.75	4	4.75	5	3.5	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
368	Choice_1	Choice_1	Choice_1	Choice_1	Choice_1	Choice_1	400	350	400	160	150	450	4	4.25	4	4.25	4.5	3.5	AC	AC	AC	Non_AC	Non_AC	AC
369	Choice_1	Choice_1	Choice_1	Choice_1	Choice_1	Choice_1	400	350	400	160	150	450	4	4.25	4	4.25	4.5	3.5	AC	AC	AC	Non_AC	Non_AC	AC
370	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	300	250	180	140	130	200	4.5	4.75	4	4.75	5	3.5	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
371	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	300	250	180	140	130	200	4.5	4.75	4	4.75	5	3.5	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
372	Choice_1	Choice_1	Choice_2	Choice_1	Choice_1	Choice_2	400	350	180	160	150	200	4	4.25	4	4.25	4.5	3.5	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
373	Choice_2	Choice_2	Choice_2	Choice_1	Choice_1	Choice_2	300	250	180	160	150	200	4.5	4.75	4	4.25	4.5	3.5	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
374	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	300	250	180	140	130	200	4.5	4.75	4	4.75	5	3.5	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
375	Choice_2	Choice_2	Choice_2	Choice_1	Choice_1	Choice_2	300	250	180	160	150	200	4.5	4.75	4	4.25	4.5	3.5	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
376	Choice_1	Choice_1	Choice_1	Choice_1	Choice_1	Choice_1	400	350	400	160	150	450	4	4.25	4	4.25	4.5	3.5	AC	AC	AC	Non_AC	Non_AC	AC
377	Choice_1	Choice_1	Choice_1	Choice_1	Choice_1	Choice_1	400	350	400	160	150	450	4	4.25	4	4.25	4.5	3.5	AC	AC	AC	Non_AC	Non_AC	AC
378	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	300	250	180	140	130	200	4.5	4.75	4	4.75	5	3.5	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
379	Choice_2	Choice_2	Choice_2	Choice_1	Choice_1	Choice_2	300	250	180	160	150	200	4.5	4.75	4	4.25	4.5	3.5	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
380	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	300	250	180	140	130	200	4.5	4.75	4	4.75	5	3.5	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
381	Choice_1	Choice_1	Choice_1	Choice_1	Choice_1	Choice_2	400	350	400	160	150	200	4	4.25	4	4.25	4.5	3.5	AC	AC	AC	Non_AC	Non_AC	Non_AC
382	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	300	250	180	140	130	200	4.5	4.75	4	4.75	5	3.5	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
383	Choice_1	Choice_1	Choice_1	Choice_1	Choice_1	Choice_1	400	350	400	160	150	450	4	4.25	4	4.25	4.5	3.5	AC	AC	AC	Non_AC	Non_AC	AC
384	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	300	250	180	140	130	200	4.5	4.75	4	4.75	5	3.5	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
385	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	300	250	180	140	130	200	4.5	4.75	4	4.75	5	3.5	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
386	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	300	250	180	140	130	200	4.5	4.75	4	4.75	5	3.5	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
387	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	300	250	180	140	130	200	4.5	4.75	4	4.75	5	3.5	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
388	Choice_1	Choice_1	Choice_1	Choice_1	Choice_1	Choice_1	400	350	400	160	150	450	4	4.25	4	4.25	4.5	3.5	AC	AC	AC	Non_AC	Non_AC	AC
389	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	300	250	180	140	130	200	4.5	4.75	4	4.75	5	3.5	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
390	Choice_2	Choice_2	Choice_2	Choice_1	Choice_1	Choice_2	300	250	180	160	150	200	4.5	4.75	4	4.25	4.5	3.5	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
391	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	300	250	180	140	130	200	4.5	4.75	4	4.75	5	3.5	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
392	Choice_1	Choice_1	Choice_1	Choice_1	Choice_1	Choice_1	400	350	400	160	150	450	4	4.25	4	4.25	4.5	3.5	AC	AC	AC	Non_AC	Non_AC	AC
393	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	300	250	180	140	130	200	4.5	4.75	4	4.75	5	3.5	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
394	Choice_1	Choice_1	Choice_2	Choice_1	Choice_1	Choice_2	400	350	180	160	150	200	4	4.25	4	4.25	4.5	3.5	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
395	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	300	250	180	140	130	200	4.5	4.75	4	4.75	5	3.5	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
