Contents

- Models

- Tables

- Figures

1. Introduction

Congestion is an increasing problem in cities around the world and in order to solve this problem, some cities have introduced congestion charges systems. However, one potential drawback is that congestion charges can have a negative impact on retail businesses (Daunfeldt, Rudholm & Rämme, 2009), (Whitehead, 2002). Due to lack of investigations in this matter, the amount of evidence of this potential impact is insufficient (Whitehead, 2002). It has been suggested that the recent introduction of a congestion charge in Gothenburg may have had a negative impact on business performance in areas near the congestion charge zone. One of these areas is Bäckebol where several retail stores have stated a noticeable downturn of visits, which has been highlighted in the media.

The public acceptance of the congestion charge has been pointed out to be of importance (OECD/ITF, 2010). It was indicated in a study by Schmöcker, Fonze, Quddus, and Bell, (2005) that those who have a low acceptance of congestion charge are more likely to change their behavior. Some studies also showed an association between public acceptance and demographic factors such as age, gender and education (Jaensirisak, Wardman & May 2005; Ben-Elia & Ettema 2011; Avineri, Nikita & Parkhurst, 2010; Eliasson & Johnson 2011). Last year a preliminary study of the implementation of a congestion charge was conducted at Gothenburg University by Persson and Wallenhem (2012) where they forecasted a negative impact on the retail business in Bäckebol. Some of the study´s predictions involved declines in the number of visits during the active congestion charge hours and in the proportion of spontaneous visit, however, there is no study conducted post the implementation.

The general aim of this study is to investigate consumer behavior, attitudes and demographic factors related to the recently introduced congestion charge in Gothenburg and to illustrate the possible impact the congestion charge may have on retail business performance in Gothenburg. This will be done by conducting a survey of the customers at IKEA Bäckebol, where we want to assess if a behavioral change has occurred and if this change in behavior is associated with public acceptance and demographic factors. We used Persson and Wallenheim´s (2012) prior study results for comparison. We interviewed Patrik Wigren Marketing Manager at IKEA Bäckebol and Marianne Sörling at Innerstaden AB to get an expert opinion on the impact on retail business. The intent was to get figures regarding store performance, such as sales and revenues, however, as these where confidential we were restricted to make any final conclusions regarding the congestion charge effect on retail business performance. Previous research has mainly focused either on the impact on performance, the level of acceptance or the demographic factors. However, there is a lack of research regarding the association between consumer behavior, acceptance and demographic factors. The debate in the media has indicated that the retail stores in Bäckebol suffer to a higher extent than in other retail stores in Gothenburg. This study´s focus will be on the factors influencing consumer behavior such as acceptance and demographic which may be determining for the impact on retail business performance. The results of this study could provide empirical evidence in the local debate among representatives of the commerce and politicians, as well as contribute to guidelines for an implementation of a congestion charge.

1.1 Definitions

Congestion Charge – In the literature there are many terms are used to describe congestion charge. Among these is road pricing, congestion tax, road tax, urban pricing etc. depending on the authors own choice. According to Swedish law the congestion charge is an excise tax charged by road users for the purpose of investing in infrastructure. In this study we will exclusively use the term congestion charge.

Traffic Behavior – Traffic behavior is a term commonly used in congestion charge theory, and refers to the factors the congestion charge aim to change, namely, destination, time, route and means of transportation.

Consumer Behavior – Consumer behavior is most commonly used in business literature within marketing. In this study the term consumer behavior represents the time of visits to the mall, the choice of mall, the frequency of visits and the means of transportation.

Public Acceptance - There are various ways to describe or define acceptance. However, in this context it is exclusively concerned with the public attitude and opinion towards congestion charge. This includes the level of public support, if it is perceived to be a good idea, if it should be implemented and so on. In this study public acceptance will be described, measured and defined as to which the public perceive the congestion charge to be a positive or negative change.

Control Perimeters - In the literature authors are using different terms for describing the tool used to collect the charged. The term used for this tool in this paper is control perimeters.

Demographic Factors - This study will categories age, gender, income, education, and place of residence as demographic factors.

Association- In this report we will mainly use the term association to describe an observed difference in proportions between groups.

2. Background

In this chapter we will present the most relevant previous research within the field of this study. This will provide the reader with the most relevant knowledge concerning the study´s problem and purpose but also, act as the frame of reference as it is the bases of the theoretical framework presented in the next chapter The first section will give a brief introduction of the structure, design and purpose of the congestion charge in Gothenburg, followed by previous research regarding the overall aim of congestion charge and how it relates to consumer behavior, public acceptance and demographic factors. Finally, the problem and purpose will be presented and further clarified by delimitation.

2.1. Congestion charge in Gothenburg

According to Trafikverket (2013a) Gothenburg has been experiencing some major growth over the last decades, with an increase of 180% in the commuting traffic in and out the city and an increase in public transport by 20% (Trafikverket, 2012b). Furthermore, it is argued that the current road and rail network is not efficient enough to meet the increasing traffic demand, thus will result in future capacity constrain. For the reasons mentioned above a congestion charge system was instated on January 1th, 2013 by Gothenburg's municipal board (Transportstyrelsen, 2013a). The motives behind the implementation of congestion charge are; decrease pollution, increase efficiency of the transport systems and reduce traffic congestion. It will also co-finance "The West Swedish Agreement" which is a major infrastructure investment with the goal of making the public transport system more efficient by constructing new bus lanes, walk/ bicycle lanes and better platforms for trains (Trafikverket, 2012c). Furthermore two new tunnels and one bridge are also included in the package (Transportstyrelsen, 2012b). The total cost of this package has roughly been estimated to be 34 billion SEK (Trafikverket, 2012d).

The Gothenburg congestion charge model is levied on all Swedish registered cars that enter and exit the city with the exception of foreign registered cars, emergency vehicles and buses (Transportstyrelsen, 2013a). There are 36 control perimeters in Gothenburg (see appendix 3). The control perimeters are placed along E6 north, that has been placed there to reduce the spillover effects from congestion i.e. to protect the surrounding neighborhood from unwanted through traffic from E6 (point 17-21, see appendix 3) (Transportstyrelsen, 2012e). There are no charges during weekends, public holidays or in the month of July. The rush hours in Gothenburg are in the morning and in the afternoon and the charges are therefore set accordingly where the congestion charge is set to 8 SEK for passage between the hours, 6:00 to 6:29; 8:30 to 14:59 and 18:00 to 18:29. A charge of 13 SEK will be charged at; 6:30 to 6:59; 8:00 to 8:29, 15:00 to 15:29 and 17:00 to 17:59. Finally, a tax of 18 SEK is charged for passage at. 7:00 to 7:59 and 15:30 to 16:59 (peak hours). However, the max amount that can be charged during a day is SEK 60/car and the charge is set by the multi passage rule which means the road user can pass any number of control perimeters for a given period of 60 minutes with one payment. (Transportstyrelsen 2012d).

2.2 Prior research

The literature of congestion charge belongs to the field of transport economics, road engineering and transport policy. There is no universally applicable congestion charge model or approach that suits every large city as all cities are unique in some way. However, in general, there are three clear goals of congestion charge that all cities share, namely; to collect revenue, to reduce traffic congestion and to invest in infrastructural projects (Niskanen & Nash, 2008; Eliasson, 2010).

2.2.1. Congestion charge effect on behavior

An adjustment in traffic behavior due to traffic congestion charge takes place when the road user *change mode of transportation*, from car to public transport, and/or *time and destination of the trip* to evade charges (Karlström & Franklin, 2008; Keuleers, Thorpe, Timmermans & Wets, 2005; Keuleers et al. 2005). Hu and Saleh´s (2005) study investigated the likely effect of a preliminary congestion charge in Edinburg and suggested that a change in the driver's behavior would occur, as they would drive less or change their destination after the introduction of the congestion charge. However, it has also been shown in several cases that these changes in travel pattern is part of the adaption process and could be seen as a short-term strategy for dealing with the congestion charge and the new circumstances, and that the behavioral change will diminish over time (Keuleers et al. 2005; Bonsall et al. 2006). Schmöcker et al. (2005) found a change in the shopping frequency post the implementation of a congestion charge, where an association to public acceptance could be noted, as people with a low level of acceptance changed their behavior to a higher extent than those who supported it. Results from AKTA road pricing experiment in Copenhagen also found an association between acceptance and behavioral change. It was argued that people change their behavior according to their acceptance level (Gehlert, Kramer, Nielsen, Bernhard & Schlag, 2011) However, there is conflicting evidence of the actual effect acceptance has on behavioral change. Cools, Brijs, Tormans, Moons, Janssens and Wets (2011) did not find any empirical evidence of an association between the two. As previously stated, to gain further knowledge of this association between public acceptance and behavior is a main objective of this study.

2.2.2 Public acceptance

It has been widely argued in the congestion charge theory that public acceptance is a determining success factor in the implementation of a congestion charge system, as without public acceptance a permanent implementation is impossible (OECD/ITF, 2010). There are several aspects in achieving a high acceptance, and most of the congestion charge theories agree upon the most critical, namely, *information, perceived need of congestion charge, perceived improvements, tax revenue purpose and scheme system design.* The level of *information* is important to gain public acceptance and the information should explain the motives of the implementation i.e. the intent to solve a traffic problem; finance a project, it should also contain practical information of how it works and when it will be activated (Odeck & Kjerkreit, 2010). The *perceived need of congestion charge* due to a pressing traffic

problem is also crucial, as people will only have a positive attitude towards paying for their mobility if there is a massive congestion (OECD/ITF, 2010). This relates to the element of *perceived improvement*, if the public do not see any improvements after the implementation, their willingness to keep paying will reduce significantly as the acceptance diminishes (OECD/ITF, 2010).

It has been suggested that how the government manages to influence the public perception of congestion charge is of vital concern for its success (OECD/ITF, 2010). It is likely that if a large proportion of the general population is disturbed by traffic congestion and are experiencing that the congestion charge has a positive effect on the problem the level of acceptance will increase. The *tax revenue purpose* is also a pressing acceptance concern, as the aim of congestion charge is to increase the efficiency by investing in infrastructure (Niskanen & Nash, 2008; OECD/ITF, 2010). This implies that investment in additional road capacity; public transport, bus lanes and other means of infrastructure that the public find beneficial, could increase the public acceptance level (Button, 2010). Furthermore, Schuitema and Steg ´s (2008) findings indicated that the highest acceptance is reached when the tax purpose is used to decrease car and road related taxes, followed by investment in public transport where other infrastructural project such as roads and tunnels was the least effective in this manner. Finally, *scheme system design* is last the critical factor and it is mainly concerned with the pricing and positioning of the control perimeters (Rentziou, Milioti, Gkritza, & Karlaftis 2011).

When a congestion charge system is planned and structured it is crucial to select the right area to charge. The boarders should be set to reduce the most congested areas to capture a large segment of the commuter traffic, without affecting surrounding areas that are less congested such as delivery traffic or shopping traffic, particularly not in a way that could affect outside stakeholders such as, retail store owners. It is also important to avoid a positioning of the perimeters that could surround or trap a certain area or to place them in unpolluted zones. If this is impossible exceptions can be made by allowing certain inhabitants to travel free of charge due to their unfortunate positioning of the perimeters or to make an exception for a route through the less polluted areas (OECD/ITF, 2010).

2.2.3. Demographic factors

Demographic factors such as, age, gender and income may be of importance for change in consumer behavior and public acceptance of the congestion charge (Jaensirisak et al. 2005; Ben-Elia & Ettema 2011; Avineri, et al., 2010; Eliasson & Johnson 2011). Some have argued that congestion charge is unfair among road users "since the same charges are levied on car use regardless of the incomes of motorists" (Richardson, 1974, p.82). It has also been argued that any kind of pricing will yield different consumption patterns for different income-groups tied to their amount of income and their ability to spend that income (Button, 2010). It is also argued by Richardson (1974) that people with less economical margins in terms of income will be more affected by the congestion charge thus suffer to a greater extent. Small, (1983) argue that congestion charge is regressive because people with higher income also have a

higher value of their time, and therefore consider the charge to be worth the value charged. Hence, there might be a difference in behavior and/or acceptance with regard to income. Further relevant demographic factors was noted in a Ben-Elia and Ettema's (2011) study which concluded that the congestion charge had a more severe impact on men, as they adjusted their travel behavior to a greater extent. The same study indicated that this could be based on the gender roles and that the women's tasks and household duties required them to drive during specific hours, which made them less sensible to the charge. Jaensirisak et al. (2005) also acknowledge the importance of demographic factors, as their findings indicated that the level of acceptance increase among people who are higher educated. This association was also found at an aggregated level in Eliasson and Johnson´s (2011) study were place of residence was pointed out to be of interest, where people in the suburb tended to have a lower level acceptance than people who live in the central city. Age is also pointed out as an associate factor towards acceptance and behavior, where older people are seen as less likely to have a positive attitude compared to younger age groups, and are also more likely to change their behavior (Avineri, et al. 2010). The theory is based on the complex mobility need of older people as well as they generally have a lower income (Avineri, et al. 2010).

2.2.4 Congestion charge impact on retail business performance

Several studies have been carried out to investigate the possible impact the congestion charge have on retail business performance, but there is little or no evidence of an actual relation. Daunfeldts et al (2011) study of Stockholm could not show any evidence of an impact. However, they speculated in the possibility of an imposed cost on the retail business as result of the behavioral change caused by the congestion charge. The argument was that the behavioral change would cause people to visit during evenings and weekends when the congestion charge was deactivated. However this is also a time when the general costs of staff are higher and thereby may affect the overall business performance. Transport for London´s (2008) findings showed that after the introduction of the congestion charge in London, the frequency of travels in or out from the western zone (see appendix 3) during charging hours dropped by more than 10 %. This led to a discussion where it was speculated that those travelling for shopping and leisure purposes, changed the travelling pattern with regard to destination and time to avoid the charging hours. It was also argued that it was less likely to use the car for the purpose of shopping (Transport for London, 2008; Quddus, Carmel & Bell, 2005). Daunfeldts et al (2009) study also found indication of a difference in the impact on performance between retail stores, where stores located near the congestion charge where more likely to be affected higher extent than the stores located in the city center. This is in line with Whitehead´s (2002) argument, which also recognized that the central city might be less affected than other areas; however, Whitehead´s (2002) argument was also related to surrounding investments and public transportation. This was also indicated to be of importance in Schmöcker et al. (2005) study as investment and public transport could lead to one area becoming more attractive than others. Another observation was made in Quddus, et al. (2005) study where it was suggested that the retail stores selling larger bulky items could be more affected than other retail stores. This could be due to the high proportion of car-born customers and the inconvenience of traveling with large items on the public transport.

