

# **How Does the Traffic Behavior of Company Vehicles' Drivers Affect Corporate Reputation and Consumers' Purchasing Behavior in Finland?**

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Abstract  <p>The object of this study was to determine, how does traffic behavior of company vehicle drivers affect corporate reputation and consumers purchasing behavior in Finland. Numerous studies about traffic behavior can be found in psychology, but they are rarely associated with business research. This is a pioneering attempt to study the impact of traffic behavior on purchasing behavior.</p> <p>The study was conducted as a part of Liikenneturva Traffic Atmosphere internet panel survey in November-December 2013. The quantitative survey was conducted by TNS Gallup Ltd. The survey produced 1677 validated answers from respondents over 15 years of age, who speak Finnish and live in Finland.</p> <p>Over 90 % of the survey respondents answered, that a company vehicle driver's traffic behavior affects corporate reputation. Traffic behavior had the biggest impact on women and people over 50 years of age. Bad traffic behavior affects corporate reputation more than good traffic behavior. Up to 30 % of the respondents had boycotted or considered boycotting a company because of traffic behavior of company vehicle drivers. The most common respondent to boycott was a man and the most common age group to boycott was 34-49 years of age. When traffic safety is considered, the most dangerous traffic behavior does not correlate directly to the change in corporate reputation and purchasing behavior. Parking in the wrong place, outrageous overtaking and driving through a red light are experienced more negatively than speeding.</p> <p>The results implicate that companies should invest in responsible traffic behavior to improve reputation. Business relevant topics for further research could be development of driver training and how the drivers associate themselves with the company's reputation.</p>		
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<p>Tiivistelmä</p> <p>Tutkimuksen tavoitteena oli selvittää, miten paljon yrityksen ajoneuvojen kuljettajien liikennekäyttäytyminen vaikuttaa yrityksen maineeseen ja kuinka suuri merkitys yrityksen ajoneuvojen kuljettajien liikennekäyttäytymisellä on asiakkaan ostokäyttäytymiseen. Liikennekäyttäytymisestä on löytynyt paljon psykologian tutkimusta, mutta sitä on harvoin yhdistetty kauppatieteelliseen tutkimukseen. Aiempaa tutkimusta liikennekäyttäytymisen vaikutuksesta ostokäyttäytymiseen tutkija ei löytänyt.</p> <p>Tutkimusmenetelmänä käytettiin kyselyä ja tutkimus toteutettiin osana Liikenneturvan Liikenteen ilmapiiri internetpaneelia marras-joulukuussa 2013. Kyselyn toteutti TNS Gallup Oy. Kvantitatiivinen tutkimusmenetelmä tuotti 1677 validoitua vastausta yli 15-vuotiailta suomea puhuvilta suomalaisilta.</p> <p>Yli 90 % vastaajista kertoi yrityksen ajoneuvojen kuljettajien liikennekäyttäytymisen vaikuttavan yrityksen maineeseen. Eniten se vaikutti naisiin ja yli 50- vuotiaisiin. Huono liikennekäyttäytyminen vaikutti enemmän yrityksen maineeseen kuin hyvä. Jopa 30 % vastaajista on boikotoinut tai harkinnut boikotoivansa yritystä tämän ajoneuvon kuljettajan liikennekäyttäytymisen vuoksi. Yleisin boikotoija tai boikotoimista harkinnut oli mies ja yleisintä boikotointi oli ikäryhmässä 34-49. Liikenteessä vaarallisin käytös ei korreloinut suoraan yrityksen maineen muutokseen eikä ostokäyttäytymiseen. Ylinopeus koettiin vähemmän merkitykselliseksi kuin väärin pysäköiminen, röyhkeä ohittaminen tai punaisia päin ajaminen.</p> <p>Maineenhallinnassa yrityksen kannattaa ottaa huomioon vastuullinen liikennekäyttäytyminen. Yritysten kannalta merkityksellisiä jatkotutkimusaiheita ovat kuljettajakoulutuksen kehittäminen ja kuinka kuljettajat yhdistävät itsensä yrityksen maineeseen.</p>		
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# 1 Introduction

“A driver of a courier company drove like a maniac; we didn’t use that company anymore.” – Man, 46 years

The purpose of this research is to find out whether the traffic behavior of company vehicle drivers affects the reputation of a company, whether the effect is positive or negative, and whether the traffic behavior has an impact on customer purchasing behavior. A company vehicle does not behave in traffic. Instead, it is always the driver whose traffic behavior affects company reputation. The consumer might not always distinguish the driver from the company but in this thesis, the traffic behavior of a company vehicle includes the driver.

Education materials for professional driving often state that traffic and the traffic behavior of company vehicle drivers are important aspects of company reputation but there is little research available on this matter. A common assumption in marketing theory is that everything related to a company influence on the company’s reputation and, respectively sales. On one hand, traffic is such an everyday matter that perhaps it does not have any impact on consumers’ buying behavior. On the other hand, traffic behavior also causes powerful feelings and could therefore perhaps even be a crucial factor in consumer purchasing behavior. If a company is able to gain cost savings and improve their reputation through an effective operational model with guidelines for how to behave in traffic, it could be a powerful competitive advantage and thus worth researching. An important view is to find out whether poor traffic behavior has caused any boycotting against a company or a product.

Compliance with the rules of the road and anticipatory driving does not lead to any extra costs for companies. The general aim for transportation is a quick delivery and avoiding delays at all costs. This often results in speeding, but in reality the time savings are insignificant. Instead, good traffic behavior brings savings as fuel costs, reduces the size of the carbon footprint, and reduces the abrasion of both equipment and roads. Companies may improve their drivers’ traffic behavior with

contracts, provisions, education or – ultimately – with technology that either monitors or constrains a driver. In addition, companies can demand irreproachable traffic behavior from their partners in a value chain cooperation. This works much in the same way as when companies demand quality certificates in the different stages of procurement.

Social media, accompanied with fast communication, uncontrollable distribution of information, and environmental consciousness, brings a new challenge to companies. Terms such as society and social responsibility are expressed more and more when speaking about companies and seeking new competitive advantage. This research seeks to find out if investments in traffic behavior may have more advantages than mere savings through lower fuel costs, lesser abrasion of vehicles and a reduced number of accidents.

## 1.1 Traffic and Challenges

Finland is a big country where distances are long and the Finnish society requires cars and road traffic to work efficiently. Without transportation companies there would be nothing to sell in the shops and no public traffic. The need to move between places also concerns companies that produce services, such as plumbing, cleaning, sales, etc. Even if the products and services are bought from the Internet, transportation companies deliver them to customers. Traffic is, one way or another, involved in the operations of each and every company. Economic life considers road transportation as the most important way of transportation. For example, in 2014 in Finland trucks carry roughly 274 million tons yearly. In comparison, railways carry 37 million tons and waterborne traffic 5.5 million tons. (Tavaraliikenne – Liikennevirasto [Freight traffic – Liikennevirasto] 2016.)

The Finnish Government has approved a traffic safety vision called Vision Zero in 2001 (Löytty 2014). The Vision Zero means that nobody should die or be seriously injured in the traffic while complying with the traffic rules (Klang 2012, 6-7). Although traffic safety has improved, Finland has been left behind from other European countries in attempt to reduce road casualties and serious injuries (Löytty 2014). At



the same time, Finland has set a goal to reduce emissions in road traffic (Liikenteen päästöt ilmaan [Traffic emissions to the air] 2014).

In spite of positive traffic safety development, according to Statistics Finland there were 5 324 road accidents in Finland in 2014, which lead to personal injuries. The number of road casualties was 229 and 6 705 people were injured, of which seriously injured were 519. (Tilastokeskus - Tieliikenneonnettomuustilasto 2014 [Statistics Finland – Road traffic accident statistics 2014] 2015.) On average 94 people have lost their lives in traffic accidents that involve heavy goods vehicles, which is third of all the road casualties in Finland each year. In comparison, heavy goods vehicles induce on average 722 injuries through traffic accidents, which comprises around 10 % of the total number of the road traffic injuries each year in Finland. The number of road casualties in accidents including heavy goods vehicles has not reduced in the same rate as in other types of traffic accidents. The single most common risk concerning heavy goods vehicles is speeding. It increases the probability of an accident and worsens the consequences. Professional traffic is involved in one third of serious traffic accidents in Finland. Each year two hundred trucks swerve off the road, causing danger to other road users and the environment. (Trafi 2014, 15, 18.)

The majority of road traffic accidents are due to a human error and the biggest variable in traffic are human capacity and behavior. Human errors on current road environment can cause serious accidents that are against the Vision Zero. Some road users are risk-takers or thoughtless drivers and this may lead to accidents. The significance of the traffic behavior is emphasized on current roads with deteriorating conditions and with the current economic situation that is unable to allocate funds to improve traffic environment. (Trafi 2015.) The lack of adequate police resources on traffic monitoring and nonexistent danger of getting punished for reckless driving can lead to unnecessary risk taking in the traffic (Autoliiton liittokokouskannanotto: Liikkuvaa poliisia ei saa lakkauttaa [Comment of Autoliitto traffic union: Traffic police is not to be discontinued] 2012).

There is an international ISO 39001:2012 Road Traffic Safety (RTS) Management Systems. The RTS management systems enable an organization that interacts with

the road traffic system to reduce deaths and serious injuries related to road traffic crashes. (International Organization for Standardization 2012.) In Finland, this standard is not widely used. VTT Technical Research Centre of Finland Ltd studied the draft of standard in 2012 and underlined in its conclusions that the commitment of company management is especially important for the successful implementation of the standard. After all, the ISO standards are specifically aimed for management systems. (Luomala & Silla 2012, 32.) After teething troubles, the ISO 39001 standard has been a positive experience in Sweden (Gabrielsson & Nilsson 2015). In 2013 in Finland, the Finnish Transport Safety Agency, Trafi ordered the Transport Research Centre Verne (part of Tampere University of Technology) to develop standards for responsible transportation of goods. A model of the standard was completed in 2015. (Nykänen & Karhula 2015.) So, if a company wishes to improve traffic safety, they can choose between an internationally standardized system or an independent Finnish system which is customized for Finnish conditions. A company can improve traffic safety without standards, but they help to do safety work more systematically. A responsible transportation may not be more expensive but even more cost efficient to the service provider.

A company, that uses well maintained equipment, abides by speed limits and practices anticipatory and flexible traffic behavior, stands out positively and its reliability improves. Factories, such as Valtra in Suolahti (Finland), do not stock all the required components for assembly, but instead they trust that their transport company can supply 5-7 truckloads of components each day accurately in production lead time in order to keep the production running. (Pentti 2011.) Without reliable logistics this is not possible.