396	Choice_2	Choice_2	Choice_2	Choice_1	Choice_1	Choice_2	300	250	180	160	150	200	4.5	4.75	4	4.25	4.5	3.5	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
397	Choice_1	Choice_1	Choice_2	Choice_1	Choice_1	Choice_2	400	350	180	160	150	200	4	4.25	4	4.25	4.5	3.5	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
398	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	300	250	180	140	130	200	4.5	4.75	4	4.75	5	3.5	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
399	Choice_1	Choice_1	Choice_1	Choice_1	Choice_1	Choice_1	400	350	400	160	150	450	4	4.25	4	4.25	4.5	3.5	AC	AC	AC	Non_AC	Non_AC	AC

STATED PREFERENCE OF QUESTIONNAIRE SURVEY

	01_choice	02_choice	03_choice	04_choice	05_choice	06_choice	01_fare	02_fare	03_fare	04_fare	05_fare	06_fare	01_time	02_time	03_time	04_time	05_time	06_time	01_ac	02_ac	03_ac	04_ac	05_ac	06_ac
400	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	300	250	180	140	130	200	4.5	4.75	4	4.75	5	3.5	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
401	Choice_1	Choice_1	Choice_2	Choice_1	Choice_1	Choice_2	400	350	180	160	150	200	4	4.25	4	4.25	4.5	3.5	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
402	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	300	250	180	140	130	200	4.5	4.75	4	4.75	5	3.5	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
403	Choice_2	Choice_2	Choice_2	Choice_1	Choice_1	Choice_2	300	250	180	160	150	200	4.5	4.75	4	4.25	4.5	3.5	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
404	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	300	250	180	140	130	200	4.5	4.75	4	4.75	5	3.5	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
405	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	300	250	180	140	130	200	4.5	4.75	4	4.75	5	3.5	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
406	Choice_2	Choice_2	Choice_2	Choice_1	Choice_1	Choice_2	300	250	180	160	150	200	4.5	4.75	4	4.25	4.5	3.5	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
407	Choice_1	Choice_1	Choice_2	Choice_1	Choice_1	Choice_2	800	750	300	300	250	350	6.5	7	6.5	6.5	7	6	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
408	Choice_2	Choice_2	Choice_2	Choice_1	Choice_1	Choice_2	700	650	300	300	250	350	7.5	8	6.5	6.5	7	6	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
409	Choice_2	Choice_2	Choice_2	Choice_1	Choice_1	Choice_2	700	650	300	300	250	350	7.5	8	6.5	6.5	7	6	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
410	Choice_1	Choice_1	Choice_1	Choice_1	Choice_1	Choice_1	800	750	800	300	250	850	6.5	7	6.5	6.5	7	6	AC	AC	AC	Non_AC	Non_AC	AC
411	Choice_1	Choice_1	Choice_2	Choice_1	Choice_1	Choice_2	800	750	300	300	250	350	6.5	7	6.5	6.5	7	6	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
412	Choice_1	Choice_1	Choice_2	Choice_1	Choice_2	Choice_2	800	750	300	300	170	350	6.5	7	6.5	6.5	8	6	AC	AC	Non_AC	Non_AC	Non_AC	AC
413	Choice_1	Choice_1	Choice_1	Choice_1	Choice_1	Choice_1	800	750	800	300	250	850	6.5	7	6.5	6.5	7	6	AC	AC	AC	Non_AC	Non_AC	AC
414	Choice_1	Choice_2	Choice_2	Choice_1	Choice_1	Choice_2	800	650	300	300	250	350	6.5	8	6.5	6.5	7	6	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
415	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	700	650	300	200	170	350	7.5	8	6.5	7.5	8	6	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
416	Choice_1	Choice_1	Choice_2	Choice_1	Choice_1	Choice_2	800	750	300	300	250	350	6.5	7	6.5	6.5	7	6	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
417	Choice_1	Choice_1	Choice_1	Choice_1	Choice_1	Choice_1	800	750	800	300	250	850	6.5	7	6.5	6.5	7	6	AC	AC	AC	Non_AC	Non_AC	AC
418	Choice_2	Choice_2	Choice_2	Choice_1	Choice_1	Choice_2	700	650	300	300	250	350	7.5	8	6.5	6.5	7	6	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
419	Choice_1	Choice_1	Choice_1	Choice_1	Choice_1	Choice_1	800	750	800	300	250	850	6.5	7	6.5	6.5	7	6	AC	AC	AC	Non_AC	Non_AC	AC
420	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	700	650	300	200	170	350	7.5	8	6.5	7.5	8	6	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
421	Choice_1	Choice_1	Choice_2	Choice_2	Choice_2	Choice_2	800	750	300	200	170	350	6.5	7	6.5	7.5	8	6	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