6

2.2.5. Current debate

A survey conducted by Sifo in 2010 showed that 57% of the people in Gothenburg did not agree to the implantation of the congestion charge, which indicates a generally low level of acceptance (TT, 2012). In December 2012, approximately 15% of Gothenburg's inhabitants signed up for a referendum regarding the congestion charge which exceeds the legal margin of 10% (TT, 2012). It was also revealed that costs of the West Swedish Agreement was underestimated and have been strongly criticized by the national audit (Boisen, 2013). Claes Norgren from the national audit stated that the actual cost for the West Swedish Agreement package will be closer to 55 billion SEK then the initial estimated amount of 35 billion SEK (Pavlica, 2012). It should be noted that the West Swedish Agreement is an infrastructural project which was regarded as the least effective foundation in gaining acceptance in Schuitema & Steg´s (2008) previous research.

In September 2012 prior to the introduction of the congestion charge in Gothenburg, business owners located close to E6 were afraid of the potential effect the congestion charge could have on their businesses (Christell, 2013a). The stores in Bäckebol are located just a couple of hundred meters from the control perimeters (point 17 & 18, see appendix 3). Many of the customers to this center are car-borne and have to pay congestion charge during the active hours and the stores claims to have been affected. According to Bäckebol Centrum´s CEO Gunnar Berg the implementation has been a disaster, as stores claims to lose customers during the hours when the congestion charge is active (Fredriksson, 2013). Moreover, 31 companies in the area of Bäckebol have asked for a reassessment of the placement of the control perimeters along E6 North. They argue the placement of these perimeters impose a disadvantage for their business as their placement encircles them. Furthermore, they argue that the placement leads to twisted market competition based on their location in relation to other centers (Fredriksson, 2013). However, no evidence has been presented to support that a decline in customers has been related to the introduction of the congestion charge. The placement of the control perimeters in Gothenburg is not in agreement with the OECD/ITF´s (2010) recommendations. It can also be added that the control perimeter placement differs in design compared to Stockholm and London (see appendix 3).

An interesting twist is that the shopping district Innerstaden, had experienced an increased amount of visitors during weekdays in January 2013, compared to the previous year (Wern, 2013). The Centrum developer Marianne Sörling who deals with the stores in the city is summarized in Wern´s (2013) article, were Sörling argue that the reduction in congestion on the streets have made it easier to access Innerstaden by car. However, Sörling also confirmed a noticeable increase in visits on the weekends when the congestion charge is deactivated which is similar to Bäckebol. Sörling believes that commerce has shifted from weekdays to Saturdays and Sundays when no congestion charge is taxed (Wern, 2013). This can be interpreted as an indication that customer behavior is changing as a result out of the congestion charge. The political majority in Gothenburg suggested that some of the control perimeters along E6 north (control point 17-18, 21, see appendix 3) could be moved. The reason for this is because the inhabitants in the area of Backa have questioned why they have

to pay congestion charge for just passing E6 when they are going to shop at Bäckebol center´s stores located east of the E6 North (Rapp, 2013; Christell, 2013b).

Persson Dahlén´s (2013) article published in February summariezed Trafikverket, Västtrafik and Gatukontoret where it was argued that t the congestion charge had reduced the flow of traffic within the charging zones. The traffic flow decreased by 20% on the charged roads which is equivalent to 121,700 fewer cars compared to the previous year 2012 (Persson Dahlén, 2013).Furthermore, the inner city experienced a decline of 22%,however, the traffic flow on the untaxed roads increased by 30% (Persson Dahlén, 2013). At the same time the number of travelers who choose express bus or commuter train as a substitute increased compared to the previous year (Persson Dahlén, 2013).

2.3 Problem

The main problem to be addressed in this thesis is, if and to what extent the introduction of a congestion charge is associated with changes in consumer behavior in the area near the congestion charge zone, and possible impact on the retail business performance. As a general background this thesis also investigates how these changes in consumer behavior can be associated with acceptance of the congestion charge and demographic factors.

2.4 Purpose

The general aim of this study is to investigate consumer behavior, attitudes and demographic factors related to the recently introduced congestion charge in Gothenburg and to illustrate the possible impact the congestion charge may have had on retail business performance. This will be done by investigating the associations illustrated in model 3 below and by addressing the following research questions:

a) Has consumer behavior in a shopping center near the congestion charge zone changed after the introduction of the congestion charge?
b) Are there differences in consumer behaviors related to level of acceptance of the congestion charge or to individual characteristics including, age, gender education, income and place of residence?
c) Are there differences in the level of acceptance to the congestion charge related to individual characteristics including, age, gender education, income and place of residence?
d) Has there been a decline in store performance after the introduction of the congestion charge?

2.5. Delimitation

The original aim of this study was to investigate the congestion charge impact on retail business performance, including some determining factors such as consumer behavior and acceptance. However, as we had difficulties to obtain relevant data regarding the actual performance of the retail stores such as sales figure, revenue etc. albeit our efforts to get these from IKEA and Gunnar Bergh. Hence this study´s main focus was adjusted as we chose to investigate the factors that may be of importance for the impact on retail business performance. These include consumer behavioral change, acceptance level and demographic factors. Based on our results, we will discuss the possible impact the congestion charge may have had on the retail stores in Gothenburg, in particular those previously mentioned in Bäckebol Centrum.

3. Theoretical Framework

The theoretical framework in this study will act as the main support to interpret our findings. The framework will mainly consist of a summarized version of the prior research presented in the background; the selection of theories is based on the relevance to the study's purpose. The theories will be presented in three models regarding consumer behavior, public acceptance and demographics with a brief explanation. This is further summarized by a model illustrating the overall associations between consumer behavior, acceptance and demographic factors.

3.1. Consumer Behavior

Some theories have implied that the congestion charges aim to change the traffic behavior might change the consumer behavior as well. These changes namely, *time of travel, destination, route and means of transportation* are basically the same throughout all congestion charge theories, and will therefore be the base of our theories regarding consumer behavior (OECD/ITF, 2010; Karlström & Franklin, 2008; Keuleers et al. 2005) However, we will not include the factor route in our study as it is rather related to traffic behavior than consumer behavior which is not a part of this study.
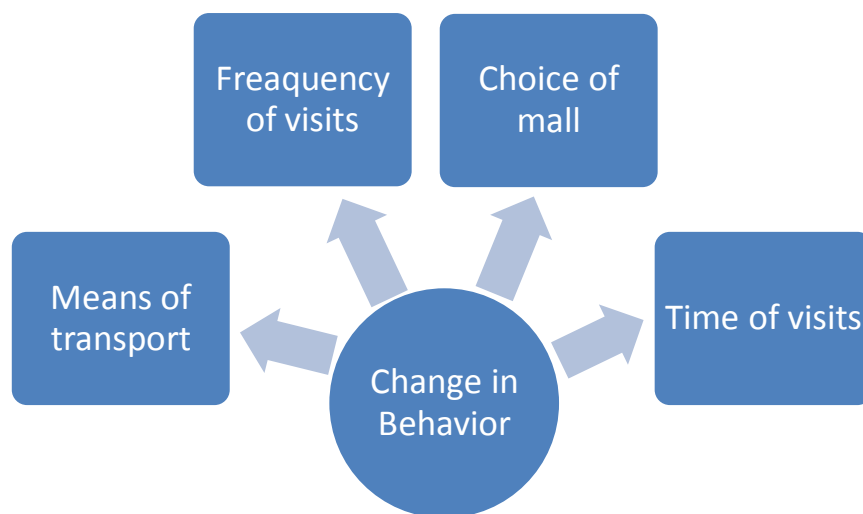
(Model 1 explains the most common factors that are influenced by the congestion charge in regard of behavioral change. Erik Hammar, Björn Åberg & Christian Loewe 2013

In regard of means of transportation, the congestion charges mainly strive to change the behavior by getting people to substitute their cars to other means such as public transportation (Karlström & Franklin, 2008). This could be relevant to consumer behavior as if the consumers chose to substitute the car for public transportation or other means it could affect which mall their visits as they become dependent on factors such as the available public transport and the possibility to carry the goods on the substituted mean. The congestion charge also aims to change behavior in regard to time and destination to decrease the congestion during the rush hours; this could also affect the consumer behavior as it also could

influence the choice of mall, but also affect the frequency of visits as well as which time the consumers chose to visit mall (Keuleers et al. 2005).

3.2. Public Acceptance

It has been recognized in the congestion charge theory that public acceptance is of great importance (Schmöcker et al. 2005; Odeck & Kjerkreit, 2010; Niskanen & Nash, 2008; OECD/ITF, 2010; Rentziou, et al. 2011). Another interesting aspect which will be of a high concern in this study is the conflicting findings from Schmöcker et a.l (2005) and Gehlert et al. (2011) studies where a low acceptance was suggested to have an association with a higher level of behavioral change, whereas Cools et al. (2011) stated that there was no evident association. There has been sufficient research in this area and most researchers agree upon the most important elements to achieve a high level of acceptance, namely, level of *information* given prior to the implementations, a *perceived congestion problem, perceived improvement* due to the congestion charge, *support of tax revenue purpose* and *scheme layout* (Odeck & Kjerkreit, 2010; Niskanen & Nash, 2008; OECD/ITF, 2010; Rentziou, et al. 2011). (See model 2)
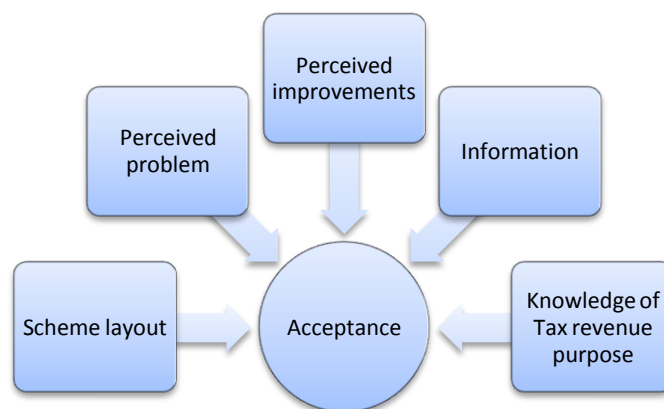
(Model 2, explain the most prevelent factors that underly the public acceptance Erik Hammar, Björn Åberg & Christian Loewe, 2013)

The *scheme layout* is mainly concerned with the systems structure such as pricing and perimeter placement (OECD/ITF, 2010). Our study will focus on the perimeter placement based on the recent debate presented in the previous chapter. The *perceived problem* is related to the public opinion of a sever congestion issue, and the pressing need to solve this problem. Prior research also pointed out *perceived improvements* as an important factor as the acceptance is likely to increase if the public see immediate improvements in the traffic. The *information* regards several aspects including *tax revenue purpose,* system activation, how the system works and placement of the control perimeters (Odeck & Kjerkreit, 2010).

3.3. Demographic factors

The demographic factors that are included in this study are based on the factors we find to be most common in previous research, thus of highest relevance, namely, gender, age, education, place of residence and income (Jaensirisak et al. 2005; Ben-Elia & Ettema 2011; Avineri, et al., 2010; Eliasson & Johnson 2011).
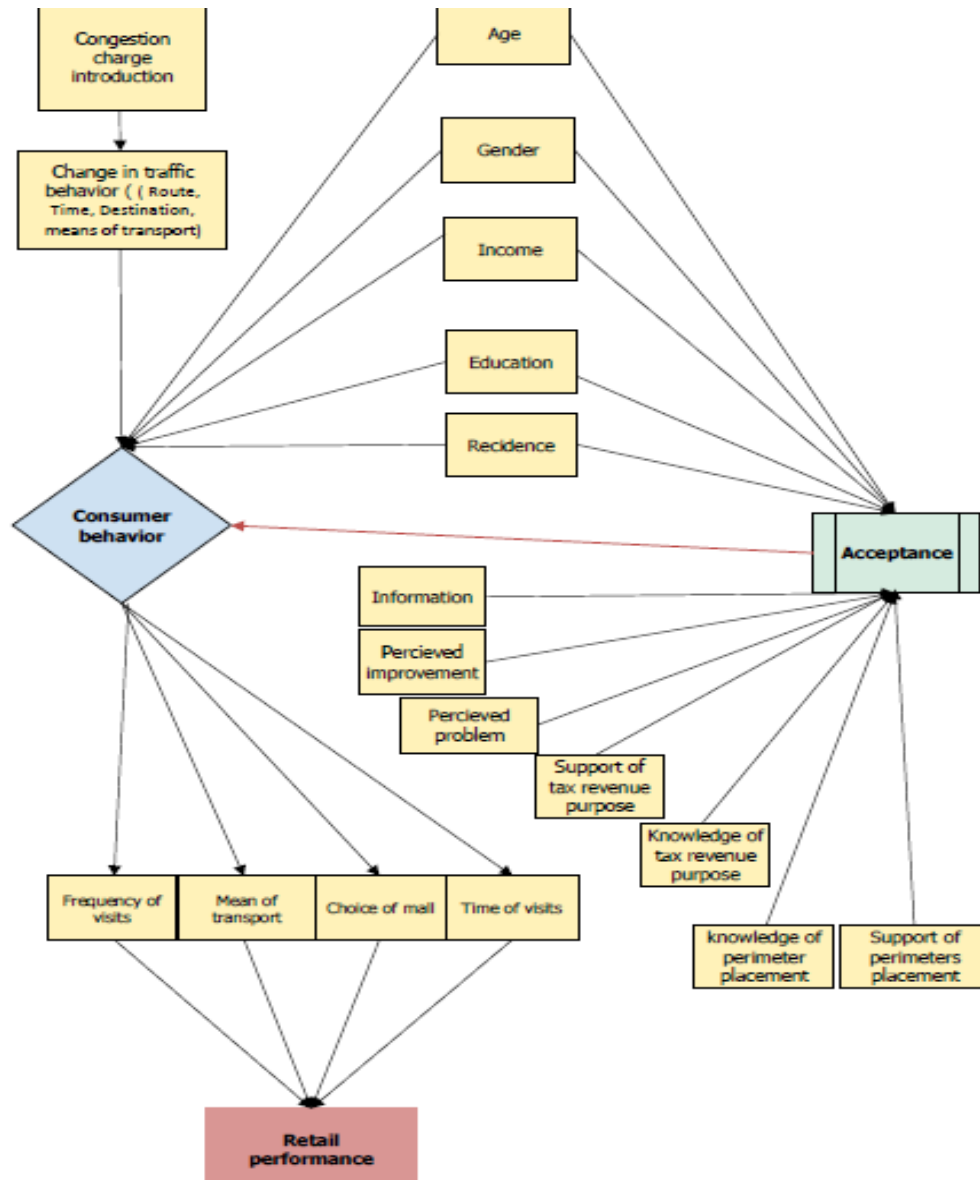
(Model 3, describes the possible associations that are going to be the main focus of this study. As the congestion charge is implemented, a change in traffic behavior will occur in regard to time, route, destination and mean of transport; this might in turn affect the consumer behavior in regard to choice of mall, time of visit, frequency of visits and mean of transport which could affect the retail performance. The model also explains the theory of an association between the change in consumer behavior, acceptance and demographic factors. Erik Hammar, Björn Åberg, Christian Loewe, 2013)

4. Methodology & Methods

This chapter describes the methodology and presents the methods used in this report. The section explains the methodology, which is the theory behind the research. This gives the reader further understanding regarding the choice of research methods in consideration of philosophy and research approach. The following section presents the methods used in this study. This section also describes the process and argues for our choice of data collection techniques, and will discuss practical issues of the process.