The challenge is to get companies to understand the realities of traffic and to improve their current practices concerning traffic. According to the Vision Zero it is not acceptable that a company driver has to speed in order to manage with driving schedules that are too tight. The companies should also have the courage to interfere, if their drivers' are speeding. This is easy with currently used tachographs that have been used for a long time. Modern technologies allow real-time monitoring with GPS for the company.

## 1.2 Research Motivation

Competition for customers tightens both nationally and internationally. Price and ethical values are ever more important for customers when they make their purchasing decisions. Economical and reliable transportation is a competitive advantage for a company. There is nothing to be done for long distances in Finland, but there is much to be done for safety and costs of transportation. A customer who is disappointed in the traffic behavior of a company vehicle driver may order his or her products and services from a competitor. Purchasing from another company requires also transportation and the customer is left to riddle with yet another company's traffic behavior.

At the moment ecology by itself is a weak asset in Finland. For example, less than 9 % of Finns choose fair trade bananas over regular ones (Reilukauppa / Medialle / Uutiset [Fairtrade / To media / News] 2015). The same trend may be seen in purchasing decisions of luxury products – ecology is not yet a crucial factor in a product feature even though it is a globally arising trend (Nyrhinen, Wilska, & Leppälä 2011, 55). Improving the reputation of a company by enhancing traffic behavior will result in less road casualties and less serious injuries. It seems that some companies do not see it worth their while to reduce costs by changing the traffic behavior. Perhaps an observation of reduced income would awaken them to put more effort in the traffic behavior and the traffic strategy.

Different national and EU wide instances have valued a traffic accidents' cost per occurrence. These values may vary due to regional differences. For example, one traffic death costs in average 1.74 million euros in the EU (Valtiontalouden tarkastusvirasto 2013, 33) and about 2 million euros in Finland (Liikenne- ja viestintäministeriö 2012, 28). Reducing the number of traffic accidents has a major financial benefit for the society. Liikenneturva (Finnish Road Safety Council) has an interest in this matter because traffic accident prevention is the foremost purpose of the organization.

From a marketing point of view, an advertisement placed in a vehicle is a risk. The reputation of a company may be at stake if the vehicle operators do not comply with

good traffic culture. This research aims to find out how much competitive advantage can be achieved through the positive traffic behavior of the company vehicle drivers and how many customers you may lose if matters are not handled properly. Perhaps it could be possible to create a model for "responsible transportation", which would signal to the customer that the traffic safety matters have been taken into account and the drivers in this company are committed to abide by the rules for safety and the environment.

### 1.3 Research Questions

Traffic behavior is a complex concept and everybody has their own understanding when transportation meets their standards and norms. Traffic is such a favorite topic that people are sending letters to newspapers and calling to radio shows to tell about their observations in traffic. Several radio channels monitor traffic on the regional or national level daily. We all have our own opinion about well-functioning traffic.

This research does not take a stand on whether consumers know what kind of traffic behavior is dangerous or un-ecological. Instead, it focuses on how consumers experience the traffic behavior of company vehicle drivers and how the traffic behavior of company vehicle drivers affects the company reputation and consumer purchasing behavior.

The research question is: How does the traffic behavior of company vehicles' drivers affect corporate reputation and consumers' purchasing behavior in Finland? This research also aims to find out if a possible change in a company's reputation is consistent when compared to the dangerousness or ecology of traffic behavior. This is a pioneering attempt to study the impact of traffic behavior on purchasing behavior.

## 1.4 The Structure of the Thesis

After the introduction to the research in Chapter 1, the thesis continues with a literature review in Chapter 2. The literature review starts with the definitions of the relevant key concepts and proceeds with presenting hypothesis and theories related to traffic behavior and purchasing behavior through different perspectives based on the current literature. Chapter 3 is about the research methodology. The section includes descriptions of the research philosophy, research approach, and an explanation of how the empirical data for the research was collected and analyzed. The research methodology defines the context for the research, which was assigned by Liikenneturva as a web survey with approximately 1600 respondents. The verification of the findings is also described. Chapter 4 is a presentation of the results of the web survey. And, Chapter 5 includes a discussion about the findings of the research together with the practical implications, limitations of the research and future research avenues.

## 2 Literature Review

### 2.1 Key Concepts

The key concepts for this research are purchasing behavior, corporate reputation, boycotting, the Vision Zero and traffic behavior. The key concepts are defined in the following sections.

#### 2.1.1 Purchasing Behavior

Consumer behavior and purchasing behavior have been studied widely. Consumer behavior is affected by all the thoughts and feelings that a consumer experiences during the consuming process, including the environmental factors. Although the process is simple, it is affected by countless number of variables.

Purchasing process can be described with a five-step simplified model:

1. **Recognition of a need or a problem** is the first step. It can be a long, unconscious process that is realized by an impulse or a stimulus. It can also be a short, impulsive process that leads quickly to purchasing decision. Mental images can be affected with marketing and marketing can even develop new needs.
2. **Information gathering** follows after recognition of the need. It can be passive or active in nature. Passive information gathering can be influenced with marketing. In active information gathering the consumer aims to find knowledge from information sources that are available for him or her.
3. **Evaluation of choices** is a phase where there are several influencing factors and the personality and values of a consumer are emphasized. Evaluation fundamentals include product features and price, but also location and brand.
4. **Decision** follows after eliminating options. Decision is made when suitable criteria is fulfilled.
5. **Assessment after purchase** begins after the purchase has been made. The consumer ponders, how sensible the purchase was and reflects whether the evaluations were correct and if the acquisition fulfilled the original need. This is when customership is continued or discontinued. (Goodman & Helin 2009, 21.)

The five-step process can be cut off at any point. Sometimes there are too many choices, the choices are not suitable or they are not pleasing. Sometimes the process may proceed up to the decision phase, but availability or financial state can prevent the purchase.

In consumer trade, the third step - evaluation of choices - is influenced by the corporate reputation, the image of company and the traffic behavior of company vehicle drivers. An experience, a story from a friend or information from media may either increase or decrease the possibility of a choice. The fourth step – decision – is where the customer finally makes the buying or purchasing decision. Rational reasoning but often feelings as well, can affect the decision.

The acquisition process of B2B customer is much the same, but different stages can involve more persons and the processes may include tools that are more precisely defined (Puusa et al. 2012, 145).

This research aims to find out if the company vehicle drivers' traffic behavior affects the purchasing process. The traffic behavior of company vehicle drivers may influence on the process during the acquisition of information and evaluation of options. A direct influence may be achieved through the traffic behavior, if the price of the product is increased due to transportation costs and the purchase process is cut off because of too high price (Phillips, Rasberry, & Caputo 2008, 68).

### 2.1.2 Corporate Reputation (Image of Company)

Terms like reputation and image are often confused. Image has many related concepts and they are often used without wondering about their meaning. Reputation has been used as a synonym to image. Other concepts such as identity, prestige, authority, and status are sometimes added to reputation. (Roper & Fill 2012, 115.) When we talk about perceptions of the company we use similar terms like identity, image, reputation, corporate image, profile and brand. Common attributes for those are immateriality of the phenomenon, difficult measurability and difficult concepts.

Table 1. The conceptual differences can be illustrated by the following questions (Brown et al. 2006, 100)

<b>Identity</b>	<b>Who are we as an organization?</b>
<b>Intended image</b>	What does the organization want others to think about the organization?
<b>Construed image</b>	What does the organization believe others think of the organization?
<b>Reputation</b>	What do stakeholders actually think of the organization?

The image can be described as an overall impression, formed in peoples' minds, which is primarily affected by the formation of different communicative elements. It represents the views of external stakeholders of the company, and may arise or change rapidly. Reputation describes the overall assessment, which is based largely on the company's actions and activities. It combines internal and external stakeholders' estimates of the company. Reputation is created on a slower pace and it is more stable than image. (Puusa et al. 2012, 190-194.)

Table 2. Factors of reputation and image

(Tuominen 2011, 57)

	<b>IMAGE</b>	<b>REPUTATION</b>
Definition	overall impression	overall rating
The primary contributor	communication	actions and activities
The substantive aspects of	cognitive and emotional	the performance of all business sectors
Stakeholders	external	internal and external
Is created	rapidly	slowly
Stability	variable	stable

“Corporate reputation comprises social image, financial image, product image and recruiting image” (Roper & Fill 2012, 5).

Especially for a services company, the corporate reputation is an important factor. The overall reputation of the service has to be positive. Good reputation creates a competitive advantage, which should be protected. Restoring the reputation is much more difficult than building or maintaining one. (ibid., 9.)



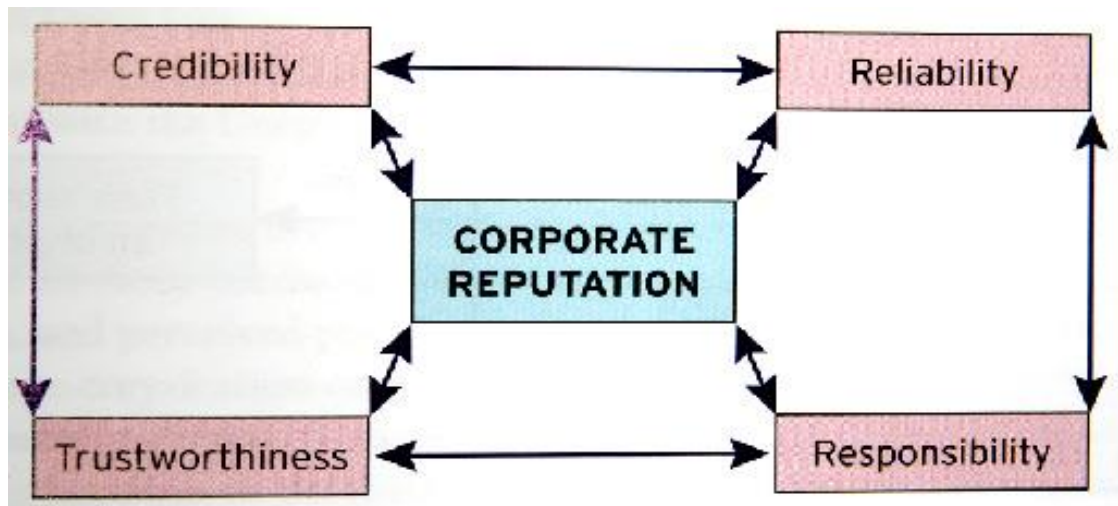


Figure 1. What makes a good reputation

(ibid., 7)

In this research survey, the term image was used and the consumers were asked: Does company image change by different traffic behavior of company vehicle drivers? In Finnish language company image (yrityskuva) is also understood as reputation, but in theory image and reputation are different matters (Aula & Mantere 2006, 39).

### 2.1.3 Boycotting

In his study of 1986 Friedman defined a consumer boycott as:

“An attempt by one or more parties to achieve certain objectives by urging individual consumers to refrain from making selected purchases in the marketplace” (Friedman 1999, 5).