422	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	700	650	300	200	170	350	7.5	8	6.5	7.5	8	6	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
423	Choice_2	Choice_2	Choice_2	Choice_1	Choice_1	Choice_2	700	650	300	300	250	350	7.5	8	6.5	6.5	7	6	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
424	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	700	650	300	200	170	350	7.5	8	6.5	7.5	8	6	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
425	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	700	650	300	200	170	350	7.5	8	6.5	7.5	8	6	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
426	Choice_2	Choice_2	Choice_2	Choice_1	Choice_1	Choice_2	700	650	300	300	250	350	7.5	8	6.5	6.5	7	6	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
427	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	700	650	300	200	170	350	7.5	8	6.5	7.5	8	6	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
428	Choice_1	Choice_1	Choice_1	Choice_2	Choice_2	Choice_1	800	750	800	200	170	850	6.5	7	6.5	7.5	8	6	AC	AC	AC	Non_AC	Non_AC	AC
429	Choice_2	Choice_2	Choice_2	Choice_1	Choice_1	Choice_2	700	650	300	300	250	350	7.5	8	6.5	6.5	7	6	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
430	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	700	650	300	200	170	350	7.5	8	6.5	7.5	8	6	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
431	Choice_1	Choice_1	Choice_1	Choice_1	Choice_1	Choice_1	800	750	800	300	250	850	6.5	7	6.5	6.5	7	6	AC	AC	AC	Non_AC	Non_AC	AC
432	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	700	650	300	200	170	350	7.5	8	6.5	7.5	8	6	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
433	Choice_2	Choice_2	Choice_2	Choice_1	Choice_1	Choice_2	700	650	300	300	250	350	7.5	8	6.5	6.5	7	6	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
434	Choice_1	Choice_1	Choice_1	Choice_1	Choice_1	Choice_1	800	750	800	300	250	850	6.5	7	6.5	6.5	7	6	AC	AC	AC	Non_AC	Non_AC	AC
435	Choice_1	Choice_1	Choice_2	Choice_1	Choice_1	Choice_2	800	750	300	300	250	350	6.5	7	6.5	6.5	7	6	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
436	Choice_2	Choice_2	Choice_2	Choice_1	Choice_1	Choice_2	700	650	300	300	250	350	7.5	8	6.5	6.5	7	6	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
437	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	700	650	300	200	170	350	7.5	8	6.5	7.5	8	6	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
438	Choice_1	Choice_1	Choice_2	Choice_1	Choice_1	Choice_2	800	750	300	300	250	350	6.5	7	6.5	6.5	7	6	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
439	Choice_1	Choice_1	Choice_2	Choice_1	Choice_1	Choice_2	800	750	300	300	250	350	6.5	7	6.5	6.5	7	6	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
440	Choice_1	Choice_1	Choice_2	Choice_1	Choice_1	Choice_2	800	750	300	300	250	350	6.5	7	6.5	6.5	7	6	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
441	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	700	650	300	200	170	350	7.5	8	6.5	7.5	8	6	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
442	Choice_1	Choice_1	Choice_1	Choice_1	Choice_1	Choice_1	800	750	800	300	250	850	6.5	7	6.5	6.5	7	6	AC	AC	AC	Non_AC	Non_AC	AC
443	Choice_2	Choice_2	Choice_2	Choice_1	Choice_1	Choice_2	700	650	300	300	250	350	7.5	8	6.5	6.5	7	6	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
444	Choice_2	Choice_2	Choice_2	Choice_1	Choice_1	Choice_2	700	650	300	300	250	350	7.5	8	6.5	6.5	7	6	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
445	Choice_1	Choice_1	Choice_1	Choice_1	Choice_1	Choice_1	800	750	800	300	250	850	6.5	7	6.5	6.5	7	6	AC	AC	AC	Non_AC	Non_AC	AC
446	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	700	650	300	200	170	350	7.5	8	6.5	7.5	8	6	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
447	Choice_2	Choice_2	Choice_2	Choice_1	Choice_1	Choice_2	700	650	300	300	250	350	7.5	8	6.5	6.5	7	6	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
448	Choice_1	Choice_1	Choice_2	Choice_1	Choice_1	Choice_2	800	750	300	300	250	350	6.5	7	6.5	6.5	7	6	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
449	Choice_2	Choice_2	Choice_2	Choice_1	Choice_1	Choice_2	700	650	300	300	250	350	7.5	8	6.5	6.5	7	6	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