4.1. Methodology

The philosophical nature of the methodology describes the author's perception of the world, or the problem in the study. It also views the authors approach in relation to if the study emerged based on a theory or a problem. The author´s philosophical view is the assumptions of the world, and have a significantly impact on the choice of research strategy, methods and the perception of what is important and what is useful in the report. It is important for the author to be aware of his or hers philosophical choice, and to defend this choice in relation to alternatives (Saunders et al. 2009).

In order to clarify the philosophy in this study, we use two of the most distinguished research positions, namely, positivism and interpretivism. Positivism views the world objectively and argues that knowledge is developed by investigating the social reality through observation (Blumberg, Cooper & Schindler, 2008). The research conducted is inspired by the positivistic view of the relationship between theory and observation. The theory usually starts with hypothesizing fundamental laws and use empirical observations to support or reject the hypotheses. Positivism also strives to detect the extent to which the research results can be generalized to the rest of the world (Blumberg et al. 2008).

The interpretivistic view can be seen as the opposite, as it argues that the world is complex, hence cannot be understood by simple fundamental laws and objective observations. This view argues that knowledge is developed and theory is built through developing ideas inducted from the interpreted social constructions (Blumberg et al. 2008). Interpretivisim does not value the aspect of generalization as the positivistic view, as it becomes questionable in an ever changing complex environment (Blumberg et al. 2008). This study holds a positivistic view, as our theory is based on a hypothesis which is to be supported or rejected by an observation, with an intention to further generalize the results. The most common methods in such a study are usually highly structured and use quantitative data by using measurements and large samples. However, qualitative data is not necessarily excluded (Saunders et al. 2009).

There are two main research approaches; inductive and deductive. The approaches relate to the philosophical view and are concerned with the design of the research. The deductive

approach relates to positivism, in which the design of the research is based on an attempt to test a developed theory and hypothesis (Saunders et al. 2009). The inductive approach seeks to develop a theory based on a data analysis, and relates to interpretivisim (Saunders et al. 2009). The deductive approach is suitable when the study´s aim is to move from theory to data, explain casual relationships between variables and generally make use of quantitative data (Saunders et al. 2009). It is a highly structured approach, which requires a sample of sufficient size to enable the possibility to generalize the results and make conclusion (Saunders et al. 2009).The inductive approach is suitable when the study strives to understand the meanings humans attach to events, gain a deep insight and understanding of the research context, and generally makes use of qualitative data. It has a more flexible structure which allows for changes in the research process. This approach is also less concerned with generalization of the conclusion (Saunders et al. 2009). It should be added that even though there are two main research approaches, it is not only a possibility to combination these, but often beneficial to do so (Saunders et al. 2009). This being said, although this study is mainly of deductive nature, we have decided to include inductive elements as well. A Blumberg et al. (2008) state that inductive elements occur when we observe a fact and ask why, which is what this study aims to do. Hence, a mixed approach is used in this study.

Another issue is the use of qualitative and quantitative data. This distinction between the two is generally based on the nature of information to study the problem (Blumberg et al 2008). Blumberg et al. (2008) p.192 define the difference as following "Qualitative refers to the meaning, the definition or analogy or model or metaphor characterizing something, while quantitative assumes the meaning and refers to a measure of it". Both terms are widely used within business research to differentiate data collection techniques and how to proceed with the data analysis. A key distinction between the two is the numeric and respectively non-numeric data the two techniques generate. Qualitative data is non-numeric and common data collection techniques involve interviews, but can also include pictures or video records (Saunders et al. 2009). Quantitative data is numeric, and commonly includes techniques such as structured interviews and questionnaires, but also direct measurements (e.g. height and weight) are used to gather data (Saunders et al. 2009). Numeric data are often easy to describe, present and analyze through statistical methods by using graphs and tables (Saunders et al. 2009).

There are several factors the researcher should consider in choosing method of data collection. These factors include the nature of the research problem, the objective of the study, what kind of information we have access to and want to obtain (Blumberg et al. 2008). A combination of qualitative or quantitative techniques is possible and it is not uncommon to use multiple-methods to address the research questions (Saunders et al. 2009). Furthermore, Blumberg et al. (2008) argues that the quality of the research rather depends on the quality of the study´s design and on how it is conducted and less on the choice of qualitative or quantitative data respectively.

4.2. METHOD

The method is going to be the main focus of this chapter. The method describes the techniques and procedures used to gather, analyze and present the data.
In this study used both primary and secondary data. Primary data is all the new information gathered to address our research questions Saunders et al. (2009), and it will be presented in the result chapter and are further analyzed forming the base to our conclusions. Secondary data refers to raw data and published summaries which provide essential information about the problem and to support our theories and thus add credibility to our conclusions (Saunders et al. 2009).

4.2.1. Secondary data

The main advantage of secondary data is the time and money that can be saved by using the already available data (Blumberg et al. 2008). However, there are many things to consider. Firstly, the secondary data should cover all the information needed to be able to address our research problem Blumberg et al. 2008). Secondly, the information should be detailed enough to be of sufficient use Blumberg et al. 2008). Finally, the data should be accurate and align with the definition of our problem (Blumberg et al. 2008). For this study relevant secondary data of high quality was important to ensure credibility of the study. In order to ensure a high quality of the material, we mainly used articles found in Jönköping's University library´s database, as we knew that it was a reliable source of information. Other sources of secondary data consisted of academically recognized books retrieved either from Jönköping's University library or Gothenburg University library. The data used from Persson and Wallenhem (2012) study at Gothenburg University is also reliable, as they investigate the same population, by using the same units, with an acceptable sample size during a relevant time period (Blumberg et al. 2008). The information gathered from the local newspaper merely acted as a source to further support the public interest of further investigating the topic and was not used to support our analysis or conclusions.

4.2.2. Primary data

This study used both qualitative and quantitative techniques in the data collection. The qualitative data was obtained through interviews and the quantitative data through a questionnaire survey. The intent of the questionnaire was to address the first three research questions stated in the purpose. These questions concerned the behavioral changes, acceptance and demographic factors of the population under study. The qualitative data was gathered in two interviews with Patrik Wigren, marketing manager at IKEA Bäckebol and Marianne Sörling CEO at Innerstaden AB. The idea was to use these interviews as support to our reasoning in the analysis. Thus, the interviews complemented the theoretical framework, by giving an expert view of the congestion charges impact on retail performance. The interviews were also the main source of information in the discussion of the final research question concerned with store performance. We chose these techniques as it is suitable for our research as it is valuable when the aim is to describe the variability in phenomena or to further

examine the relationship between variables, as Saunders et al. (2009) p.362 argue that "although questionnaires may be used as the only data collection method, it may be better to link them with other methods in a multiple-methods research design, for example, a questionnaire to discover customers' attitudes can be complemented by in-depth interviews to explore and understand these attitudes".

4.2.3. Interviews

The interviews in this study were personal face to face encounters. The advantages with personal interviews are the depth of the information and detail that can be held. The information from a personal interview exceeds other interview methods such as telephone or mail surveys as the interviewer can improve the quality and amount of the data by observing and probing with additional questions (Blumberg et al. 2008). In this study we used semi structured interviews. This involves open ended questions, which allows a fairly high degree of flexibility in the answers (Blumberg et al. 2008).This is a hybrid between structured and unstructured interviews and is suitable when you want to learn the respondents' viewpoints relevant to the broader context of the research problem (Blumberg et al. 2008). Saunders et al. (2009) also recommend this specific structure in cases where the author seek answer questions of complex nature, such as correlations between variables. To add further credibility to this part of the research, all interviews where audio recorded and written down in a transcript recently after.

We strived to minimize data quality issues such as questionable reliability and biased results by proper preparation prior to the interviews. A common source of biased response is the level of trust or perception the respondent have about the interviewer (Saunders et al. 2009). This is generally more prevalent in unstructured interviews. Furthermore, in an unstructured interview there is a chance that the respondent will answer inconclusively on a question as the complete answer would lead to a topic to which he or she is not empowered to discuss (Saunders et al. 2009). There is also a possibility that the respondent will answer in a way to be seen in a positive fashion (Saunders et al. 2009). The validity of the data is concerned with the degree of access of the respondents' knowledge and experience and to which the researcher manage to infer meaning to the retrieved information (Saunders et al. 2009). It should be added that our technique is not a case study; hence the possibility to generalize the results from the interviews decreases (Saunders et al. 2009).

A key component to overcome these obstacles regarding validity reliability is careful preparation. In order to enhance the validity of the data by showing credibility in the interviews, we ensured that we had sufficient knowledge about the topic and organization. The semi-structured questions where conducted with great care, and the intention was always to directly relate the question to one of our four research questions. This allowed the respondent to overview or gather documents, figures etc. that might become relevant during the interview process. We also prepared the respondents, by describing our intention and the nature of the questions prior to the interview. Further, we made sure that the respondent understood that we accounted for the ethical aspects; whereas we ensured the respondent that

16

if anything was said "of the record" this would not appear in any way in the finished report. We also tried to avoid wording that could lead the respondent to a biased answer, by asking as neutral questions as possible. (See appendix 1.)

In our interview process, two 45 minute interviews were carried out in April 12th & 18th, 2013. During the interviews the persons where asked several questions related to Gothenburg's congestion charge to assess what impact the charge have had on the retail performance and if they had noticed any change in customer behavior. The questions were directly tied to the current debate and theories based on the previous research outlined in this paper. The interviews started off by asking questions that had been prepared in advance (see appendix 1.) but since we used semi-constructed interviews this also allowed us to ask both follow up and new questions which arise during the interview. Since we chose two interviews with two independent persons working for two different companies at two different locations where the impact of the congestion charge was assumed to have been different (an assumption based on our research before the interviews were conducted), we decided to ask slightly different questions to the both. As previously noted the market manager for IKEA Gothenburg, Patrik Wigren, was interviewed answering questions related to Gothenburg's congestion charge scheme and its impact on IKEA's business performance and consequently their customers behavior after it was introduced (see appendix 1). Furthermore Marianne Sörling, CEO Innerstaden AB, was also interviewed answering questions related to the congestion charge scheme and its impact on the overall commerce in the inner city of Gothenburg as well as visitors and customers behavior (see appendix 1).

4.2.4. Questionnaire

Saunders et al. (2009) states that the response rate, reliability and validity of data collected through a questionnaire, relies on the design of the questions, a clear and attractive layout, a simple explanation of the purpose of the study, pilot testing and a planned execution of the data collection. Following these principles our questionnaire had a carefully designed layout with an aim to be quick to answer and easy to understand. The number of questions was a concern, since a long questionnaire might reduce the respond rate. Nevertheless, we had a short unbiased banner, describing the topic and purpose of the survey, as it can increase the respondent's willingness to cooperate (Saunders et al. 2009). Furthermore, Blumberg et al. (2008) argues that in order to obtain a high quality in the data from the questionnaire it has to be designed and executed with great caution.

Based on these guidelines, we made sure that all the questions provided significant information towards answering our research questions with the exception of the two questions included for IKEA´s interest. The questions were wherever possible simple yes or no questions, the only exceptions concerned demographic factors were more response alternatives where available. Finally, a pilot study to test the questionnaire was carried out. Thus, 20 people were asked to respond to the questionnaire with the purpose to get feedback on the structure, design and to ensure that the questions where easy to understand. This is

important to ensure a high quality in structure and formulation questions (Saunders et al. 2009).

We strived to ensure that the survey only asked questions that the respondent could be expected to have the knowledge to answer. We tried to enhance the participants' willingness to answer the demographic questions which could be sensitive, by ensuring total anonymity. Finally, in formulating the questions we tried to avoid words that could be misinterpreted or had double meaning (Blumberg et al. 2008). We also strived to have a good logical flow in our questions, where questions 1-5 were concerned with the demographic factors gender, age, place of residence, income and education, questions 6-14 was related to behavioral change, questions 17-24 to acceptance and 15-16 where related to IKEA´s interest (see appendix 2).

We used a theoretical perspective in the formulation of our questions, as the questions regarding changes in behavior related to the congestion charge theory (Model 1). This theory states that the congestion charge aims to change the behavior of the public in their choice of; destination, route, time to travel and mean of transportation (question 6-14). We can also compare results regarding travel behavior directly Persson and Wallenhem´s (2012) study conducted last year at Gothenburg University (question 6 & 7). This gave evidence as to whether a change in behavior had occurred. Importantly, for the purpose of this comparison the questions were worded in the same way as the previous survey and the data collection was carried out in the same place and in a similar manner. Furthermore, in order to investigate the acceptance level of the congestion charge, we used questions regarding the elements presented in model 2, as we also wanted to obtain information regarding the underlining factors of acceptance. Finally, we investigated if there were any associations between behavioral change, acceptance and the demographic factors age, gender, income, education and place of residence.

4.2.5. Sample and statistical validity

The target population for this survey was adult customers at IKEA Bäckebol. In order to be able to generalize our results from a sample to this population we aimed to take a non-probability sample of all customers at IKEA during a specific week.
A random sample requires that each individual in the population has a known probability of being selected (Gravetter & Wallnau, 2010). To be able to draw a random sample with known sampling probabilities, a list of all the elements (subjects) in the population of interest, also referred to as a sampling frame is required. In this case we did not have a list of the population and a sampling frame could not be prepared, hence we were not able to use the simple random sampling method. Instead we chose to conduct a systematic sample by selecting every 5th customer that walked in through the main entrance of IKEA Bäckebol (Aczel, 2009). In this case the sampling probabilities were not known, but all subjects visiting the IKEA department store in Bäckebol during the period of data collection had a 20% chance of being selected for the sample. In addition, all non-responders were recorded thus allowing for a non-response analysis. All non-respondents were classified into categories according to age and gender. We recruited a sample size of 443 people where 335 participated (76%). This

ensured a 90% statistical power of observing a true 20% difference in population proportions (e.g. the proportion approving of the congestion charge before and after the introduction of the charge or between men and women) with a 5% significance level (Gravetter & Wallnau, 2010). The definition of statistical power is "the probability that the test will correctly reject a false null hypothesis" (Gravetter & Wallnau, 2010 p.265).