We can look at boycott as an individual or a group exerting influence, where the number of participants increase the impact of an act. It is the ultimate way for consumers to influence the action and behavior of a company. Characteristically, it is a usual punishment and boycott is referred as a “weapon of the weak.” Boycott

intentions have been many such as the lowering of prices, political changes, the fight against illegal activities and, recently, negative corporate social responsibility. History has shown many cases where the power of boycott has caused a significant change. Business leaders consider boycott to be the most effective means to influence an organization. (ibid., 3.)

#### 2.1.4 The Vision Zero

The Vision Zero is a safety vision. According to this safety vision no one should die or be seriously injured in traffic. The traffic environment should be so safe that a human error does not cause such an accident where the driver or other road users die or get serious injuries. Compliance with the traffic rules and anticipatory traffic behavior reduces the risk to get involved in an accident. Safety devices and their proper use reduces the number of accidents or the consequences from accidents. (Liikenne- ja viestintäministeriö, Tiehallinto, Liikenneturva 2005.)



Figure 2. Components and variables of the Vision zero and their relations.

Info graphics for Talvitiepäivät, Jyväskylä, Tomi Rossi 2013. (Roine & Luoma 2009.)

There are three things, which all are required to achieve the Vision Zero:

1. Road users comply with the traffic rules and use safety devices.
2. Road environment prevents serious accidents from happening.
3. Vehicle safety features prevent accidents and protect road users.

The Vision Zero thinking has started well in the industry. The Occupational Safety Card is based on the idea of zero accidents in the workplace and it has been used since year 2001. Everyone working in a common workplace, has to attend to safety education and pass a test. Aviation, shipping and rail are the modes of transport that are already striving to reach vision zero goals. This is not the case in road traffic yet. Compulsory further education for professional drivers was supposed to contribute to improving the shortage, but the benefits are not yet evident. (Laapotti & Peräaho 2011, 1.)

#### 2.1.5 Traffic Behavior

Traffic behavior is guided by the norms of society, legislation, environment, goals of driving and living, individual skills, the situation in traffic and the ability to control a vehicle. Personality, lifestyle and motives are important factors behind traffic behavior. Everyone in traffic is able to contribute to the safety of road traffic. (Ahlrot & Pöllänen 2011.)

“Reaching a destination is usually the main goal of driving. In the decision-making process to achieve this goal, feedback is usually self-evident as the driver navigates towards and approaches her or his destination.” (Fuller 2004, 461.)

“Traffic behavior is a social activity. Social skills are a complex set of related factors including values, norms, individual stereotypes and social attributions. In order for the transport system to work, transport stakeholders must be able to predict each other's activities, as well as act predictably by themselves.” (Liikenne- ja viestintäministeriö 2007, 9.)

“Driving task demands are determined by a plethora of interacting elements. There are environmental factors such as visibility, road alignment, road marking, road signs and signals, road surfaces and curve radii, camber angles and so on. There are other road users with various properties occupying or with the potential to occupy critical areas in the projected path of the driver. There are the operational features of the vehicle being driven, such as its information display and control characteristics and its capability to provide roadway illumination in dark conditions. And then added to all of this are elements of task demand over which the driver has immediate and direct control, namely the vehicle's trajectory and speed.” (Fuller 2004, 464.)

When talking about traffic behavior, in many cases it means cognitive skills. Some people still assume that, a driver who has a lot of driving experience will manage difficult situations better than a less experienced driver and know how to drive safely on the road. The current study about traffic behavior has shifted to a hierarchical model, where the traffic behavior is also explained through psychological behavior. (Ranney 1993, 735.)

In modern psychology it is typical to observe human activity as a hierarchical system, where the upper levels guide the actions in the lower levels. It is possible to regard driving behavior as such a system. The lowest level in driving behavior consists of technical management skills (direction and speed control). The second level consists

of the mastery of traffic situations. The third level has such components as goals of driving, social situation in the vehicle, traffic environment and mastery of these components. The fourth level consists of matters like skills of living, goals of living and the ability of self-control. The motives for driving and living affect how one behaves in traffic. The lower levels are directly related to the technical implementation of driving and the upper levels to the strategy of driving, in other words the way of driving. (Hatakka 1998.) The latest study by Keskinen (2014) also includes a fifth level on the top, called Social environment. This level is important for setting personal goals as it connects the driver to a social group that they want to identify themselves with. These social groups are important to personal development offering norms and values, giving feedback and affecting behavior.

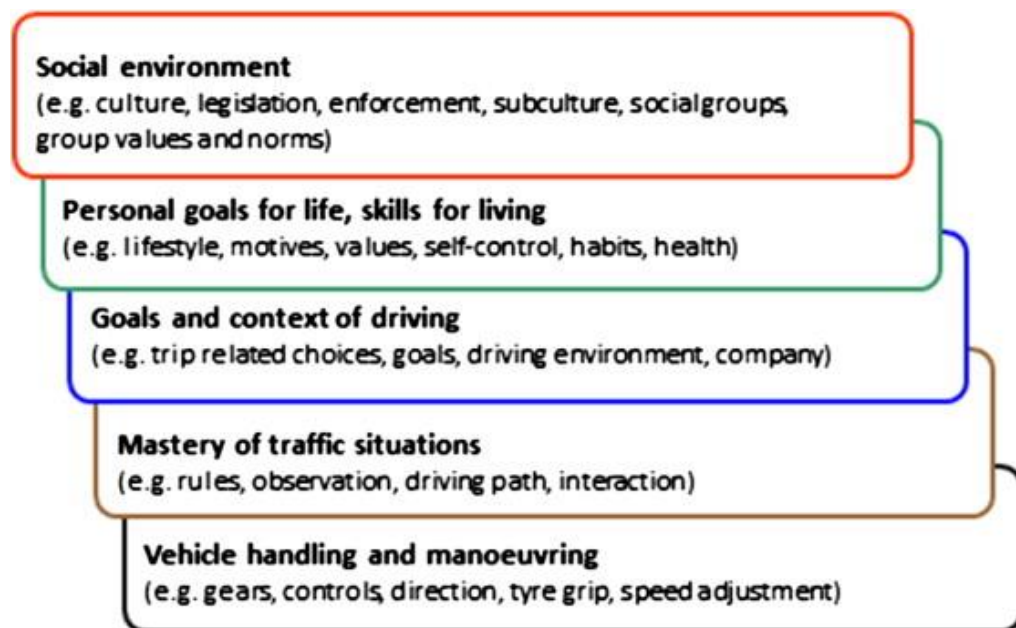


Figure 3. Keskinen's hierarchy system of traffic behavior

(ibid., 2014)

In occupational traffic an employee's traffic behavior means how the company's drivers operate their vehicles and behave in traffic. For example, the European Commission (2015) mentions that it is characteristic of such traffic behavior that

improves safety that “everybody fastens seatbelt, respects speed limits and does not drive under the influence of alcohol.”

In this thesis, traffic behavior means all the consumers’ observations of vehicles recognized as company vehicles on the basis of the company logos or colors on them. The survey did not provide explanations to the used terms for the respondents. Instead, the survey respondents have answered on the basis of their own perception in the context.

## 2.2 The Elements of Corporate Reputation and Traffic Behavior

Reputation is defined in the key concepts. This chapter goes through the elements of reputation on which the traffic behavior may be influenced. Corporation reputation includes two things. It is awareness that the company is known by name, and what products or services it offers. One part of the reputation is the sum of stories which the company tells about itself and the other part is the quality of the company products. The easiest way to gain a good reputation is to make good products or services. Peer testimonials and descriptions of a company and its products and services are shared in public and grapevine is working. All deviant behavior and accidents are reported by news journalism. Continuous good work that has been done for decades rarely exceeds newsworthiness, but violations, irresponsible behavior or failures end up in the headlines and may lead to poor corporate reputation. Just a single unfortunate event can weaken the company's reputation for a long time. (Aula & Mantere 2006, 35.)

Literature has defined criteria that affects the corporate reputation in several ways. Pitkänen (2001, 24) has listed six criteria behind the corporate reputation.

1. Corporate Culture and Management
  - respect
  - trust between managers and employees
  - motivating and rewarding
  - commitment and satisfaction

2. Products and Services
  - delivery and service assurance
  - price and value for money
  - quality
  - benefit
3. The ability to change and the capacity for development
  - development
  - dynamic ability and capacity for change
  - courage
  - vision and strategy
4. Public image
  - awareness of stakeholder groups
  - the presence of the public
  - publicity
  - charismatic leadership
5. Corporate social responsibility (CSR)
  - care for the environment
  - participation in the development of society
  - environmental friendliness
  - ethics
6. The commercial success
  - internationality
  - leadership
  - profitability and competitiveness
  - economic growth

Roper and Fill (2012, 42) has divided the criteria still further and lists ten criteria that affect the company's reputation.

1. Product/service quality (including value)
2. Employee satisfaction
3. Customer satisfaction

4. Customer service
5. Innovation
6. Vision and leadership
7. Corporate social responsibility (CSR)
8. Profitability
9. Market position
10. Comprehensive reputation

All the criteria of reputation are affected directly or indirectly by the traffic behavior of company vehicle drivers. Criteria that directly affect the company reputation are CSR, the importance of employee, profitability and comprehensive reputation.

It may be assumed that good traffic behavior is based on the compliance with the traffic rules. Half of the current traffic fatalities could be avoided if everyone would follow the traffic rules. (Liikenne- ja viestintäministeriö, Tiehallinto, Liikenneturva 2005.) Good interaction between traffic and anticipatory driving will reduce the risk in traffic situations. The Road Traffic Act says:

” 3§ General obligations of a Road User

The road user must follow the traffic rules and moreover as the situation requires, care and caution in order to avoid danger and damage” (Finlex 1981/2005).

Traffic behavior has been studied extensively internationally. Understanding and influencing behavior is a major challenge. At its simplest, Fuller has defined traffic behavior as follows:

“Reaching a destination is usually the main goal of driving. In the decision-making process to achieve this goal, feedback is usually self-evident as the driver navigates towards and approaches her or his



destination. Subsumed under this goal are a variety of secondary goals among which there has been a lasting controversy regarding the role played by risk of collision.” (Fuller 2004, 461.)

This research does not focus on what causes interference into the driving process. It tries to sort out if disorders and risk-taking in traffic affects the company reputation and the customers’ buying and purchasing behavior.

The road environment and vehicle development aim to create an environment where a human error does not lead to anyone’s death or injury. To achieve this objective, compliance with the traffic rules is the first priority. (Liikenne- ja viestintäministeriö, Tiehallinto, Liikenneturva 2005.)