450	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	700	650	300	200	170	350	7.5	8	6.5	7.5	8	6	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
451	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	700	650	300	200	170	350	7.5	8	6.5	7.5	8	6	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
452	Choice_2	Choice_2	Choice_2	Choice_1	Choice_1	Choice_2	700	650	300	300	250	350	7.5	8	6.5	6.5	7	6	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
453	Choice_2	Choice_2	Choice_2	Choice_1	Choice_1	Choice_2	700	650	300	300	250	350	7.5	8	6.5	6.5	7	6	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
454	Choice_2	Choice_2	Choice_2	Choice_1	Choice_1	Choice_2	700	650	300	300	250	350	7.5	8	6.5	6.5	7	6	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
455	Choice_2	Choice_2	Choice_2	Choice_1	Choice_1	Choice_2	700	650	300	300	250	350	7.5	8	6.5	6.5	7	6	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
456	Choice_1	Choice_1	Choice_1	Choice_1	Choice_1	Choice_1	800	750	800	300	250	850	6.5	7	6.5	6.5	7	6	AC	AC	AC	Non_AC	Non_AC	AC

STATED PREFERENCE OF QUESTIONNAIRE SURVEY

	01_choice	02_choice	03_choice	04_choice	05_choice	06_choice	01_fare	02_fare	03_fare	04_fare	05_fare	06_fare	01_time	02_time	03_time	04_time	05_time	06_time	01_ac	02_ac	03_ac	04_ac	05_ac	06_ac
457	Choice_1	Choice_1	Choice_1	Choice_1	Choice_1	Choice_1	800	750	800	300	250	850	6.5	7	6.5	6.5	7	6	AC	AC	AC	Non_AC	Non_AC	AC
458	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	700	650	300	200	170	350	7.5	8	6.5	7.5	8	6	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
459	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	700	650	300	200	170	350	7.5	8	6.5	7.5	8	6	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
460	Choice_2	Choice_2	Choice_2	Choice_1	Choice_1	Choice_2	700	650	300	300	250	350	7.5	8	6.5	6.5	7	6	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
461	Choice_2	Choice_2	Choice_2	Choice_1	Choice_1	Choice_2	700	650	300	300	250	350	7.5	8	6.5	6.5	7	6	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
462	Choice_2	Choice_2	Choice_2	Choice_1	Choice_1	Choice_2	700	650	300	300	250	350	7.5	8	6.5	6.5	7	6	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
463	Choice_1	Choice_1	Choice_2	Choice_1	Choice_1	Choice_2	800	750	300	300	250	350	6.5	7	6.5	6.5	7	6	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
464	Choice_2	Choice_2	Choice_2	Choice_1	Choice_1	Choice_2	700	650	300	300	250	350	7.5	8	6.5	6.5	7	6	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
465	Choice_2	Choice_2	Choice_2	Choice_1	Choice_1	Choice_2	700	650	300	300	250	350	7.5	8	6.5	6.5	7	6	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
466	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	700	650	300	200	170	350	7.5	8	6.5	7.5	8	6	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
467	Choice_2	Choice_2	Choice_2	Choice_1	Choice_1	Choice_2	700	650	300	300	250	350	7.5	8	6.5	6.5	7	6	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
468	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	700	650	300	200	170	350	7.5	8	6.5	7.5	8	6	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
469	Choice_2	Choice_2	Choice_2	Choice_2	Choice_1	Choice_2	700	650	300	200	250	350	7.5	8	6.5	7.5	7	6	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
470	Choice_1	Choice_1	Choice_2	Choice_1	Choice_1	Choice_2	800	750	300	300	250	350	6.5	7	6.5	6.5	7	6	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
471	Choice_2	Choice_2	Choice_2	Choice_1	Choice_2	Choice_2	700	650	300	300	170	350	7.5	8	6.5	6.5	8	6	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
472	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	700	650	300	200	170	350	7.5	8	6.5	7.5	8	6	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
473	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	700	650	300	200	170	350	7.5	8	6.5	7.5	8	6	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
474	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	700	650	300	200	170	350	7.5	8	6.5	7.5	8	6	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
475	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	700	650	300	200	170	350	7.5	8	6.5	7.5	8	6	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