In the implementation of this study design we selected every 5th customer that walked in through IKEA´s main entrance during the week April 15-22 14-18 Mon-Fri and 10-16 Sat - Sun. Subjects aged 18 or older were included as it is generally the adults in the households that drive and pay the congestion charge.

4.2.6. Statistical analyses and presenting of data

Information from the questionnaires was recorded and analyzed in a pre-prepared SPSS document. In planning the analyses it is important to be straightforward and use methods that are relevant for the research questions and contribute to fulfill the purpose of the study (Saunders et al. 2009).The presentation of the results consists of a model describing the overall associations between consumer behavior, acceptance and demographics, this is followed by five tables displaying the most relevant data, this data is then further explained through graphic presentations by using pie charts and bar diagrams, this section is accompanied by short comments of the results. Comparisons of proportions will be performed by estimating differences. The statistical precision will be taken into account by performing chi-square tests for four fold tables and by estimating 95 % confidence intervals, in these analyses the differences in means and proportions will be assumed to follow an asymptotic normal distribution due to the fairly large sample size (Aczel, 2009). Tests of statistical significance were performed by using chi-square tests. Chi square tests were only applied if the lowest expected number of a single cell exceeded five. In order to take into account background factors in the analyses, e.g. gender, we conducted stratified analyses with application of the statistical methods mentioned above. Finally, all statistical associations where examined in a multivariate logistic regression analysis. We chose logistic analyses as it is well suited to analyze proportions and binary data (Aczel, 2009). The purpose of these analyses was to evaluate if the associations observed in univariate analyses (chi-square) could be explained by background or correlated factors. In these analyses we used dichotomized data only (yes/no). We estimated regression coefficients for each variable included in the model and calculated p-values corresponding to the hypothesis of no association. In this way we can exclude the possibility that an observed difference between two variables can be explained by other variables that we have information on in our study (Aczel, 2009). For example: if our chi-square tests indicate that people with a high income are more likely to have a high acceptance, the logistic regression can show that this is actually due to the fact that the people who live in the central city have a higher income and this explains the association. In these analyses we used all variables regarding demographic factors and the variable concerned with acceptance.

4.3 Practical issues in the process

One of our most severe practical issues was to obtain information regarding the actual retail performance. As previously stated in the delimitation, this led the study to an alternative purpose as we could not retrieve any figures regarding sales and revenue. Furthermore, we also had some difficulties regarding our sample size, since we did not have an available sample frame; however, this problem was solved by using systematic sampling which enabled the study to get results with a high credibility. We also had some technical issues during the interview with Marianne Sörling, where our recorder stopped the recording after a few minutes. Fortunately, we took notes as well and wrote a transcript of all the information directly after the interview. In order to further reduce the effect, we sent a copy to Marianne Sörling so that she could confirm all the statements. However, even if we have confirmed all the statements, there is always a possibility that we missed or forgot some valuable information which could affect the study´s quality in this specific section.

5. Empirical findings

In this section the empirical findings from our interviews and questionnaire will be presented. The first section will present the most relevant information from the two interviews; these also involve statements regarding customer flow, which are relevant in the speculation of the final research question. The first interview presented is with Marianne Sörling, CEO Innerstaden AB, Patrik Wigren, Market manager at IKEA Bäckebol. The following section presents the results from questionnaire conducted at IKEA Bäckebol.

5.1 The interviews

This section will present a summarized version of the interviews containing the most relevant information with regard to our purpose. Each interview has a brief introduction of the company

5.2. Innerstaden AB

Innerstaden AB was founded in 2005 and is owned by the merchant's guild "Göteborgs Köpmannaförbund" and property owners union "Fastighetsägarna Göteborg". It is a cooperation of 620 members, consisting of restaurants, shops and other retailers in the city, with an aim to increase the region's growth with respect to climate.

5.2.1. Consumer behavior

It was indicated in a reportage done by TV4 News that customer behavior among customers visiting the inner city of Gothenburg had changed after the congestion charge was implemented 1 of January 2013. Sörling was asked about these changes and what the main differences in customer behavior have been so far. The most significant difference in customer behavior that has been noticed is a change in time and number of shopping visits made to Innerstaden where they see an increase and a higher number of customers during weekends, especially on Sundays compared to the same period in 2012 (M. Sörling, personal communication, 2013-04-12). According to Sörling, the congestion charge has generally affected people's behavior to some degree. This could in particularly be in the inner-city, where the residents may choose to stay inside the inner city rather than to travel to shopping malls located in the suburb. It can also be noticed that people have changed their time for shopping purposes as they tend to shopping more during weekends (M. Sörling, personal communication, 2013-04-12).

In November 2011 Innerstaden AB implemented statistical gauges out on the shopping streets which count the number of visiting people passing by on the streets. (M. Sörling, personal communication, 2013-04-12). Sörling said that these gauges have helped to indicate what impact the congestion charge have had on the number of visiting people to the inner city after it was introduced (M. Sörling, personal communication, 2013-04-12). The gauge shows an increase on Mondays and Thursdays with 6% respectively (M. Sörling, personal communication, 2013-04-12). An increase has also been noted on the weekend as M. Sörling states "It has particularly been an increase during the weekends, as one can see, Saturdays has

increased by 10% during this period after the congestion charge was implemented compared to the year before" (M. Sörling, personal communication, 2013-04-12).

5.2.2. Retail performance

In January 2013 Innerstaden carried out a survey among their 620 members asking them how their sales performance had been affected (M. Sörling, personal communication, 2013-04-12). The results were a mixed of positive and negative sale figures, which according to Sörling was more related to trends and the actual goods of sale rather than the congestion charge (M. Sörling, personal communication, 2013-04-12). Nevertheless, Sörling stated that "according to the retailers the decrease in sales was due to the congestion charge (M. Sörling, personal communication, 2013-04-12). However, the statistical gauges during this time period showed an increasing number of visitors in the shopping streets, thus external and internal business factors such as trends are more likely to be the origin of the slow business. However, the decline in sales cannot exclude the congestion charge as a responsible factor (M. Sörling, personal communication, 2013-04-12). " Since sales for some retailers have fallen, but our statistical gauges still shows an increase in the number of visitors, some retailers have opted to stay open on Sundays to take advantage of this" (M. Sörling, personal communication, 2013-04-12). As the retailers are expanding their opening hours on weekends Sörling says their labor costs also increase (M. Sörling, personal communication, 2013-04-12). The retailers that are most affected by these costs are the small business owners as it gets very expensive for them to have extra staff working during weekends (M. Sörling, personal communication, 2013-04-12).

5.2.3 Differences in impact on retail stores

M. Sörling believes that one aspect to why Innerstaden is less affected than other retail stores is that most of their customers use public transportation. Furthermore, the public transport system has better connections to the inner city compared to centers located outside the city (M. Sörling, personal communication, 2013-04-12). Thus "it can require a higher effort to get out to the shopping centers outside the city center by public transportation (M. Sörling, personal communication, 2013-04-12). M. Sörling also mentioned the trend is moving away from larger shopping malls with stores selling similar goods towards smaller stores selling unique and different kind of goods something that attract customers more and thus have made the impact of the charge less dramatic for the inner city commerce (M. Sörling, personal communication, 2013-04-12). Furthermore Innerstaden AB have invested in new infrastructure which have made the shopping area more attractive for the customers and thus increase the number of visits (M. Sörling, personal communication, 2013-04-12). It could also be that the customers who live in the inner city could be influenced to do their shopping there due to the congestion charge (M. Sörling, personal communication, 2013-04-12).

5.3. IKEA Bäckebol

IKEA Bäckebol is located north east of Gothenburg close to E6 (point 17, see appendix 3). Like all the other IKEA stores, they are selling a wide range of household goods and functional furniture's. Since the store is selling bulky goods for which car is convenient, most of their customers are car borne (P Wigren, personal communication, 2013-04-18). The store is located next to Bäckebol Home Center, a shopping center consisting of 25 stores for which most of them are also selling bulky and household goods. The common factor for all the stores in the area is the fact that they are located near the control perimeters.

5.3.1. Consumer behavior

Wigren was asked if IKEA Bäckebol had noticed any changes in customer behavior since the implementation of the congestion charge. According to P. Wigren they have seen changes in customer behavior since the implementation of the congestion charge and argue that these changes are due to the congestion charge as other externalities such as economic conditions have been accounted for (P Wigren, personal communication, 2013-04-18). In general the customers are now arriving at different times than before the implementation, such as later in the evening and an increase in visits during the weekends (P Wigren, personal communication, 2013-04-18).

5.3.2. Retail performance

January and February was a catastrophe for our business, March was noticeable but now in April we can see some adjustment toward previous customer behavior but there is still a higher ratio of visits during weekends and evenings..." (P Wigren, personal communication, 2013-04-18). There has been a decrease with 13 % in number of customers during weekdays and a 12% increase on weekends. P. Wigren pointed out that this is shown as a clear change of trend in their computer system and differs compared to the same period in 2012 (P Wigren, personal communication, 2013-04-18). Furthermore Wigren pointed out that the actual decrease in customer flow is 16% compared to the previous year, but when taking out other business factors into account, the system could specifically show that the 13% decrease was due to the congestion charge itself (P Wigren, personal communication, 2013-04-18). "The majority of our sales are during the weekends, which is account for 43% of our total sales" (P Wigren, personal communication, 2013-04-18). Overall, the sales have dropped in January, February and March compared to the same months in 2012 (P Wigren, personal communication, 2013-04-18).

The changes in customer behavior have induced some extra costs to the store in terms of labor. Since the customers have adapted to the charge by changing time for their trip by shopping during the evenings and weekends, IKEA have adapted to this change by increasing the amount of staff in evenings and on weekends (P Wigren, personal communication, 2013-04-18). "Having more staff working on these hours will automatically cost us more and we have to adapt to the customer behavior with this internal adjustment in that sense" (P Wigren, personal communication, 2013-04-18). The changes in customer flow during weekdays,

automatically affects the overall sales and thus the turnover for the store (P Wigren, personal communication, 2013-04-18).

According to Wigren the behaviorl change has been reduced over time and he believes that people's adaption could be due to the first payment of the congestion charge invoice in the end of March (P Wigren, personal communication, 2013-04-18). "Maybe most people noticed that this invoice was not as expensive as previously thought, we therefore believe the first dip in January and February has to do with the fear of this first congestion charge invoice" (P Wigren, personal communication, 2013-04-18). Shortly, besides the fact that the customers have changed time for their purchases, customers have begun to come back. According to Wigren, since April there is no longer the dip of 13% in customer flow it has started to level off and is now around 10% (P Wigren, personal communication, 2013-04-18).

5.3.3. Differences in impact on retail stores

"I think the bigger retail stores are not affected to the same degree as the smaller retail stores since people will come and buy their couch regardless of the congestion charge" (P Wigren, personal communication, 2013-04-18). Furthermore Wigren mentioned that IKEAS customers have a more planned buying behavior which means they will visit the store regardless of the charge if the purchase have been planned in advance (P Wigren, personal communication, 2013-04-18). Shortly customers are less willing to pay SEK 18 in charge for smaller spontaneous purchases compared to planned and more expensive purchases. This is related to why many stores in the same area have lost 20% in customers (P Wigren, personal communication, 2013-04-18). Overall the placement of the control perimeters seems to be one of the main reasons why the stores around Bäckebol have been so affected (P Wigren, personal communication, 2013-04-18). In general the connections to and from Bäckebol with public transport are underdeveloped compared to the city connections which constrains customers when choosing transport mode (P Wigren, personal communication, 2013-04-18).