To measure traffic behavior of the Finnish road users some annually conducted monitoring studies are provided by a variety of organizations:

- driving speeds of vehicles (Finnish Transport Agency)
- use of seatbelts by car drivers and front seat passengers (Liikenneturva)
- use of seatbelts by private cars’ backseat passengers (Liikenneturva)
- car drivers’ signaling upon making a turn (Liikenneturva)
- alcohol consumption cases in flow of traffic (National Institute for Health and Welfare, Police)
- use of bicycle helmet (Liikenneturva)
- compliance with traffic lights by pedestrians (Liikenneturva)
- use of reflector by pedestrians (National Institute for Health and Welfare, Liikenneturva)
- compliance with traffic lights by drivers (Liikenneturva)

(Liikenteen seurannat | Liikenneturva [Traffic monitorings | Central Organisation for Traffic Safety in Finland] 2016.)

Liikenneturva has followed the development of traffic atmosphere every year since early 90’s by a survey. In the light of that research, it is possible to find out what kind

of behavior in traffic particularly irritates or scares people. The research also shows the behavioral characteristics that are perceived as positive.

In Liikenneturva's atmosphere measurement the indicators of negative driving behavior are reckless driving, terrifying traffic, impatience in traffic jams, driving close behind a car, and risk taking when passing. Positive findings are asked about respect and flexibility, compliance with the rules of the road, the care of safety and respect for the rights of others. It might be due to the general view that everything was better in the past, but on the basis of this questionnaire the atmosphere in traffic has weakened since 1995. (Liikenneturva 2014.)

There is a gender issue in traffic. The traffic behavior of men and women differ from each other. The accident statistics show, how men are more prone to accidents even though the general stereotype is that women have inferior abilities to drive. Today, 83 % of death crashes in Finland are caused by men. (Liikennevakuutuskeskus 2015, 20.) Young men are at highest risk in traffic. They want to show off to their friends and be brave, but their skills are not developed. (Liikennevakuutuskeskus 2013.)

Characteristics of a rising risk has been observed also in older men. Men are risk-takers, in transport as well as in buying behavior. Their economic position enables them to become a hero or a rebellion. They want to be like James Bond or a man-of-action. (Otnes & Zayer 2012, 401.)

### 2.3 The Company's Personnel Represent the Company

Sometimes a company makes a lot of effort to look good for the investors. When in fact the most important key stakeholders of any company include consumers and the employees. An employee is the most important stakeholder in terms of corporate reputation. The employees that are committed to the company are better for the corporate reputation than the employees that only are rewarded with monetary incentives. (Roper & Fill 2012, 29-31.)

For example, when an organization informs its workers about the safety situation and safety objectives, workers put more emphasis on safety either in a factory or in a joint construction. One way to inform the employees may be a counter telling how many accident-free days the company has achieved. This information may be told on a bulletin board or on an info display. This information tells the employees, that they have succeeded in their work and they can also understand, that the improvement in security will benefit them personally. (Oinonen & Aaltonen 2007.)

The employee's contribution to a company's success is everything. An employee is the face and the business card of a company. Because the company name or logo can be seen on the vehicles, the traffic behavior of company vehicle drivers is noticeable in traffic. The way this vehicle behaves in traffic creates an image of a company and may tell something about the traffic culture that prevails in a company. Each employee affects the image and reputation. Satisfied employees care about the company's reputation, and follow instructions. The management is also part of the personnel and their traffic behavior is also important. The director is the company's face and his behavior is directly connected to image. Well-known prior-person's drunk driving or speeding tickets always creates news headlines. This is partly due to our daily penalty system which can lead to giant fines and partly due to our strong disapproval of drunk driving. Discussions in the social media and the Internet keeps the subject in publicity for a long time. A wrong way to control this publicity is, when an annoyed leader blames poor legislation rather than apologizes his own illegal behavior. The leader as an individual worker has a big impact to the company reputation. (Roper & Fill 2012, 21; Pitkänen 2001, 65.)

Further education of professional drivers is a good policy for companies. Traffic behaviors is a visible action that everybody can see and survey. It also affects traffic safety and is therefore regulated by law and directives. There is the directive 2003/59/EC of the European Parliament and of the Council of 15 July 2003 on the initial qualification and periodic education of drivers of vehicles of carriage of goods or passengers. The paragraph 3.6 of the directive has stated a target for professional drivers that they have to be able to behave in a way that supports the company image:

“Objective: ability to adopt behavior to help enhance the image of the company: behavior of the driver and company image: importance for the company of the standard of service provided by the driver, the roles of the driver, people with whom the driver will be dealing, vehicle maintenance, work organization, commercial and financial effects of a dispute. Licenses C, C+E, C1, C1+E.” (EUR-LEX 2003.)

So a driver should also know the importance of quality in their work and the consequences of any possible conflict in the commercial and economic level (ibid.). In Finland, the law for truck and bus driver’s professional qualifications came into force on 16 March 2007. This law has determined minimum qualification and educational requirements for professional drivers in passenger transport from 10 September 2008 and the transport of goods from 10 September 2009.

Before the Directive 2003/59/EC it was possible to practice as a professional driver if you had a driving license for that kind of vehicle – no other competence was required. Finland ratified this directive with maximum transitional period, which was five years. Today, a professional driver has to acquire further education in order to maintain their professional qualifications. To fill these qualification requirements a driver has to attend to a 35-hour period of accepted education in five years, which is in practice five seven hour days of education. One of these days has to be a course about anticipatory driving. (FINLEX 2007.)

There were 682 options for different courses in the Trafi (Department of Traffic Safety in Finland) database in 2014. Some of these courses featured special training sessions for professional drivers and some were universal courses for all drivers. “Behavior that supports image of the company” was most underlined objective in these courses. This was mentioned in connection with 131 courses. “Work safety and traffic safety, risk identification and anticipation” was mentioned in 305 courses descriptions and educational contents. “The company's brand image, customer

service, quality, orientation tasks " was mentioned in 270 course contents. (Hatakka, Laapotti, & Peräaho 2014, 6-10.)

Companies have the opportunity to use these days of education for their benefit and thus improve their image and enhance their reputation. The courses do not include any exams and they can be carried out only by being present and sitting in the classroom (FINLEX 2007; Trafi.fi – Kuorma- ja linja-auton kuljettajien ammattipätevyys [Trafi.fi – Professional competence of truck drivers and bus drivers] 2016). This education system has been criticized in the field and in an editorial as unnecessary and the whole Directive has been deemed unnecessary (Kärkkäinen 2015). Despite the criticism, the compulsory education system gives a company a good opportunity to invest in high-quality and company- oriented education. The traffic behavior of company vehicle drivers can be improved by choosing suitable courses for drivers, such as economic driving and anticipatory driving. After the education and training the company may encourage the employees to exploit the things they have learnt.

## 2.4 Corporate Social Responsibility (CSR)

Corporate Social Responsibility (CSR) is currently part of the business model. For example, a company makes sure that subcontractors do not use child labor.

Porter and Kramer outline four reasons why companies engage in CSR:

- Moral obligation: companies engage in CSR because they think it is their duty to be a good corporate citizen.
- Sustainability: companies participate in CSR as attempt to ensure that there are sufficient resources and customers in the future to allow the business to continue and prosper. This might be considered enlightened self-interest.
- License to operate: an organization needs to ensure that they fulfil the legal, moral and ethical codes that are necessary to operate in their various marketplaces.

- Reputation: many firms hope to build their reputation capital by engaging in CSR. If the company is portrayed as responsible and ethical, this leads to higher reputation, higher profitability and an increase of the share value. (Porter & Kramer 2006, 81.)

There are four important dimensions included when a company communicates about their CSR. They are moral obligation, sustainability, license to operate, and reputation. In addition, sustainability will be emphasized in the future. Well-being grows and people become too lazy to stress about social responsibility. Social responsibility is outsourced and pleasure is obtained by buying responsible products and services from credible companies. Riding with green values is dangerous if there is no real effort to back this up. The term for this phenomenon is greenwashing. According to an American study, 71 % of consumers boycott a product which is revealed to have undergone greenwashing and 37 % will start to boycott the entire brand. (Solomon 2013, 170.)

Consumers in developed and rich countries are willing to pay extra if they believe in the product and the values of the corporation. Premium products are expected to be manufactured with responsibility to ensure the well-being of the world and to manage environmental issues. Customer practically buy themselves the freedom to be pure in heart. The biggest change in the 21<sup>st</sup> century market behavior is that consumers' choices have increased. Decisions are made more and more with feeling. (Goodman & Helin 2009, 245.)

Foreign literature emphasizes that CSR in companies is important for the image of the company and for the purchasing decisions of consumers. However, the recent Finnish studies have shown that the majority of Finnish consumers do not make purchasing decisions according to ethics. According to professor Wilska, the popularity of the Fairtrade trademark products has increased due to reduced prices, greater products range and change of image over the last few years. Fairtrade prices have approached normal prices, which explains most of the growth. Consumers think that we should use more ethically produced products, but in their own buying

decisions price still plays a major role. It is possible that the perceived higher quality causes people to use more ethical products in the future. Wilska mentions that the biggest reason for people's indifference is the lack of information. Consumers do not know the consequences of their choices. Consumers have confidence in labels and certificates in Finland. (Kallunki 2015.)

The logistics and transport of production is an important part of business of today. Good traffic behavior is a responsible company's way to do business. The driving behavior of company vehicle drivers is part of proactive CSR. Driving speed is one of the first things to attend to on the way to improve corporate social responsibility of transports.

“Of these speed is clearly the most significant factor: it is self-evident that the faster a driver travels, the less time is available to take information in, process it and respond to it. Because the driving task is a self-paced task, driving task demand is in a very real and fundamental way under the control of the driver through speed selection. Importantly, choice of speed, like driver competence, is subject to the influence of human factor variables.” (Fuller 2004, 464.)

If company vehicle drivers are able to save resources when producing transport service, the whole business will benefit becoming more profitable. One common phenomenon in the transport business that causes extra costs and raises the risk of accidents is slightly exceeding the permitted speed limits.

” In our country a driving culture has evolved, where trucks drive on the main road network as fast as the limiter permits (about 88 km/h), almost always when it is possible. People talk about driving against the limiter.” (Lehtonen & Vehmas 2008, 1.)