476	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	700	650	300	200	170	350	7.5	8	6.5	7.5	8	6	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
477	Choice_1	Choice_1	Choice_2	Choice_1	Choice_1	Choice_2	800	750	300	300	250	350	6.5	7	6.5	6.5	7	6	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
478	Choice_2	Choice_2	Choice_2	Choice_1	Choice_1	Choice_2	700	650	300	300	250	350	7.5	8	6.5	6.5	7	6	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
479	Choice_1	Choice_1	Choice_2	Choice_1	Choice_1	Choice_2	800	750	300	300	250	350	6.5	7	6.5	6.5	7	6	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
480	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	700	650	300	200	170	350	7.5	8	6.5	7.5	8	6	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
481	Choice_1	Choice_1	Choice_2	Choice_1	Choice_1	Choice_2	800	750	300	300	250	350	6.5	7	6.5	6.5	7	6	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
482	Choice_2	Choice_2	Choice_2	Choice_1	Choice_1	Choice_2	700	650	300	300	250	350	7.5	8	6.5	6.5	7	6	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
483	Choice_1	Choice_1	Choice_1	Choice_1	Choice_1	Choice_1	800	750	800	300	250	850	6.5	7	6.5	6.5	7	6	AC	AC	AC	Non_AC	Non_AC	AC
484	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	700	650	300	200	170	350	7.5	8	6.5	7.5	8	6	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
485	Choice_1	Choice_1	Choice_1	Choice_1	Choice_1	Choice_1	800	750	800	300	250	850	6.5	7	6.5	6.5	7	6	AC	AC	AC	Non_AC	Non_AC	AC
486	Choice_1	Choice_1	Choice_1	Choice_1	Choice_1	Choice_1	800	750	800	300	250	850	6.5	7	6.5	6.5	7	6	AC	AC	AC	Non_AC	Non_AC	AC
487	Choice_1	Choice_1	Choice_1	Choice_1	Choice_1	Choice_1	800	750	800	300	250	850	6.5	7	6.5	6.5	7	6	AC	AC	AC	Non_AC	Non_AC	AC
488	Choice_1	Choice_1	Choice_2	Choice_1	Choice_1	Choice_2	800	750	300	300	250	350	6.5	7	6.5	6.5	7	6	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
489	Choice_2	Choice_2	Choice_2	Choice_1	Choice_1	Choice_2	700	650	300	300	250	350	7.5	8	6.5	6.5	7	6	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
490	Choice_1	Choice_1	Choice_2	Choice_1	Choice_1	Choice_2	800	750	300	300	250	350	6.5	7	6.5	6.5	7	6	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
491	Choice_1	Choice_1	Choice_1	Choice_1	Choice_1	Choice_1	800	750	800	300	250	850	6.5	7	6.5	6.5	7	6	AC	AC	AC	Non_AC	Non_AC	AC
492	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	700	650	300	200	170	350	7.5	8	6.5	7.5	8	6	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
493	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	700	650	300	200	170	350	7.5	8	6.5	7.5	8	6	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
494	Choice_1	Choice_1	Choice_1	Choice_1	Choice_1	Choice_1	800	750	800	300	250	850	6.5	7	6.5	6.5	7	6	AC	AC	AC	Non_AC	Non_AC	AC
495	Choice_2	Choice_2	Choice_2	Choice_1	Choice_1	Choice_2	700	650	300	300	250	350	7.5	8	6.5	6.5	7	6	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
496	Choice_2	Choice_2	Choice_2	Choice_1	Choice_1	Choice_2	700	650	300	300	250	350	7.5	8	6.5	6.5	7	6	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
497	Choice_1	Choice_1	Choice_1	Choice_1	Choice_1	Choice_1	800	750	800	300	250	850	6.5	7	6.5	6.5	7	6	AC	AC	AC	Non_AC	Non_AC	AC
498	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	700	650	300	200	170	350	7.5	8	6.5	7.5	8	6	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
499	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	700	650	300	200	170	350	7.5	8	6.5	7.5	8	6	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
500	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	700	650	300	200	170	350	7.5	8	6.5	7.5	8	6	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
501	Choice_1	Choice_1	Choice_2	Choice_1	Choice_1	Choice_2	800	750	300	300	250	350	6.5	7	6.5	6.5	7	6	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
502	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	700	650	300	200	170	350	7.5	8	6.5	7.5	8	6	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
503	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	Choice_2	700	650	300	200	170	350	7.5	8	6.5	7.5	8	6	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC
504	Choice_2	Choice_2	Choice_2	Choice_1	Choice_1	Choice_2	700	650	300	300	250	350	7.5	8	6.5	6.5	7	6	AC	AC	Non_AC	Non_AC	Non_AC	Non_AC