5.4. Questionnaire Results

In this section we present the results from the questionnaire in two section, the first section consists of a model that explains the overall associations of consumer behavior, public acceptance and demographic factors as well as the respondents indicated behavioral change. This is followed five tables that summarize the statistical findings from the survey. The most interesting and statistically significant findings are marked with green and red color. The green color represent the findings that where statistically significant in the chi-square test, but where explained by other factors in the regression analysis, and the red color are the statistically significant results considering all other variables. The findings marked in red color are then further explained in the following section together with the most relevant findings regarding our purpose through pie and bar charts including comments. The latter section will start by presenting the change in behavior followed by acceptance and its determining factors, which in turn is followed by the associate findings between behavioral changes, acceptance and demographic factors that was seen in model 4.
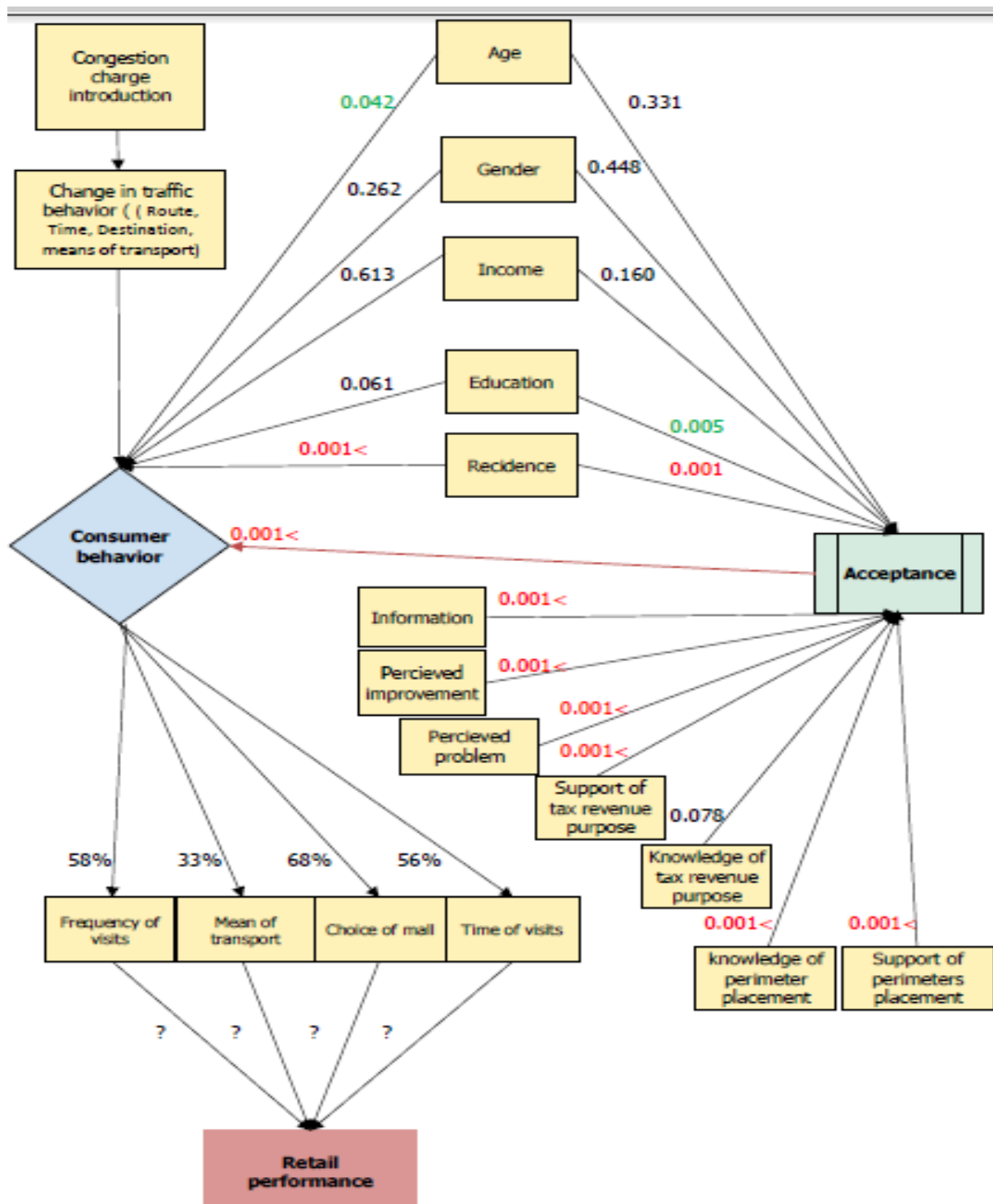
(Model 4. is similar to model 3 however; this model also shows the results of the questionnaire regarding associations, between consumer behavior, acceptance and demographics. The associations are explained by the p-values placed next to the lines, where the significant differences are the values marked in red. The behavioral change explains the percentage of the population who consider that they changed their behavior in that specific factor. As we do not have sufficient evidence of the actual impact on retail performance, we chose to illustrate those associations by using question marks. Erik Hammar, Björn Åberg & Christian Loewe, 2013)

Change in behavior

Gender	N 335	Male (n194)	Yes in %	Female (n141)	Yes in %	Total	P value
Time of visit			55%		57%	56%	0.670
Freuancy of visits			59%		55%	58%	0.469
Choice of mall			68%		67%	68%	0.791
Mean of transport			33%		34%	33%	0.840

Resisdence	N 335	Central (n117)	Yes in %	Suburb (n151)	Yes in %	Other (n 67)	Yes in %	Total	P value
Time of visit			46%		69%		45%	56%	0.001<
Frequency of visits			48%		70%		48%	58%	0.001<
Choice of mall			54%		80%		64%	68%	0.001<
Mean of transport			35%		39%		18%	33%	0.008

Educatiom	N 335	Elementary (n41)	Yes in %	High school (n143)	Yes in %	Higher education (n151)	Yes in %	Total	P value
Time of visit			68%		58%		51%	56%	0.117
Frequency of visits			63%		60%		54%	58%	0.487
Choice of mall			78%		72%		60%	68%	0.300
Mean of transportat			39%		39%		27%	33%	0.870

Income	N 335	<11 000 (n42)	Yes in %	11 000- 25 000 (n133)	Yes in %	26 000- 39000 (n126)	Yes in %	40 000 > (n34)	Yes %	Total	P value
Time of visit			55%		59%		55%		53%	56%	0.890
Frequency of visits			50%		59%		59%		56%	58%	0.735
Choice of mall			62%		70%		72%		47%	67%	0.330
Mean of transport			43%		38%		31%		15%	33%	0.380

Age	N 335	18-29 (n65)	Yes in %	30-45 (n126)	Yes in %	46-65 (n95)	Yes in %	65+ (n49)	Yes %	Total	P value
Time of visit			49%		57%		57%		61%	56%	0.607
Frequency of visits			51%		60%		55%		67%	58%	0.301
Choice of mall			65%		65%		66%		80%	67%	0.272
Mean of transport			39%		39%		22%		35%	33%	0.470

Acceptance	N 335	Positive (n66)	Yes in %	Negative (n253)	Yes in %	No opinion (n16)	Yes in %	Total	P value
Time of visit			26%		65%		38%	56%	0.001<
Frequency of visits			24%		68%		25%	58%	0.001<
Choice of mall			33%		77%		56%	68%	0.001<
Mean of transport			15%		40%		13%	33%	0.001<

(Table 1 illustrates the change in behaviour with regard to demographic factors)

Results compared to previous study

Visit	(N)	Planned %	Spontaneous %			Total	P value
2012	n 155	45%	55%			100%	
2013	n 335	49%	51%			100%	0.701

Transportation	(N)	Pedestrians %	Taxi %	Bicycle %	Car %	Public transport %	Total	P value
2012	n 155	1%	2%	0%	91%	6%	100%	
2013	n 335	0%	0.5%	0.5%	92%	7%	100%	0.139

(Table 2 illustrate the comparing results of this study and Persson and Wallenhem´s study concerned with the ratio of planned visits and the respondents mean of transportation)

Nr of behaviroal changes	N 335	0 count % within	1 count % within	2 count % within	3 count % within	4 Count % within	Total in %	P value
Gender	Male (n194)	26%	13%	11%	20%	30%	100%	
	Female (n141)	26%	12%	8%	30%	24%	100%	
	Total	26%	13%	10%	24%	28%	100%	0.262
Residence	Central (n117)	36%	14%	7%	19%	25%	100%	
	Suburb (n151)	17%	9%	9%	31%	34%	100%	
	Other (n67)	28%	19%	18%	18%	16%	100%	
	Total (n335)	26%	13%	10%	24%	28%	100%	0.001<
Education	Elementary (n41)	12%	17%	17%	17%	37%	100%	
	High school (n143)	22%	13%	9%	25%	31%	100%	
	Higher education (n151)	33%	11%	8%	26%	22%	100%	
	Total (n335)	26%	13%	10%	24%	27%	100%	0.061
Income	<11 000 (n42)	31%	10%	9%	19%	31%	100%	
	11000 -25000 (n133)	22%	14%	11%	24%	29%	100%	
	26 000 - 39 000 (n126)	25%	14%	9%	25%	28%	100%	
	40 000> (n34)	41%	6%	9%	29%	15%	100%	
	Total (n335)	26%	12%	10%	24%	27%	100%	0.613
Age	18 - 29 (n65)	28%	20%	5%	17%	31%	100%	
	30-45 (n126)	26%	11%	10%	21%	32%	100%	
	46-65 (n95)	30%	10%	8%	34%	18%	100%	
	65 + (n49)	16%	10%	18%	25%	31%	100%	
	Total (n335)	26%	13%	10%	24%	27%	100%	0.042
Acceptance	Positive (n66)	56%	18%	3%	17%	6%	100%	
	Negative (n253)	17%	11%	11%	27%	34%	100%	
	No opinion (n16)	44%	13%	19%	19%	6%	100%	
	Total (n335)	26%	13%	10%	24%	28%	100%	0.001<

(Table 3 show the number of affected factors in behavioural change, with regard to demographic factors)

| Acceptance											
Acceptance ratio	N 335		Positive%		Positive%		Positive%		Positive%	Total %	P value
Gender		Male (n194)	19%	Female (n141)	21%					20%	0.448
Income		<11 000 (n42)	21%	11 000 - 25 000 (n133)	12%	26 000- 39000 (n126)	25%	40 000 > (n34)	27%	20%	0.160
Residance		Central (n117)	29%	Suburb (n151)	10%	Other (n67)	25%			20%	0.001
Education		Elementary (n41)	7%	High school (n143)	15%	Higher education (n151)	27%			20%	0.005
Age		18-29 (n65)	12%	30-45 (n126)	24%	46-65 (n95)	24%	65+ (n49)	6%	20%	0.331

(Table 4 show the level of acceptance with regard to demographic factors)

Acceptance ratio	N 335	Positive%	Negative%	No opinion %	Total %	P value
Percieved problem	Yes (n32)	74%	16%	10%	100%	
N 335	No (n242)	3%	94%	3%	100%	0.001<
Percieved improvement	Yes (86)	61%	31%	8%	100%	
N 335	No (n210)	2%	96%	2%	100%	
	Unsure (n39)	23%	64%	13%	100%	0.001<
Knowledge of placement of perimeters	Yes (n274)	20%	77%	3%	100%	
N 335	No (n61)	20%	69%	11%	100%	0.001<
Support of placement of perimeters	Yes (n32)	72%	25%	3%	100%	
N 274	No (n242)	13%	84%	3%	100%	0.001<
Information	Yes (n164)	34%	60%	6%	100%	
N 335	No (n171)	6%	90%	4%	100%	0.001<
Knowledge of tax revenue purpose	Yes (n205)	23%	73%	4%	100%	
N 335	No (n130)	14%	80%	6%	100%	0.078
Support of tax revenue purpose	Yes (n69)	61%	33%	6%	100%	
N 208	No (n139)	4%	93%	3%	100%	0.001<

(Table 5 illustrates the origins of public acceptance and the proportions of positive/negative opinions, in relation to the elements in model 2)

5.4.1. Change in consumer behaviour

The questionnaire had six questions that addressed consumer behavior. Four of which directly asked the respondents if he or she had changed their behavior with regard to which *time to visit* the mall, frequency of visit, if the congestion charge affects their *choice of mall* they visit and/or their *means of transportation*. The other two questions concerned the ratio of planned and spontaneous visits and by which mean of transport the respondent came to IKEA, these questions where included to compare to Persson and Wallenhem´s study. The four direct questions indicated that a change in behavior has occurred due to the congestion charge, as 74% of the respondents reported that they had changed their behavior in at least one of the investigated aspects (see figure 1). Furthermore, as figure 1 also shows it was common to change behavior in all aspects.
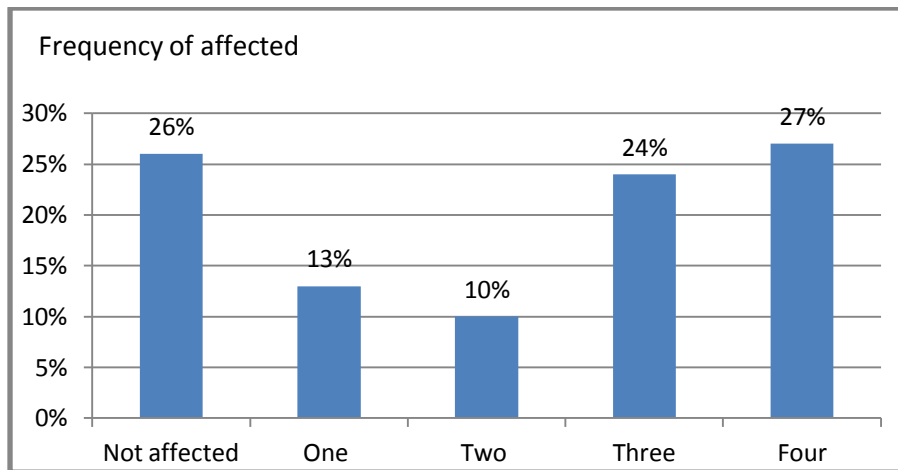
(Figure 1, describes the frequency of the number of affected behavioral factors among the respondents)

Among these four behavioral factors, the choice of mall was the most frequently reported (Figure 2). Moreover, 58% reported that the congestion charge affected how often they visited the mall and 56% said that it influenced the decision of which time to visit the mall. The least frequently reported change concerned the question of the means of transportation. The two questions that were compared to the previous study which investigated if the number of spontaneous visits had declined and if the overall means of transportation had changed did not show any significant difference when comparing.
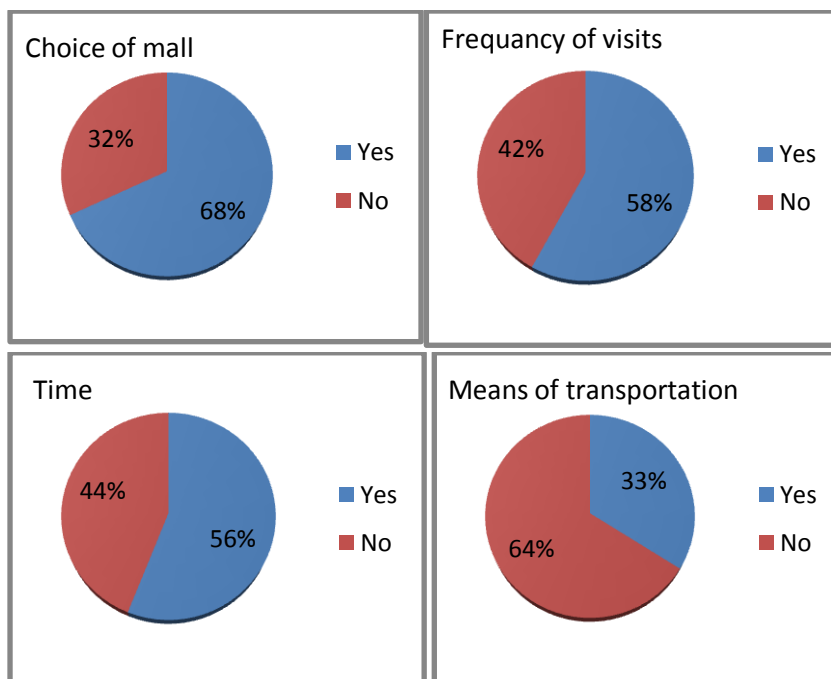
(Figure 2, describes the ratio of change in each behavioral aspects of the choice of mall, frequency of visits, time of visit and means of transportation)