” In Finland a vehicle-specific speed limit for a truck is 80 km/h. Such a speed limiter has to be installed in a truck (N2, or N3), which will prevent vehicle from driving no more than 90 km/h”. (FINLEX 2002)

A truck or a lorry or a delivery van does not have the same aerodynamic features as a modern passenger car. The aerodynamic drag in trucks increases by the square of the speed. When the driving speed is 80 km/h, the rolling resistance accounts for about 60 % of the total running resistance and the aerodynamic resistance accounts for about 40 %. If the speed increases from 80 km/h to 89 km/h, this demands a power increase as much as 21 % and still the vehicle travels the same distance. (Motiva Oy 2006, 13.) Anticipatory driving and avoiding speed over 80 km/ reduces road traffic accidents by 20 – 40 percent. This kind of eco-driving alone, reduces the need for the maintenance of brakes and tires by five percent. SKAL (Finnish Transport and Logistics association) estimated in their “LITRAPÄIVÄSSÄ”-campaign (a liter a day), that driving as fast as the speed limiter allows, will generate additional cost by increasing the fuel consumption by 13 – 21 percent depending on the vehicle brand. Driving within the speed limit actually means savings of 9750-15750 liters’ fuel per year for a 60-ton truck combination. Saving in time when driving against the speed limiter is negligible compared to the increase of fuel consumption. (Lehtonen & Vehmas 2008.)

By driving against the speed limiter of nearly 90 km/h the driver degrades the stability of the combination by 9-19 % compared to the speed limit of 80 km/h. Speed increases the trailer lateral displacement (Rearward Amplification). When a truck with a trailer is making an avoidance maneuver on the road, for example when trying to avoid a pedestrian or a moose, it generates a significant lateral acceleration to the trailer. When the speed is 90 km/h the lateral acceleration of the trailer’s aftermost axle causes challenges to control the truck even in good driving conditions. There are some differences in the characteristics and loading of the combinations of vehicles. Too fast situation speed causes strong lateral movement of the aftermost axle of the trailer. This leads to overturns of the trailer and drifts into the oncoming



lane. (Kiviniemi 2004; Heikkilä 2010.) Every year more than 200 vehicle combinations overturn on Finnish roads (Trafi 2014, 18).

Accidents raise insurance premiums, move the operating equipment from productive work to a workshop for repair and lead to injuries and sick leaves for the drivers.

Product prices have an impact on the company's image and on the assumed quality of products. More expensive products are perceived as of high quality and consumers make purchase decisions based on that. There is always “a Sweet Spot” for price. Price has to be the right for the image, but not too high for a consumer’s solvency. (Pradeep 2010, 152.)

## 2.5 Reputation Management

The feeling of **security** is an important component of human well-being and to experience it has a great influence on the choices consumers make every day. In 1954, Maslow identified a hierarchy of needs. It illustrates, how fundamental and important the sense of security is to a person. It is also the case, when a consumer forms a mental image of the company and its values and it affects ultimately to the decisions whether or not to purchase a product. People want to survive and travel safely every day and they want the same for their family and friends. (Solomon 2013, 152.)

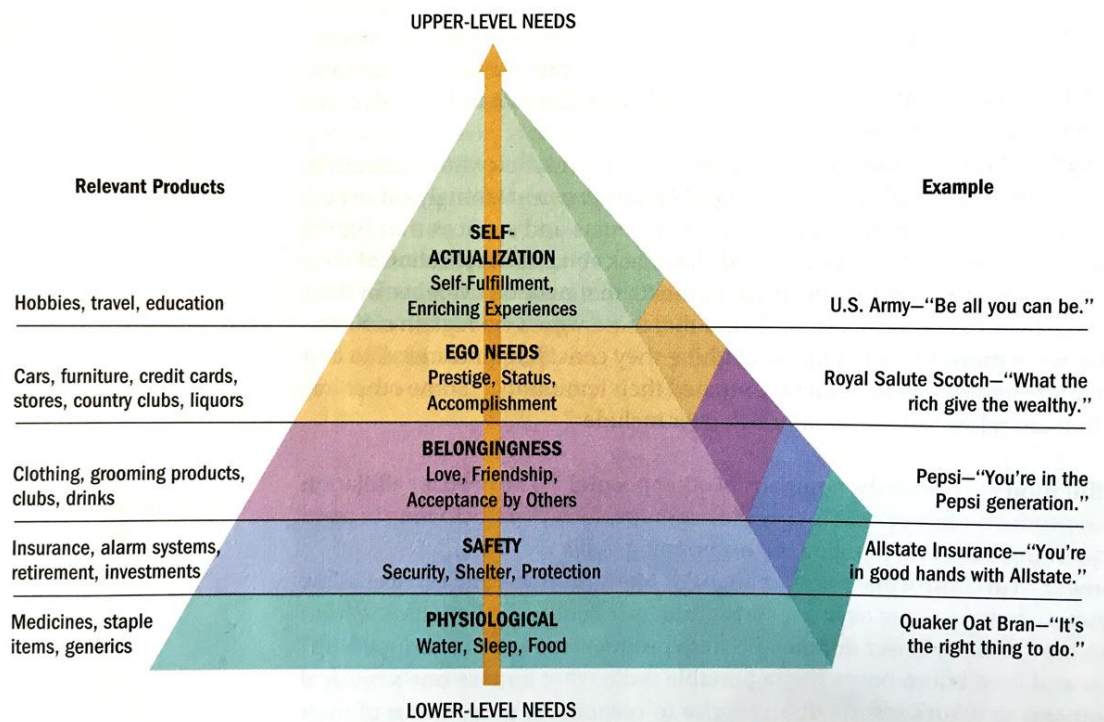


Figure 4. Maslow's hierarchy of needs

(ibid., 152)

According to the Government's decision in 2008, preparation of Internal Security Program was launched. The regional implementation plans had to be drawn to promote safety and security in the provinces. (Safety first — Internal Security Programme 2008–2011 2008.)

Before these plans were drawn, a survey was implemented in many municipalities. Residents of the municipalities were asked questions about safety and security issues via Internet and paper questionnaire. People of all ages had the opportunity to share their concerns about the safety matters. In several areas, like Central Finland, the largest security flaw was road safety. The respondents felt that the worst threats in traffic were speeding and drunk driving. (Keski-Suomen Liitto 2011.)

Consumers' own **culture** has an effect on what is considered safe or unsafe and how the sense of danger is formed. Women's and men's attitudes towards the sense of danger and the resulting consumer behavior are different and this has been explained with prehistoric brain development. Throughout history, women have

been aware of anything that might harm their offspring. For a woman, it is sufficient that she feels the danger. It is enough to change the image, the use and the choices of companies or products. A man often requires experience before the sense of danger or risk of damage will influence his decisions and purchasing behavior.

Women have always kept in touch with each other and shared information to protect their offspring. In the past, their stakeholders, friends and relatives could include no more than ten persons. Nowadays, a mother's social media network can rise up to 10 000 other mothers. There is a saying "mothers do not forgive!" (Pradeep 2010, 70, 75, 80.)

Culture influences on communication and what is considered acceptable driving behavior. If something is accepted, it does not change brand or images. The traffic behavior and culture differ from country to country, but also regionally. In Finland, the driving culture in Helsinki area is considerably more flexible than in the middle Finland. A company vehicle cutting in traffic in rush hour might be normal in a big city, but in a small town this kind of traffic behavior will end up to the letters to the editors in local newspaper. (Roper & Fill 2012, 238; Wells & Foxall 2012, 67.)

Cultural question is, if a consumer is using a cell phone illegally, will he allow the same for company vehicle drivers? Is it the same thing with speeding, passing by or giving way at a zebra crossing? Cultural differences, such as education, wealth, and country-specific differences, explain how different kind of traffic behavior affect purchasing behavior. (Wells & Foxall 2012.)

While collecting data about traffic accidents, an important source was news in the **media**. News coverage of the road traffic accidents were compared to accidents in other modes of traffic and accidents in industry. Fields such as aviation, shipping, factories and constructions have applied the Vision Zero seriously. When an accident happens, the name of the company is always mentioned in the news coverage. For example, if the news is about an incident in aviation, the news mentions the name of the carrier. If a tanker hits a rock, the ship-owner is mentioned. If an incident happens in a construction site, despite of who the subcontractor is, the name of the construction company is revealed. However, if the news is about a turn over truck

full of sulfuric acid or about a vehicle, that has drifted to a wrong lane and caused a fatal car accident, the name of the company is not mentioned. Seldom, the logo can be seen from a photo of the accident.

Traditional media like newspapers have left out the company names and logos, but reputation management in the Internet has become more difficult, because the social media does not work like advertising did before. The social media channels are open 24 / 7 and people have become more cynical to explanations from companies. Continuous vigilance requires resources. On the other hand, for services sector, the social media is a new way to gain reputation and brand. Companies no longer use large amounts of money on advertising in the newspapers or on the radio. Market growth has been obtained by word-to-mouth means and that is what the social media supports. This could not have been foreseen 25 years ago. When creating the company strategy, the choices must be made to stand out from your competitors. (Pitkänen 2001, 81, 87.)

In the past, the channel for the corporate messages was the TV. The advertisements were feeling-based and efforts were made to influence the consumer's emotions. (Pradeep 2010, 229.) The market value of material distributed in the social networks has grown. Consumers consider viral marketing to be cool, interesting or just plain fun. This can go both ways for the companies. Negative footage uploaded by disappointed consumers have the same power. The new electronic devices allow sharp HD videos to be shot from everywhere and also from traffic. Once a video is in the Internet, it is too late to explain. (Solomon 2013, 290.)

Some of the large companies have realized the importance of road safety. For example:

“Truck speed limiter in Neste Oil's contractual operators has been set in the speed of 82 km / h, when the national limit is 89 km / h. The carriers have agreed to annual car checks, which are carried out by the external service providers. Neste Oil's contractual operator's automobile equipment, including LPG transportation vehicles and equipment are inspected annually. Each vehicle has a driving control

device, which monitors the driving behavior of drivers. New trucks after the year 2010 are equipped with an alcolock.” (Vastuullisuus | Neste [Responsibility | Neste Oil] 2015.)

One of the quality criteria in manufacturing and construction industries today is safety at work and this is monitored by observing the accident frequency. The accident frequency is calculated by taking the number of accidents as a proportion to the number of working hours. Based on these figures it is possible to compare different sectors and their operators. (Tapaturmataajuus [Accident frequency] 2016.) When companies are improving the overall quality of their operation, then the observation must extend to the whole production chain. The statistics include also the suppliers and the contractor’s company’s accident frequencies. The requirements about safety will be included into the contracts and as part of the evaluation. (Työturvallisuus | Fortum [Work safety | Fortum] 2015.)