5.4.2. Public acceptance

Acceptance ratio

- Positive
- Negative
- No opinion
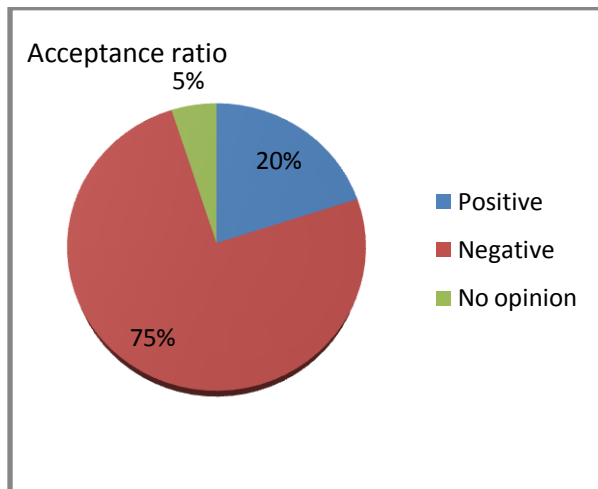
(Figure 3, illustrates the population's ratio of positive, negative and opinion less views of the congestion charge in Gothenburg)

The overall level of acceptance is presented in figure 3 by investigating if the population considers the congestion charge to be mostly positive, negative or indistinctive. The congestion charge theory implied that the level of acceptance depend on the level of information given prior to the implementations, a perceived congestion problem, perceived improvement due to the congestion charge, tax revenue purpose and scheme layout which are presented below.
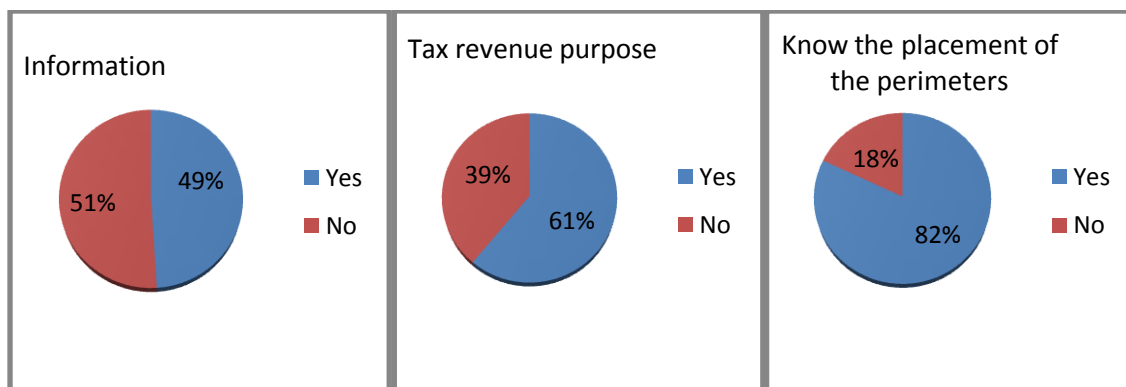
(Figure 4, show the ratio of respondent that received suffcient information prior to the implementation , know how the perimeters are placed and know the tax purpose)
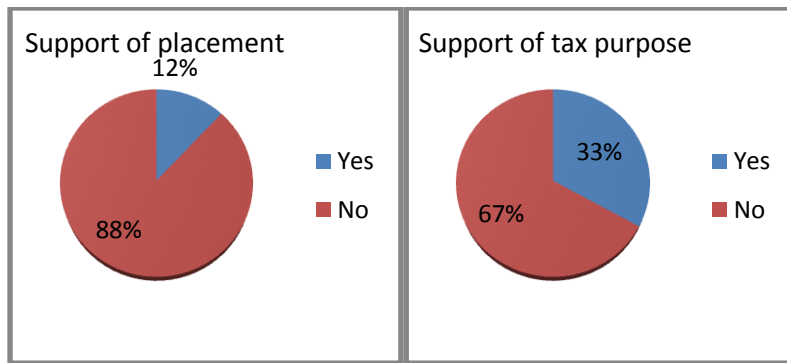
(Figure 5, display the perimeter placement approval and support towards the tax purpose)
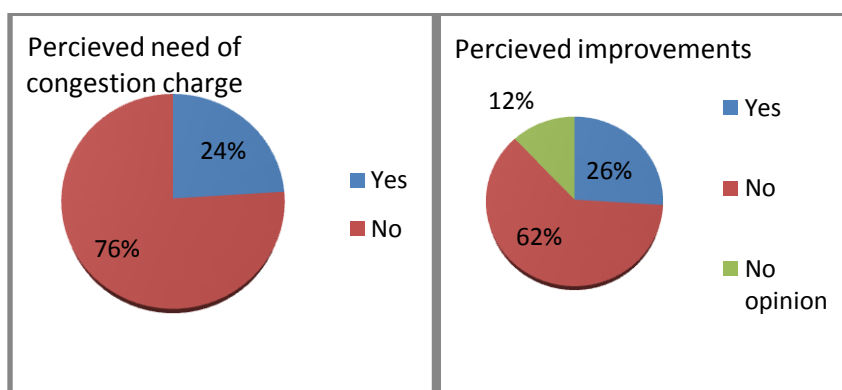
(Figure 6, display the perceived a need of congestion charge in Gothenburg and the experienced improvements post to the implementation)

Viewing questions regarding the origin of acceptance it shows that the majority of the population knew how the perimeters are placed and more than half of the people knew the purpose of the tax revenue, however, only less than half of the population considered themselves as properly informed prior to the implementation. These figures show that the politicians have managed to inform the public regarding placement of the perimeters and the tax revenue purpose rather well, but still lack public acceptance. Figure 5 illustrates the ratio of support towards the structure of the perimeter placement and the tax revenue purpose, where it can be noticed that the majority disapprove of the structure and less than half support the tax revenue purpose.

It is also displayed that approximately a fourth of the respondents perceived a need of a congestion charge system, and a slightly smaller proportion have seen improvements since the implementation. To further explain the impact these elements have on acceptance, figure 7 & 8 will illustrate the association between them.

Percieved need of congestion charge

Percieved improvements

Support of placement
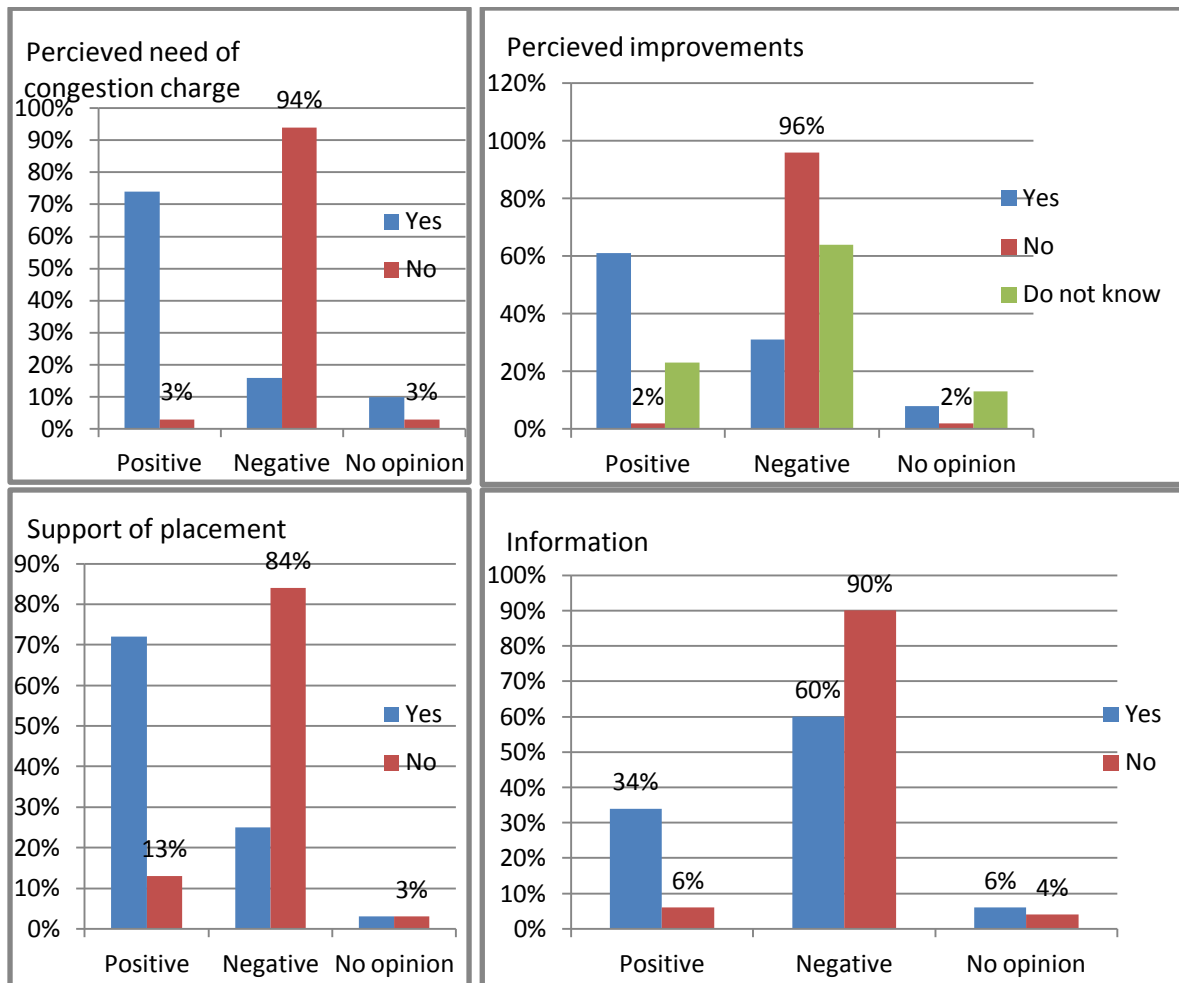
Information

(Figure 7, illustrates the association between acceptance and perceived need of congestion charge, improvements post to the implementation, the approval of the perimeter placement and the perception of valid information given prior to the implementation)

The perceived need for congestion charge showed to be important in regard to the level of acceptance as only 3% of the people, who did not perceive a need of congestion charge where positive, compared to the 74% positive among the people who did see a need. Furthermore, it was also relevant if the respondent had experienced any improvements due to the congestion charge. This can be seen as the level of acceptance was higher among the people who had seen improvements. Moreover, the opinion of the positioning of the perimeters also showed to influence the level of acceptance. In figure 7 it is illustrated that 72% of the people who approved of the positioning where positive to the congestion charge, but only 13% of the people who disapproved of the positioning shared this opinion. It was also evident that the acceptance level increased among the people who experienced that they were given proper information about the congestion charge prior to the implementation.
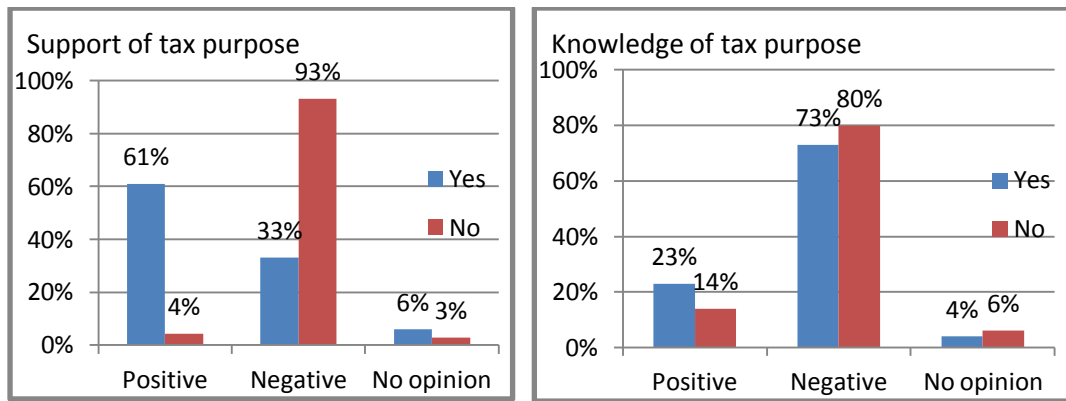
(Figure 8, demonstrate the association between acceptance level and if the respondent knew the tax purpose and if the respondent supported the tax purpose.)

The importance of the tax revenue allocation with regard to acceptance was investigated by asking the respondents if they knew what the purpose of the tax was and if they supported the purpose. Figure 8 show that the knowledge of the purpose is not significantly important in this matter, however it is indicated that the support of the purpose play an eminent part as the level of acceptance among the people who approve of the tax revenue purpose is 61% compared to 4% among the people who disapprove of it.

5.4.3. Associations of behavioral change, acceptance and demographic factors

The aim with this study was also to further understand to which extent the acceptance influence the change in behavior and it was implied to have an effect in previous research. This study also found an association between these, and is presented in figure 9.
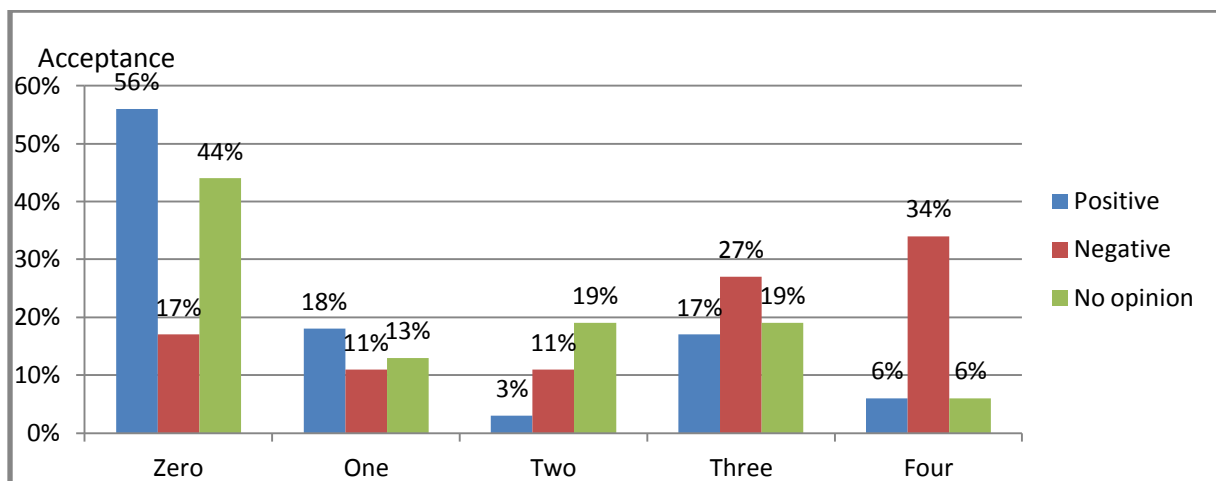
(Figure 9, describes how many behavioral factors the population have changed in percentage in association with the level of acceptance.)

The result presented in Figure 9 show that the overall change in behavior is more noticeable among people with a low acceptance level compared to their counterparts. This indicates that people that have a low level of acceptance is more likely to change their behavior.

The results concerning the demographic factors are shown in figure 10 where it is shown that place of residence is associated to both acceptance and behavioral change where the

acceptance level tended to lower among people who live in the suburban area than those who lived in the central city. It was also evident that the same proportion changed their behavior to a higher extent.
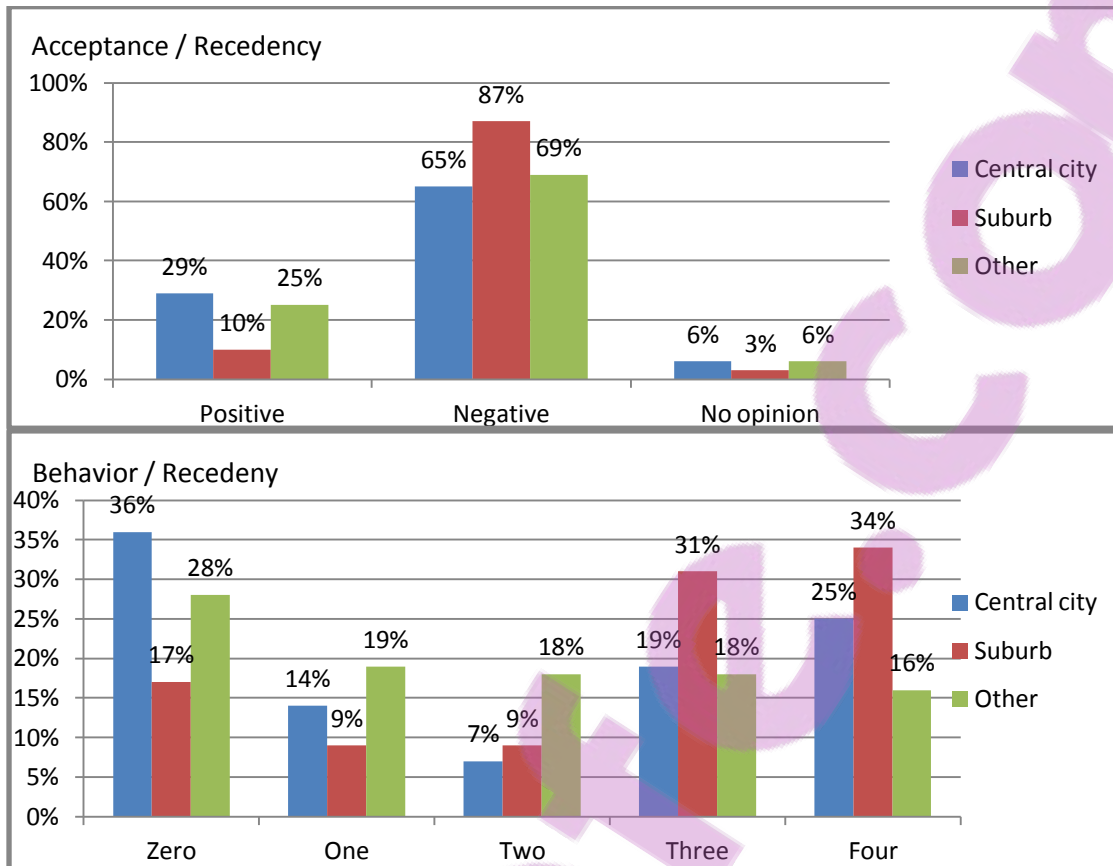
(Figure 10, explains the association between acceptance and place of residence)

6. Analysis & Discussion

In this chapter we will discuss the findings using the theories in the framework and by comparing to previous research. We will also include a suggestion to future research and discuss limitations, credibility and the level of generalizing the study's results. This is finally followed by a conclusion.

6.1. Consumer Behavior

One of our main findings was that in the questionnaire survey the respondents argue that they have changed their behavior with regard to the time of visit, frequency of visits, means of transportation and choice of mall. These findings are not surprising and are consistent with the overall aim of the congestion charge to reduce and redirect traffic (OECD/ITF, 2010). It was also evident from the survey that these reported behavioral changes were associated with the acceptance level. This association between acceptance level and reported behavioral changes was also observed by Schmöcker et al. (2005) in the study of the introduction of the congestion charge in London. This association is manifested by an increase in subjects reporting a behavioral change among those with a low level of acceptance. However, interestingly, although roughly a third of the population in this study stated that the congestion charge affected their means of transportation, there was essentially no difference in consumer behavior in this respect before and after the introduction of the congestion charge as far as we could see by comparing to the results of Persson and Wallenhem (2012). This concerned consumer demographic characteristics, the proportion of spontaneous visits and means of transportation.

These findings could have different interpretations. One possibility is a misinterpretation of the question by the respondent. It is possible that the respondent actually has changed the travel behavior but not to this specific store which was intended in the question. The fact that over 90% of the respondents still use the car as the mean of transportation to this specific store could be due to the bulky items sold at IKEA. However, another possibility, and perhaps more likely, is that people with a low acceptance of the congestion charge may have exaggerated their behavioral change. This could be anything from a reported change in behavior in all regards, but in reality no change at all, or that they have changed the behavior but not as much as indicated by the questionnaire response. However, considering the results from the regression analysis, the latter option of a smaller degree of exaggeration is more likely. Here it becomes evident that the association between behavioral change and residency is not explained by the low acceptance exclusively. Thus it is likely that a change in behavior actually has occurred, as a high proportion of the people in the suburban area stated that they had changed their behavior regardless of their view of the congestion charge. Hence, although the reported changes in behavior in this study are difficult to judge as they are strongly related to a low acceptance of the congestion charge, it is most likely that some behavioral changes has occurred which would be consistent with the theory of an increased behavioral change among the negative part of the population.

The interviews of this study imply that stores located outside the inner city, as retail stores in Bäckebol, could be affected to a higher extent by the congestion charge than Innerstaden. This was also pointed out in previous research by (Daunfeldt et al. (2013); Whitehead, (2002), Quddus et al. (2005) who found that stores located just outside the charging circle are more likely to suffer in this manner. In our research we noticed some factors that might relate to this. Sörling reasoned that the congestion charge might influence the people who live in the central city area to stay inside the perimeters which could be due to that negative people might avoid the control perimeters on a principle bases and therefore stay in the inner city.

Even though Sörling confirmed a similar change in customer behavior regarding time of visit, with an increase of customers during weekends, the overall consumer flow after the implementation had generally been positive. Both Wigren and Sörling pointed out the local public transportation system as a significant factor in this manner, which are in line with the factors pointed out by Whitehead (2002) who emphasized combined investments and public transport, to be of significant importance in attracting customers. Our findings imply that Whitehead's (2002) theory is accurate as Sörling described the investments prior to the congestion charge to be of great value for both the commerce and to attract customers, and may have damped the effect of the congestion charge. This observation was also noted by Schmöcker et al. (2005) who pointed out that deviations in these investment factors between retail areas could lead to one area becoming less attractive compared to another in the eyes of the customers and would thus affect the number of visitors and consequently the retail sales.

The importance of good public transportation for retail business has been pointed out in previous research. It could be argued that Gothenburg´s public transportation system is not as good as that of Stockholm and London which could lead to a difference in the effect of the congestion charge on traffic flows. Results reported by Quddus et al. (2005) indicated that retail stores who mainly sell bulky items are affected to a higher degree than other stores. Our findings that more than 90% of the customers to IKEA Bäckebol used the car as a means of transportation both before and after the introduction of the congestion charge are in line with this However this was not investigated in great detail in this study and if the lack of behavioral change in this respect depend on the public transport system is only a speculation.

6.2. Public Acceptance

Another main finding of this study was that the acceptance level regarding the congestion charge in Gothenburg is quite low. The results show a statistically significant association between the acceptance level and the reported perceived need of the charge, tax revenue purpose, proper information and scheme structure. These factors were pointed out as determining factors in gaining acceptance in the OECD/ITF (2010) implementation guide. Regarding the association between behavioral change and acceptance, it could be argued that the failure to gain acceptance by fulfilling the goals of a good structure, tax purpose and to show improvements may have boosted the change in behavior, which could lead to increased harm on the retail performance. This is what has been suggested in media to have happened.

In the present study, roughly half of the respondents considered that they were properly informed which was the highest proportion among the factors determining acceptance.

However, contrary to expectation from theory this factor was rather weakly related to acceptance. More important according to our results were support of tax revenue purpose, scheme structure and perceived need and improvements. The result indicated that the most important factors determining acceptance were the perceived need of congestion charge in Gothenburg and the approval of the perimeter placement, where roughly 70% of the people who approved of at least one of these factors where positive to the congestion charge. It could be argued that the congestion in Gothenburg is generally too small to gain public acceptance of a congestion charge or that acceptance is reduced due to control perimeters placed in areas where there is not a perceived problem such as outside the inner city. Hence, it could also be claimed that the positioning of the perimeters in the Bäckebol area might influence the acceptance to an extent where it will change consumer behavior and harm the retail stores in Bäckebol as people chose to avoid these specific perimeters due to the disagreement of their placement. This reasoning implies that people might be more willing to cross a control perimeter that is regarded to be in a more acceptable placement. According to OECD/ITF (2010) the perimeters should capture a large segment of the commuter traffic, without affecting surrounding areas that are less congested, delivery traffic, or shopping traffic, in particular not in a way that could affect outside stakeholder. However, it seems as these are not the conditions in Gothenburg and could be one of the main reasons to why it might differ from Stockholm and London where the control perimeters have a more "logical" placement circling the city. (See appendix 3)

6.3. Demographic Factors

Another, interesting observation was the fact that the demographic factors seemed to play en eminent role in the degree of behavioral change and level of acceptance. The results showed a statistically significant association where place of residence was associated with the degree of behavioral change and acceptance. The associations implied that if you live in a suburban area you are more likely to have a lower acceptance level and to change your behavior to a higher extent than people who live in the inner city. This was also was found in Eliasson and Johnson's (2011) study of factors behind positive attitudes. Furthermore, it was also found that the level of acceptance increases among people with higher education which is the same relationship as Jaensirisak et al. (2005) observed in their study that strived to explain the variation of public acceptance. However, when we further scrutinized these findings in a regression analysis, we found that these associations where mainly explained by the place of residence. Hence, the theory that residency play an eminent role with regard to acceptance and behavioral change is further supported by our findings. However, the results do not support the hypotheses of an association between genders or income groups regarding acceptance and behavioral change as we did not find any significant differences in these groups. Nevertheless, these are still interesting results that allows further speculations. No association between income and behavioral change was found which conflicts with Richardson (1974) and Button's (2010) theories which suggest a higher impact on behavior among people with a lower income. This implies that it is not the actual level of the congestion charge that is determining the change in behavior. This could be related to the

previous reasoning where people avoid the charge based on a principle rather than an economic impact.

6.4. Possible impact on retail business

The questionnaire´s results indicated that the frequencies of visits are affected by the congestion charge and a downturn in the number of visiting customers was stated by Wigren. This indicates that the retail performance could be harmed as fewer customers are visiting. Furthermore, it was also clear that many of the customers were influenced by the congestion charge in their choice of mall, which could affect specific stores and this might depend on where it is located and what types of good they sell. It was also a noticeable number of people who stated that the congestion charge affected which time they chose to visit, which also could have an effect on the overall business performance. If an increased number of customers choose to visit during evenings and weekends when the congestion charge is deactivated more staff could be needed and considering that the wages are double during these hours it could affect the overall costs and thereby the business performance. This is a similar result and reasoning as in the study by Daunfeldt et al. (2009)

The study by Bonsall et al. (2006) indicated a pattern; where they argued that people are getting used to the charge. Instead of being rational and avoiding shopping travels for the purpose of not paying any charge and thus maximizing their behavior, as seemed to be the case initially, customers are now instead more aware of the charge and just simply adapt by changing their behavior. Wigren and Sörling also indicate that people are going back to their old behavior as they might have been alarmed of the congestion charge the first months and thereby avoided to use their cars, as they thought that it would play a more significant part in their household budget. Our study can thereby support this theory of a more substantial behavioral change in the early stage post the implementation.

In this study we have found it difficult to find firm evidence of an impact on retail business performance by the congestion charge. Sörling argued that many of the stores blame the congestion charge and use it as a scapegoat and Wigren cannot provide any concrete evidence of a downturn in performance due to the congestion charge. We have found evidence that the congestion charge is changing the consumer behavior, and the degree of this behavioral change depends on the level of acceptance as well as some demographic factors. As mentioned above, the difficulty in clearly distinguishing actual behavioral change and perceived and reported change related to a low level of acceptance needs to be taken into account in the evaluation of this evidence. The overall impact on the retail business could also depend on the location of the store, the structure of the scheme and the ratio of car borne customers. However, we have found little or no firm proof that supports the overall theory that congestion charge has a negative impact on retail business.

6.5. Recommendation for future research

There are several aspects of the association between the congestion charge and the retail performance. Based on our findings and reasoning in the previous section two specific questions comes to mind. Firstly it would be interesting to further investigate the association of consumer behavior and the level of acceptance, as our results indicated that people with a low acceptance might have a tendency to exaggerate the actual impact the congestion charge have on their behavior. With further insight to this issue it would increase the knowledge of the responsible factors underlying the possible downturn in retail performance caused by the congestion charge. Secondly, it would be exciting to further investigate the association between selling bulky items and performance, as both our study and Quddus et al. (2005) study indicated that such a relationship might exist as the retail stores that mainly sell bulky goods generally have more car borne customers, thus are more likely to experience a downturn in performance.

6.6. Limitations of the study

There is always room for improvements in a study and alternative ways of pursuing the purpose. We have chosen to conduct our study based on our reasoning in the method and chosen our use of theories according to relevance and credibility. In the questionnaire survey we did not have a strictly random sample. The sample was systematic in the way that we selected every 5th subject that passed through the entrance of IKEA during the data collection days. We conducted the data collection weekdays as well as during the weekend and noted all people that did not want to participate. We had a reasonably high response rate (75%) and there were not great differences in response rates between age and gender groups. There was essentially no other way that we could obtain this sample and we believe that it is representative for customers visiting the Bäckebol IKEA department store and probably the Bäckebol mall in general. This is further strengthened by the close correspondence in results with the previous similar survey from Persson and Wallenhem (2012). The questionnaire for the survey was deliberately made short so that people could respond in less than ten minutes. This of course limited the possible scope of the questionnaire to a very basic collection of items. We tried to cover the areas of acceptance, behavioral change and demography in this way. In addition we replicated questions from the 2012 survey in order to make direct before and after comparisons. Furthermore, it would have been interesting to have two samples including one from Innerstaden, as it would allow further comparing and more insight to the association found in place of residence and behavior and acceptance. It would also have been interesting if we had more questions to compare to the study from the previous year; however, the formulation of the questions from last year made it difficult to do this accurately and was therefore excluded. Another limitation is the fact that we could not receive any statistical evidence of a downturn in sales or profit from any of our sources, which only allow for assumptions regarding the impact of retail performance and reduce the credibility of the arguments. The selections of subjects for the interviews were done in order to get the views of strategically positioned managers in Bäckebol center and inside the city center. These should not be regarded as representative of other people but rather as 'experts' to add to the questionnaire survey. Nevertheless, it should also be added that the qualitative data retrieved

from the interviews, were from people in commerce who might have a degree of bias as they have an interest in the matter.