## 2.6 Theoretical Framework

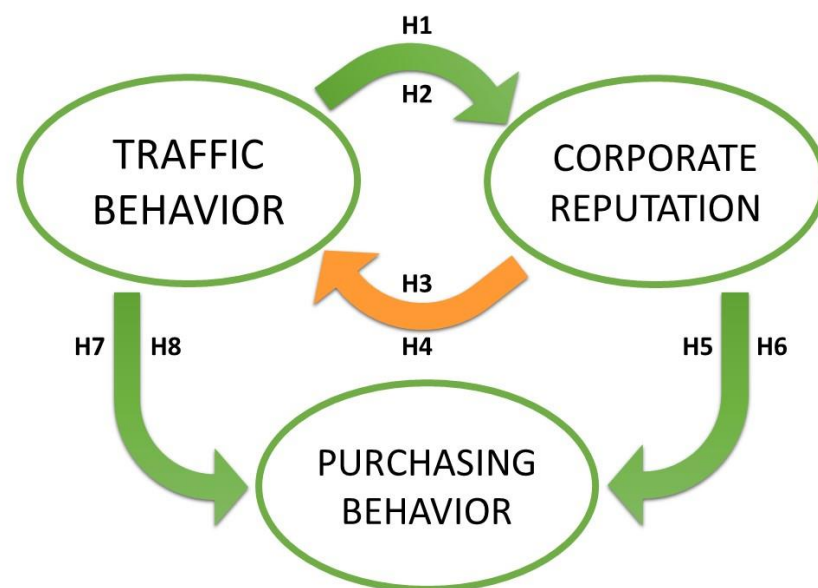


Figure 5. How traffic behavior, corporate reputation, and purchasing behavior are connected

This study assumes that people have an understanding of good and poor traffic behavior. People assess traffic behavior according to the culture they live in and according to their own traffic behavior and safety concerns.

**Hypothesis 1 (H1):** If the traffic behavior of a company vehicle driver is good, it will influence the corporate reputation in a good way.

**Hypothesis 2 (H2):** If the traffic behavior of a company vehicle driver is bad, it will influence the corporate reputation in a bad way.

The traffic behavior of company vehicle drivers may improve or deteriorate the corporate reputation. The poor traffic behavior of a company vehicle driver may create an impression of an indifferent corporation, which is not interested in the environment and safety. On the other hand, if a company vehicle driver complies with the traffic rules and good traffic culture, the company will avoid negative news and negative discussion of the company. By paying special attention to traffic behavior, a company is able to improve their own reputation concerning environmental issues and corporate responsibility, and thus gain a competitive advantage.

**Hypothesis 3 (H3):** If the corporate reputation is good, it will influence the traffic behavior of company vehicle drivers in a good way.

**Hypothesis 4 (H4):** If the corporate reputation is bad, it will influence the traffic behavior of company vehicle drivers in a bad way.

Hypothesis 3 and 4 are not studied in this thesis. They are explained in the literature review and discussed in Chapter 5 in the practical implications. The corporate reputation may improve or deteriorate a company vehicle driver's traffic behavior. If a company emphasizes the importance of good traffic behavior and provides guidance about traffic to the employees, everybody knows what is expected of them. The driving culture remains good and may even get better. Taking care of the employees, educating them and helping them to internalize the values of the company will enhance the possibility to achieve a common goal. If the company does

not take care of the worker, the worker does not care about maintaining the corporate reputation.

**Hypothesis 5 (H5):** If the corporate reputation is good, it will influence the customers' purchasing behavior in a good way.

**Hypothesis 6 (H6):** If the corporate reputation is bad, it will influence the customers' purchasing behavior in a bad way.

The corporate reputation may have an effect on the purchasing behavior described in the five-step model in chapter 2.1.1. If a consumer feels that the corporate reputation is negative, the products from such a company are not taken into account in the "information gathering" phase, when the consumer is looking for information about the products. In the next phase of the purchasing process, "the evaluation of choices", a customer compares the products and their features. The product features may feel better, if the company is reputable. In the "decision" phase, when a customer is making the choices, some people pay more attention to the company's reputation than the others. However, if the characteristics of the products of different companies are identical, the customer chooses a company with the better reputation.

**Hypothesis 7 (H7):** If the traffic behavior of a company vehicle driver is good, it will not influence the purchasing behavior.

**Hypothesis 8 (H8):** If the traffic behavior of a company vehicle driver is bad, it will influence the customers' purchasing behavior in a bad way.

The traffic behavior has mainly a deteriorating influence on the purchasing behavior. If a consumer has a powerful negative experience from a company vehicle driver's traffic behavior, he might begin to boycott a product or a company. A negative experience from a friend or major negative news may cause a boycott. Of course, a negative experience about poor traffic behavior relates to the corporation reputation, but a strong boycotting decision affects directly to the purchasing decision. The good traffic behavior of a company vehicle driver will not create a need to acquire a product. But a bad experience can be so significant, that a customer

boycotts a company and selects either a competitor's product or a replacement product. Sometimes the customer wants to punish a company and continues without a product even though he would need it and otherwise the product would be a good one in the procurement comparison.

Rising prosperity will create a greater interest about CSR and the CSR will play a bigger role in people's choices. The growing selections, increasing acquisition opportunities, and flood of information will challenge companies to include the traffic behavior in to their reputation management. With the good traffic behavior, a company may improve and maintain reputation. The poor traffic culture of company vehicle drivers undermines the credibility and in the worst case even causes the consumer to actively campaign against the company.

### **3 Methodology**

Very little or no previous research exists on the connection between traffic behavior, corporate reputation and consumers purchasing behavior. Neither the author nor Liikenneturva has been able to find any. When you start researching a new subject, a qualitative research makes a good pilot study, because it enables a researcher to limit the object of the study (Alasuutari 1999, 231). The author has been conducting undocumented, unstructured, qualitative preliminary investigations on this topic since 2008, when he started working at Liikenneturva. His job includes educating and lecturing to road users of different ages. In these sessions people have brought up attitudes, that they have as consumers towards corporate vehicles. The author's colleagues have encountered the same phenomenon and the issue of corporate vehicles has been discussed.

The author ended up doing a quantitative research to find out, how the traffic behavior of a company vehicle driver affect corporate reputation and consumer purchasing behavior in Finland. A quantitative survey provides reliable information, but admittedly more superficial than a qualitative study (ibid., 37-39). However, it was appropriate to conduct a quantitative survey at this stage of the study of the



topic. One open question was added to the survey. Therefore, the study also provides descriptive information and background information of why people boycott. These may also give clues also to future research topics. A study, which uses different methods may expand the angle of research and provide useful information for future studies (Davies 2007, 34-35). By adding a qualitative question to the questionnaire it is possible to enrich the study report with authentic answers (Hirsjärvi, Remes, & Sajavaara 2015, 190). This research was done solely using quantitative methodology. The survey was conducted as part of a Liikenneturva study, which was made in cooperation with a specialized data collection company TNS Gallup Ltd. This made it possible to get a sufficient number of valid answers in order for it to be a credible national research. The data was collected in November-December 2013 on Gallup Forum, which is an internet panel. The total number of respondents were 1677 people, of which 49.7 % (834) men, and 50.3 % (843) women. 1353 respondents were motorists, which was 81 % of the respondents. The questions were part of a wider survey to enable cross tabulation from the background information of the panelists.

### 3.1 Research Strategy

The query method has been chosen to achieve the greatest possible number of respondents with available resources. With this target in mind, the author ended up to choose Liikenneturva's survey, which is made twice a year. It is carried out nationwide in Finland by a specialized survey company. The primary purpose of the survey was to investigate the extent of the phenomenon. Large number of valid respondents for a quantitative study was a more desirable outcome than the depth of qualitative answers. A survey was selected as the data collection method in order to obtain a reliable number of responses. The selection of the research method was also due to the ease of an existing survey and moderate cost.

The design of research questions and their layout were formulated in accordance with the rest of the query. This avoided any misunderstanding and exceptional

separation of the questions. If the logic of the questions varies, it may confuse the respondents, the questions may be left unanswered or responded illogically. The Liikenneturva survey included 40 other questions and these 40 question added meaningful information for this study. Due to the scale of the survey, the respondents exact backgrounds information could be obtained and cross-tabulated with frequently asked questions. These extra 40 questions ensured the validity of the study and cross tabulation of the answers was possible. The questionnaire also included one open question.

According to the principles of the form of survey, the questions were formulated as neutrally as possible, and the respondents were only asked of things concerning them, in order to obtain first-hand information (Alasuutari 1999, 110). Clare Morris "Quantitative Approaches in Business Studies" book guided preparation of the questions in order to formulate good survey questions (Morris 2003, 50-51).

The level of measurement was set to ordinal scale. It tells more information than nominal scale categories response options. There were no good questions for interval and ratio scales response option. (Brenson, Levine, & Krehbiel 2009, 39.)

The research questions were discussed with the Liikenneturva Communication & Information department, which normally designs questions for this survey twice a year. The questions also went through the review of the professionals in TNS Gallup Ltd before they ended up in the final questionnaire. A separate pre questionnaire and pre study were not done, because both organizations are trustworthy and have good knowledge and experience in implementing surveys.

### 3.2 Data Collection

Today for a company or organization like Liikenneturva, whose core mission is not doing research, or who do not have very special needs, it is not worthwhile to make an in-house online data collection system. It is more profitable to buy the data from a specialized data collection company. (Poynter 2010, 17.)

Data collection for this research was carried out with an Internet panel in November and December 2013. The survey questions were part of a larger survey, which is called the Traffic Atmosphere in 2013. The survey was conducted by TNS Gallup Ltd, which is a commercial company and specializes in market surveys. The study was commissioned by Gallup Forum for Liikenneturva. Gallup Forum panel is a set of 40 000 respondents, who have been recruited by the most versatile recruitment channels in Finland.

TNS Gallup Ltd has recruited the respondents with separate recruitment forms in other studies or in a separate recruitment examination. The recruitment is managed and self-recruitment for panel is not used at all. The recruitment is mainly carried out by telephone, e-mail and Internet campaigns. The research panel members turnover rate is 30-40 % a year. The respondents are not given any monetary compensation. Answering to a survey is voluntary-based for the panelists and they may choose to resign anytime they want. The panelists' background information is updated annually.

The panelists, who do not have up-to-date background information, or who have not responded to study invitations within 12 months, are not considered to be included in the panel. The demographic structure of the respondent and relevant information is provided to the customer on request and Liikenneturva has this information. The respondents' identification and validation phase of the recruitment takes place with a telephone number. Once the panelists are answering to the research survey, they are using a personal response link.

About 6300 panelists from Gallup Forum were selected as the respondents to this survey by using the recruitment criteria of local information and socio-demographic status. Very comprehensive background information has been collected from the respondents and this can be matched directly to the actual research data. The panel members must be at least 15 years old. They have to live in Finland and understand the Finnish language. The panelists or the members of their family are not allowed to work in market research or in a public opinion poll company. TNS Gallup delivers data from the survey to Liikenneturva using the SPSS program file and Liikenneturva

can make information searches of the desired things by itself. TNS Gallup data collection projects are allocated to the named members of Gallup Forum. This practice prevents that the answering robots and other non-target groups cannot respond to the inquiries. In the data quality inspection process invalid answers (the criteria are time spent for responding and technical quality) and disrupted answers are removed from the data. Even the best Internet surveys do not quite reach all who belong to the ranks of the respondents to complete the study. The survey is likely to miss busy people, the socially excluded, the elderly, people who do not have the Internet, and people that have a principle not to reveal their opinions.