6.7. Conclusion

The general aim of this study was to investigate attitudes and consumer behavior related to the recently introduced congestion charge in Gothenburg and to illustrate the possible impact the congestion charge may have had on retail business performance in Gothenburg. We can conclude that there is evidence suggesting that a change in behavior has occurred due to the congestion charge both at Bäckebol and at Innerstaden, particularly with regard to time of visit. It was reported in interviews of key business retail managers, both regarding Innerstaden and IKEA´s that a change in customer flow has occurred with a clear difference from the previous year.

According to Patrik Wigren, IKEA also has had a downturn in visits during the congestion charge active hours. Moreover, a noticeable proportion of the respondents argued that the congestion charge affected their behavior with regard to choice of mall, frequency of visits and means of transportation. However, the results in the questionnaire indicated that people reporting a change in behavior also often had a negative attitude. Compared to a previous survey performed before the introduction of the congestion charge we did not find an indication of behavioral change. It is possible that they have had a tendency to exaggerate the degree of their behavioral change.

More evident was the low level of acceptance as a large proportion of customer disapproved of the congestion charge and this was mainly associated to the perceived need of congestion charge, scheme structure and support of tax purpose. Since consumer behaviors appear to be strongly related to the public acceptance it is likely that there has also been a change in behavior although this is difficult to firmly prove.

Furthermore, we also found results that supported the theory of a difference in demographic factors with regard to behavioral change and acceptance, where people in the suburb tend to have a lower acceptance level and higher proportion of behavioral change. With regard to the congestion charge impact on retail business we could not obtain any firm proof of an effect on the business performance in spite of requests to those responsible for key retail business management. However, on the other hand this does not provide evidence for the opposite.

We can conclude that regardless of the congestion charge impact on business performance, Gothenburg has a low level of acceptance. This is likely to have impacted on consumer behavior particularly in suburb areas but further evidence of this as well as facts regarding retail business performance and consumer frequencies are needed to finally evaluate the full impact of the congestion charge on consumer behavior and retail business in Gothenburg.

7. Reflections on the writing process

The group of authors for this thesis is Christian Loewe, Erik Hammar and Björn Åberg. We got to know each other during the first week at Jibs and we are in the program, International Management 2010. During the three years we have become friends both within university as well as outside. Since our first year at Jibs we have completed three group works. Already during our second year as well as after we undertook our exchange semesters we decided that we wanted to write this bachelor thesis together as we are used to collaborate and complement each other in a sufficient and efficient way. By so doing we knew already at an initial stage how to divide the workload since all the three of us are well aware of each other's strengths and weaknesses. Hence we divided the work after what was most convenient for each and one of us taking the above factors into consideration and enabled a solid base for collaboration.

As with all other writing project several problems can occur during the process. Initially we decided to write about a topic which is not related to this thesis. After almost two months of writing we realized that each member's knowledge within the field was too diverse i.e. we were not able to match our knowledge in a way that would enable us to finish the thesis. This period of time was exhausting for all of us and we realized we had to change our direction before it was too late. Thus we decided to completely switch topic and find a new problem. After been reading the local newspapers we found a new intriguing subject we wanted to research which consequently lead us to formulate a totally new problem and purpose based on the newly acquired knowledge and information about the implementation of the congestion charge in Gothenburg. This time each and one of us felt we were on the same page both regarding the study as such but also on the skills each one of us could contribute with. Even though we knew we had a very limited amount of time this gave us new energy and made us work very hard on getting the research done. In the aftermath of all the writing, and even though it takes huge amount of time to change and process a new research in the middle of the semester, we found this to be a very good solution as we felt that the new study was more solid than the old one.

For our first topic we decided that a quantitative method in terms of interviews would be most convenient. However all of us were initially interested in doing a quantitative research. We had heard before that the gathering of data and then statistically process it would be difficult thus we were initially a bit concerned whether we would be able to successfully carry out a research based on such a method. When we changed topic we realized that a quantitative method would best suit our purpose so we took the opportunity to utilize this method. The problems we faced by using questionnaires was that it is very time consuming to carry out such a survey. We underestimated the time it would take to formulate a proper questionnaire, collect the data and then process it. Ever since we changed topic we already knew our time was scarce and we had very tight deadlines. Nevertheless we managed to get the questionnaire done in time by devoting a whole week for data collection and during the same time make sure to code the data retrieved after each finished day of collection. In this way we utilized our time better instead of focusing on less important parts of our thesis that still could be time-consuming in the light of our deadlines.

Another problem we initially had before we changed research topic was to structure our time and set deadlines. We did not follow any schedule and deadlines none existed. By changing topic while having a very limited amount of time to finish the study we decided this time to structure our working process in a more efficient way with clear deadlines each day in order to utilize our time better while focusing on the most essential parts of the study first. Thus we put less emphasis on parts that could be finished later and focused instead on our method for fulfilling our purpose. Hence data gathering and then the processing of that data which gave us results that we then could match to our theory made it easier to structure our work rather than being guided by our theory.

After have been looking into many previous thesis completed at Jibs it came to our mind that most of them are using qualitative method in forms of interviews. The reason for this we believe is because many students tend to think that quantitative data in combination with statistical analyzing tools and programs are complicated to use. There are very good guides on the internet teaching how to use these statistical software's. We found them very useful and we would recommend future thesis writers at Jibs to use quantitative research methods to an even greater extent.

We would also like to recommend future thesis writers to look for and assess real world phenomena's surrounding us and the society. By so doing we think it can be a good way of finding a base for a research study and formulating a problem. We tended to be more guided by theory when writing on our first topic something we found confusing. When we decided to change we wanted to find an up to date real world problem that occurred in our society. After finding it we found it easier to formulate a purpose then we did before.

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Appendices

1. Appendix

Interview questions

Marianne Sörling 2013-04-12

The reportage from TV4 indicated a change in consumer behavior post the introduction of the congestion charge, which changes are the most prevalent? Are these mainly positive or negative for your commerce?

The reportage also stated that there is an increased flow of customer visits during the weekends; do you think these are the same customers who changed their time of shopping or new customers who changed place of shopping?

Why do you think the customers respond/act in this way?

How does this affect the overall commerce in Innerstaden?

Has the commerce been forced to make any changes with regard to opening hours or staff due to this change in behavior? If yes. Does this affect the general costs?

Would you say that there is any specific branch that is more affected than others? Why is this? Why not?

Can you be certain that these behavioral changes are related to the congestion charge? Why?

Several retail stores in Bäckebol have reported in the media a far more sever situation compared to your statement in the reportage in TV4 of Innerstaden, why do you think there is a difference in your situation?

Previous studies from London and Stockholm indicate that the behavior have a tendency to go back to "normal" after a few months' time, do you think that will happen in Gothenburg as well? Why/Why not?

Patrik Wigren 2013-04-18

The media in Gothenburg have indicated a change in consumer behavior post the introduction of the congestion charge, if any, which changes are the most prevalent? If so, can they solely be related to the congestion charge? Are these mainly positive or negative for your commerce?

Have you been able to identify a clear change or deviation in trend in terms of number of customers, sales and turnover post implementation of CC and that is only related to the CC?

Have customers shopping behavior changed since the implementation of the CC?

If so, why do you think the customers respond/act in this way?

How does this affect the overall commerce at IKEA?

Have you made any changes with regard to staff or other adjustments due to a change in behavior? If yes. Does this affect the general costs and profit?

Can you be certain that changes in behavior are related to the congestion charge? Why?

Several retail stores in Bäckebol have reported in the media a far more sever situation than others, why do you think the impact differs among stores?

Previous studies from London and Stockholm indicate that the behavior have a tendency to go back to "normal" after a few months' time, do you think that will happen in Gothenburg as well? Why/Why not ?

2. Appendix

Questionnaire questions

JÖNKÖPING INTERNATIONAL
BUSINESS SCHOOL
JÖNKÖPING UNIVERSITY

Hej!

Denna enkät är en del i en studie vid Jönköpings Internationella Handelshögskola som undersöker trängselskattens påverkan på företag. Deltagandet i undersökningen är helt anonym och genomförandet av enkäten uppskattas ta ca 5 min.

Tack för din medverkan!

Kön

☐ Man ☐ Kvinna

Ålder

☐ 18-29 ☐ 30-45 ☐ 46-65 ☐ 65+

Bosatt i:

☐ Centrala Göteborg ☐ Förort Göteborg ☐ Annan ort

Ungefärlig månadsinkomst innan skatt?

☐ 11 000 eller mindre ☐ 11 000 – 25 000 ☐ 26 000 – 39 000 ☐ 40 000 eller mer

Utbildning

☐ Grundskola ☐ Gymnasium ☐ Högre utbildning

Är ert besök idag…..

☐ Planerat ☐ Spontant

Hur kom du hit idag?

- ☐ Bil
- ☐ Taxi
- ☐ Kollektivt
- ☐ Till fots
- ☐ Cykel
- ☐ Annat sätt

Känner du till att trängselskatt infördes i Göteborg den 1 Januari 2013?

- ☐ JA
- ☐ NEJ

Vet du hur stor trängselskatten är en vardag respektive heldag?

- ☐ JA
- ☐ NEJ

Påverkar trängselskatten och dess storlek hur ofta du åker hit?

- ☐ JA
- ☐ NEJ

Påverkar trängselskatten vilken tid du väljer att besöka varuhuset?

- ☐ JA
- ☐ NEJ

Påverkar trängselskatten ditt val av köpcentrum?

- ☐ JA
- ☐ NEJ

Påverkar trängselskatten ditt val av transportmedel till varuhuset?

- ☐ JA
- ☐ NEJ

Är online tjänster och hemstransport av ett större intresse sedan trängselskatten infördes?

- ☐ JA
- ☐ NEJ

Känner du till att Ikea erbjuder hemtransport som en tilläggstjänst?

- ☐ JA
- ☐ NEJ

(Om Ja) Hur mycket är du villig att betala för hemtransport om behov uppstår (max tre vagnar)?

- ☐ 150-250
- ☐ 250-350
- ☐ 350-450
- ☐ 450-550
- ☐ 550-650

Anser du att trängelskatten i Göteborg är mestadels positiv eller negativ?

☐ POSITIV ☐ NEGATIV ☐ INGEN ÅSIKT

 Tycker du att Göteborg är i behov av trängselskatt?

☐ JA ☐ NEJ

Har du upplevt några förbättringar efter trängselskatten infördes?

☐ JA ☐ NEJ ☐ OSÄKER/VET EJ

Vet du hur vägtullarna är placerade?

☐ JA ☐ NEJ

(Om JA på föregående fråga) Tycker du generellt att placeringen är bra?

☐ JA ☐ NEJ

Anser du att du fick tillräckligt med information om hur trängselskatten fungerar och dess ändamål innan införandet?

☐ JA ☐ NEJ

Vet du vart skattepengarna från trängselskatten går till?

☐ JA ☐ NEJ

(Om JA) Stödjer du dess ändamål?

☐ JA ☐ NEJ

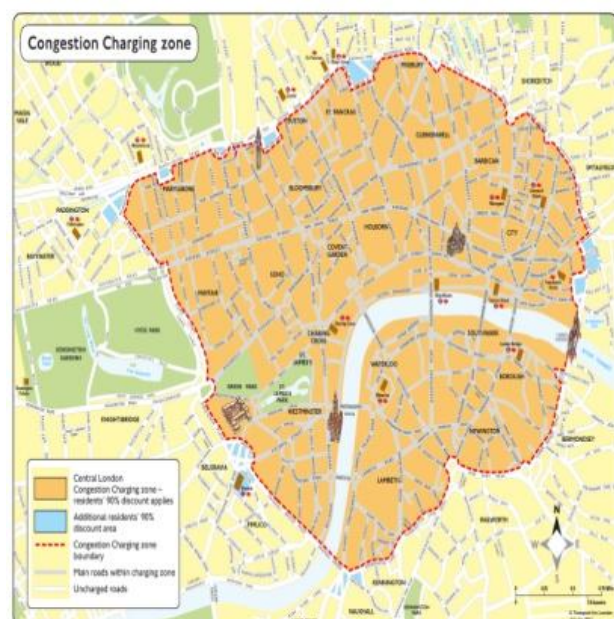### 3. Appendix

Control perimeter placements:

The three figures below illustrate the placements of the control perimeters in Gothenburg, Stockholm and London. There is a clear difference in the positioning as Stockholm and London have a circle around the central city where as Gothenburg also include to involve areas outside the inner city.
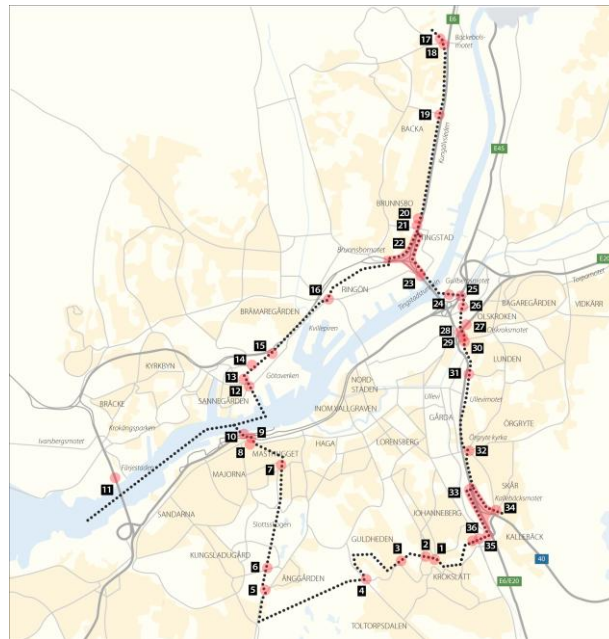
Control points Gothenburg

Control points Stockholm

Control points London