### 3.3 Data Analysis

The data from the survey has been analyzed with a software. The first data analyzes were performed with the IBM SPSS software and graphics with the Microsoft Excel 2013. The direct quantitative results are easy to present as tables and charts. One of the questions was on open question to which the respondents were asked to answer about their boycotting. The author read these answers several times. Based on the responses, the author created general groups of the answers and calculated the answers by keyword or context. The main interpretations of the open responses the author made based on basic analyses with quantitative methods. The respondents create more information of background of human thought, but they are not analyzed in more detail with the qualitative methods. The responses from individual respondents will be used in the publication of research to make it more interesting and to have more informative background from boycotting. (Hirsjärvi, Remes, & Sajavaara 2015, 190.)

In the analysis of quantitative data, a graph helps to clarify the conclusions about the results. When a respondent chooses one answer from options of a series, a useful and clear graph type is "Percentage bar chart of data" to describe the distribution of the different opinions. Graphic presentation of answers makes comparison easier. (Morris 2003, 79.)

The SPSS program was used to generate simple tables and the Excel for producing graphs. The percentages were used as the method for analyzing the answer deviation. The responses were analyzed whether the gender or age of the respondent affected their opinions. Possible significant differences were tested by using the Chi-Square Tests in the SPSS software (Brenson, Levine, & Krehbiel 2009, 534).

### 3.4 Verification of Findings

Reliability in quantitative research takes into account the following criteria: Internal validity, External validity, Reliability, and Objectivity. Validity means that the research is focused on the right things. The reliability of research results, in turn, means the extent to which a data collection method or methods will yield consistent findings. This means that similar observations would be found or conclusions reached by other researchers. Validity (both internal and external) determine the study design, object of the measurement, and the indicators used. In turn, reliability evaluates the reliability of measurement and results. (Hirsjärvi, Remes, & Sajavaara 2015, 216-217; Kananen 2015, 347-349.) Finally, objectivity evaluates if there have been possibilities for breaches of anonymity, a conscious bias or a subjective selection during the conduct and analysis of research (Saunders, Lewis, & Thornhill 2009, 596).

**Internal validity** in research refers to the cause-effect relationship (Kananen 2015, 347); does traffic behavior affect a corporation's reputation and the customers' purchasing behavior. The respondents selected for this survey are minimum 15 years old. They were selected using the recruitment criteria of local information and socio-economic status. Five questions were used for data measuring. The questions were presented along with Liikenneturva's annual Traffic Atmosphere survey in 2013.

The questions were presented only once. Thus, the potential variance between measurements from different years cannot be presented. Based on the survey, it is not possible to evaluate for example the change of attitudes between the time of the survey (December 2013) and the present.

The measuring event was a web survey, in which a respondent first replied to the questions related to personal information and then to over 40 questions related to traffic issues. All questions regarding this research were placed in the end of the survey. By the time they were answering the questions related to this research, the respondents had probably been thinking about traffic from several angles and shaped their perception about decent traffic behavior. With some, it may have led to a more accurate response and with some others to indifference. However, the number of respondents in itself is large enough to balance out the results and improve the validity of the study.

The meter measures opinions of the respondents and possible previous consumer activity. Whether a corporate vehicle's traffic behavior affects the reputation or purchasing behavior is otherwise difficult to measure. The respondents were privately asked about their personal opinions and not about their hypothesis about what others might think. The person himself or herself knows best his or her own motives, in which case asking him or her directly resolves the matter (Kananen 2015, 347). Some people do not want to reveal their opinions in the survey, which leaves room for error. It is impossible to recreate a traffic situation and measure a human reaction with any meter. There is no better method to do a quantitative study on the impact of a traffic situation than this type of survey. Liikenneturva has used a similar meter since 1992 and it has been calibrated during many years through an iterative process. A meter bias has been prevented by forming the questions in a similar way to all the other questions in the survey. This way the questions are not separate from other questions and answering them is logical. Common terms were used instead of research vocabulary. For example, instead of talking about reputation, the survey uses the term image, which is more widely used in speech in Finland. Crosschecking the questions with experts from TNS Gallup and Liikenneturva increases the validity. For meter reliability, the survey produced enough valid answers (n=1677) to get a scale model of the target group, which consisted of Finns older than 15 years.

The survey was executed by a commercial TNS Gallup Ltd, which is one of the most famous and prestigious operators in Finland and which is specialized in market

research. Their professional process in data acquisition increases the validity of the research.

In spite of the large number of survey respondents and use of experts in the data collection, there are weaknesses related to the research method. It is possible that the survey did not reach those who are too busy to answer, outcasts of society, elderly people, or people without access to the Internet. Other weaknesses may arise from the formulation of the questions and their position in the end of the survey, which can have an effect on the mindsets of the respondents.

**External validity** is interesting when it is relevant to think about the extent to which the results from the study are generalizable to all the relevant contexts; in what population, situations or contexts can the results be generalized? Weaknesses in the external validity might be affected by many issues, such as the selection of the research target: the target group is biased when compared to the general population, in which case the target group represents only partially the general population (ibid., 347-348). TNS Gallup offers a conversion factor for accurate reflection of the Finnish population. In this research absolute answers are used without conversion factor and the validity comes from precise selection of the target group. It is also important to notice that both corporate reputation and consumer behavior are influenced by many other factors besides the traffic behavior of corporate vehicles, such as price, convenience, and economical situation. As the general level of the security rises, traffic is perceived as a bigger threat to the overall safety and it gains more influence on consumer behavior.

The survey questions have been targeted to people who travel and make purchasing decisions in Finland. Majority of the respondents, 81 %, drive a car, which means that they are observing traffic while they drive. The reliability of the results has been increased by including as many respondents from the target group as possible. It is crucial to this survey that the respondents travel in the traffic making observations and forming opinions about corporate reputation consciously or unconsciously. At the same time, the target group has the financial means to make purchasing

decisions. The survey rules out people who are younger than 15 years old, but otherwise the target group aims to represent the population of Finland.

**Content validity** (face validity) represents how well a question, a scale, or a measure appears logically to reflect accurately what it was intended to measure (Saunders, Lewis, & Thornhill 2009, 592; Kananen 2015, 345-347). The results of the questions have been processed into graphics that include the numerical values. These graphics are introduced in Chapter 4 the Results and they include all of the data that was collected for this research. The question number five was an open text field. The data that was collected from this question was categorized after several readings. The categories were formed based on reasons to boycott, that were mentioned several times in different answers. After the categorization, the answers were calculated one by one and processed with quantitative methods and they are presented as a table in Chapter 4.

Part of the content validity is evaluating the logic of the research and whether the results reflect accurately the research target. As an expert working in the field of traffic safety for several years, the author's personal opinion is that the results are logical and correlate with other research and surveys that have been conducted about the subject. The author's personal experiences, technical knowledge, and background research are experiential data, which provides insights, hypotheses and validity checks (Maxwell 1996, 86-88).

**Reliability** means the extent to which data gathering method will yield consistent findings (Saunders, Lewis, & Thornhill 2009, 600; Hirsjärvi, Remes, & Sajavaara 2015, 216). Would similar observations be made or the same conclusions reached if the research would be done by other researchers? Can there be found a measuring bias in the research? The reliability may be evaluated by using a variance-based index. In this research the Cronbach's alpha composite reliability factor was used. The method is the variance function of absolute measurement error and the measured parameters. (Ketokivi 2015, 98-103.)



The quantitative survey included three parts:

1. How does the traffic behavior affect corporate reputation?
  - 1a. positive effect in corporate reputation
  - 1b. negative effect in corporate reputation
2. Reasons for boycotting
3. Factors of the buying and purchasing behavior of consumers

The internal consistency of these meters was reviewed with the Cronbach's alpha composite reliability factor. The part where reasons for boycotting were asked included only one question so it is not meaningful to review this question with this method. The alpha receives high values when the correlations between indicators are strong. The internal consistency of the meters used in this research received fairly high values.

Table 3. The Cronbach's Alpha values

	<b>Cronbach's Alpha</b>	<b>N of Items</b>
<b>Positive effect in corporate reputation</b>	,86	3
<b>Negative effect in corporate reputation</b>	,83	5
<b>Factors of the buying and purchasing behavior of consumers</b>	,81	5

The research is reliable as a research form, because similar survey has been conducted annually since the middle of the 90's by Liikenneturva. The internal consistency of the meter is shown on the previous surveys by Liikenneturva and the results that stood out were parallel to the previous surveys. For example, drunk driving is consistently considered as very negative behavior.

To ensure reliability, the research could be repeated. In practice, the schedule of the thesis research does not prohibit conducting the survey and analyzing the results for a second time. The phenomena might change in time and as the circumstance

change. As was previously noted, the general safety situation, increase in awareness, global values and trends might affect the values of consumers.

**Objectivity** means avoidance of conscious bias and subjective selection during the conduct and analysis of research. During the data collection phase subjective selectivity has been avoided by collecting the data accurately and fully. Objectively collected data enhances the ability to analyze and report results accurately. Also, confidentiality and anonymity has been ensured so that identifying persons is not possible from the data. (Saunders, Lewis, & Thornhill 2009, 194.)

The objectivity has been ensured by keeping the same idiom throughout the survey. The questions are formed in a way that they are not seeking any specific answers. Using professionals in forming the questions brings more objectivity to the meters. Perfect objectivity is impossible to attain. The author's personal experiences and expertise are useful in creating content analysis and summaries. They also provide a basis to link the results to a larger context and for the benefit of both Liikenneturva and industry.

## 4 Results

There were 1677 validated survey respondents, of which 843 were women and 834 men. Majority of the respondents were motorists, 1353 or 81 per cent. The respondents' average age was 46.7 years. The respondents who were selected in the survey represent a general overview of the population of those over 15 years of age in Finland. The region and socio-economic status were also taken into account.

The research company that conducted the survey, is offering a conversion factor for the answers in order for the results to respond as closely as possible to the results of Finnish opinions based on age and geographic variables. This research uses actual answers directly from the survey without the conversion factor. In practice, the differences would be less than two percentage points, in which case it does not matter in the whole picture. This information was examined to find out if there is any group that seems particularly abnormal. Abnormalities were not found. The answers

and analyzes are presented as graphs to make their analysis quick and easy to use as a reference.

#### 4.1 Impact of Traffic Behavior on the Corporation Reputation

The first question was about what may improve corporation image. The question was: "There are vehicles in traffic that are equipped with various corporate logos. How do you evaluate their driving behavior affect corporate image?" The claims and response options are available in "Figure 6".

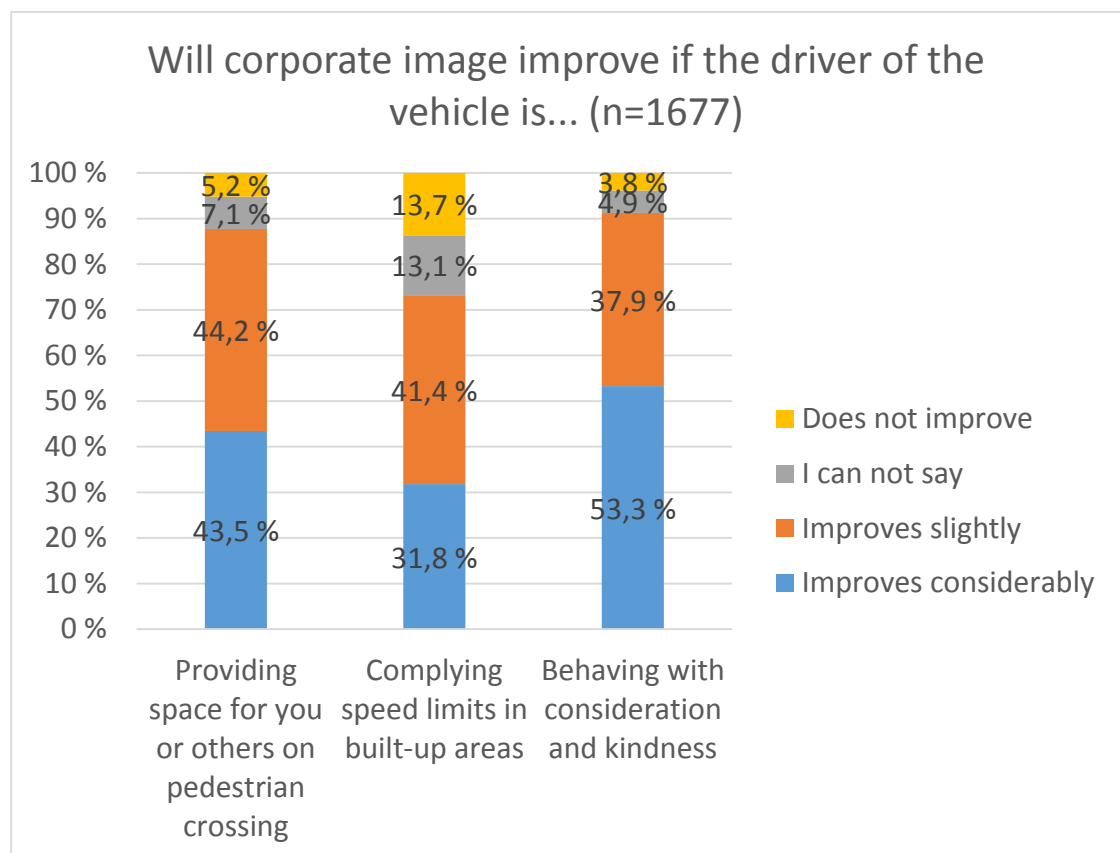


Figure 6. How different factors improve corporate image

Of the respondents, 91.2 % answered that "**behaving with consideration and kindness**" improves the corporate image, 53.3 % answered that the image improves considerably, and 3.8 % answered that it does not improve at all. For 4.9 % of the respondents, the issue was neutral or they could not say.

The second most positive impact was “**providing space for you or others on pedestrian crossing**”, where 87.7 % of the respondents said it improves the corporate image, 43.5 % said the image improves considerably, and 5.2 % said it does not improve at all. For 7.1 % of the respondents, the issue was neutral or they could not say.

“**Complying speed limits in built-up areas**” improves the corporate image for 73.2 % of the respondents, 31.8 % answered that the image improves considerably, and 13.7 % answered that it does not improve at all. For 13.1 % of the respondents, the issue was neutral or they could not say.

When the Chi square test was implemented, a statistically significant gender difference could be found in all the answer groups in all the propositions:

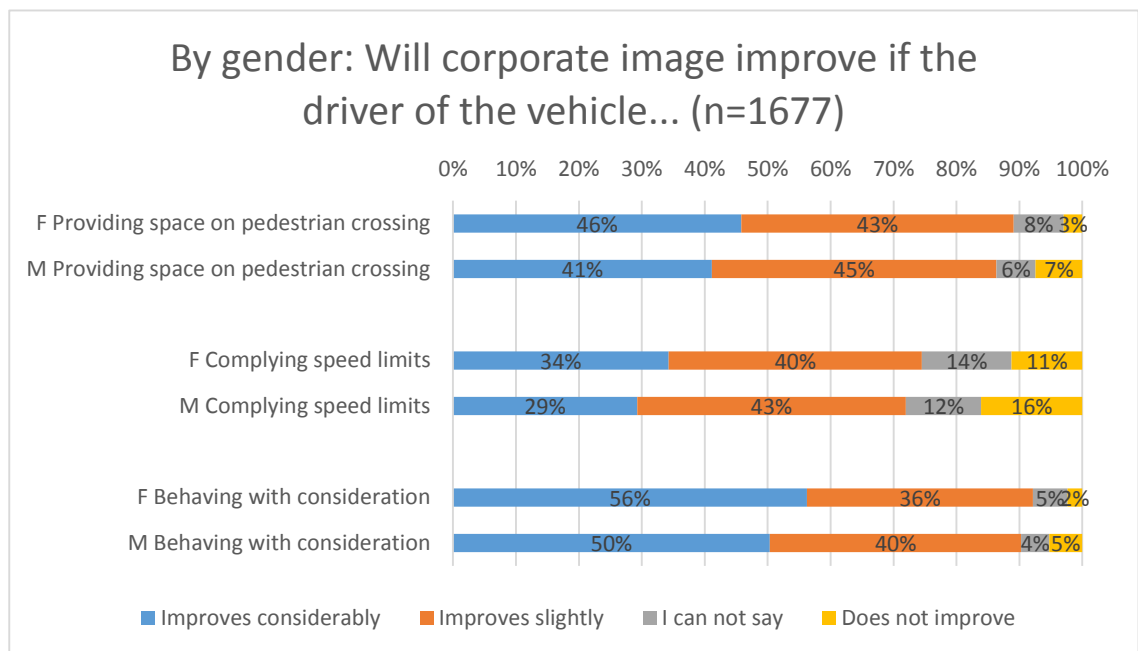


Figure 7. How different factors improve corporate image by gender

“Behaving with consideration and kindness” improves corporate image more for women, than for men. The statistically biggest difference is in the group where consideration and kindness did not matter at all: this was the case for 5 % of men and 2 % of women.

“Providing space for you or others on pedestrian crossing” was considered to improve the company image considerably by 46 % of the women and 41 % of the men. Respectively, 7 % of the men said that it does not improve the company image at all where 3 % of the women answered the same.

For 34 % of the women, “complying speed limits in built-up areas” improves corporate image considerably where the same number for men is 29 %. For not improving, 16 % of the men and 11 % of the women.

When the Chi square test was implemented, a statistically significant age difference can be found in all answer groups in all the propositions. The differences are shown in “Figure 8” below.

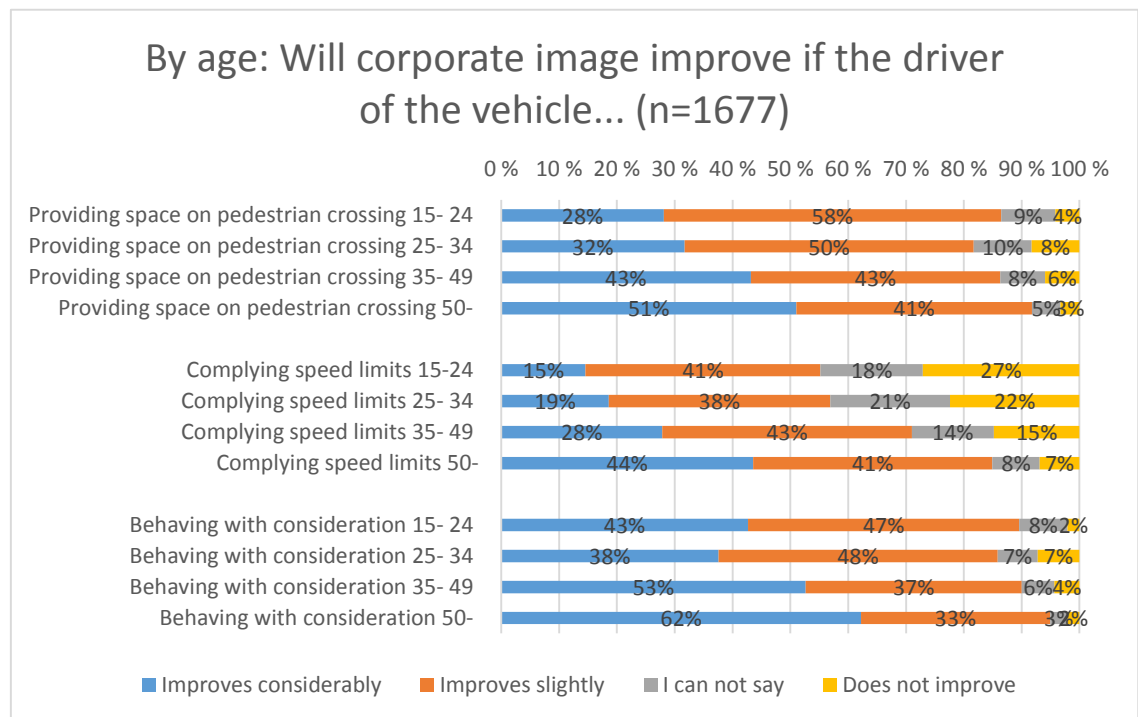


Figure 8. How different factors improve corporate image by age

The biggest difference between age groups can be found between the 25-34 years old and those over 50 years old. Of the respondents over 50 years old, 62 % considered that “behaving with consideration and kindness” in traffic improves company image considerably. In the group of 25-34 years, the same percentage is 38 %.

The statistical significance of “providing space for you or others on pedestrian crossing” on corporate image increases as the age of the respondents grows. Where 28 % of the 15-24 years old thought it improves corporate image considerably, the same number in the age group of over 50 years old is 51 %.

“Complying speed limits in built-up areas” improves corporate image less in younger age groups (15-24 and 25-34) and more in older age groups (35-49 and 50-). In the age group of 15-24, 56 % considered it to improve corporate image while in the age group of over 50 years, 85 % considered it to improve corporate image.

**The second question** was about what may deteriorate company image. The question was: “There are vehicles in traffic that are equipped with various corporate logos. How do you evaluate their driving behavior affect corporate image?” The claims and response options are available in “Figure 9”.

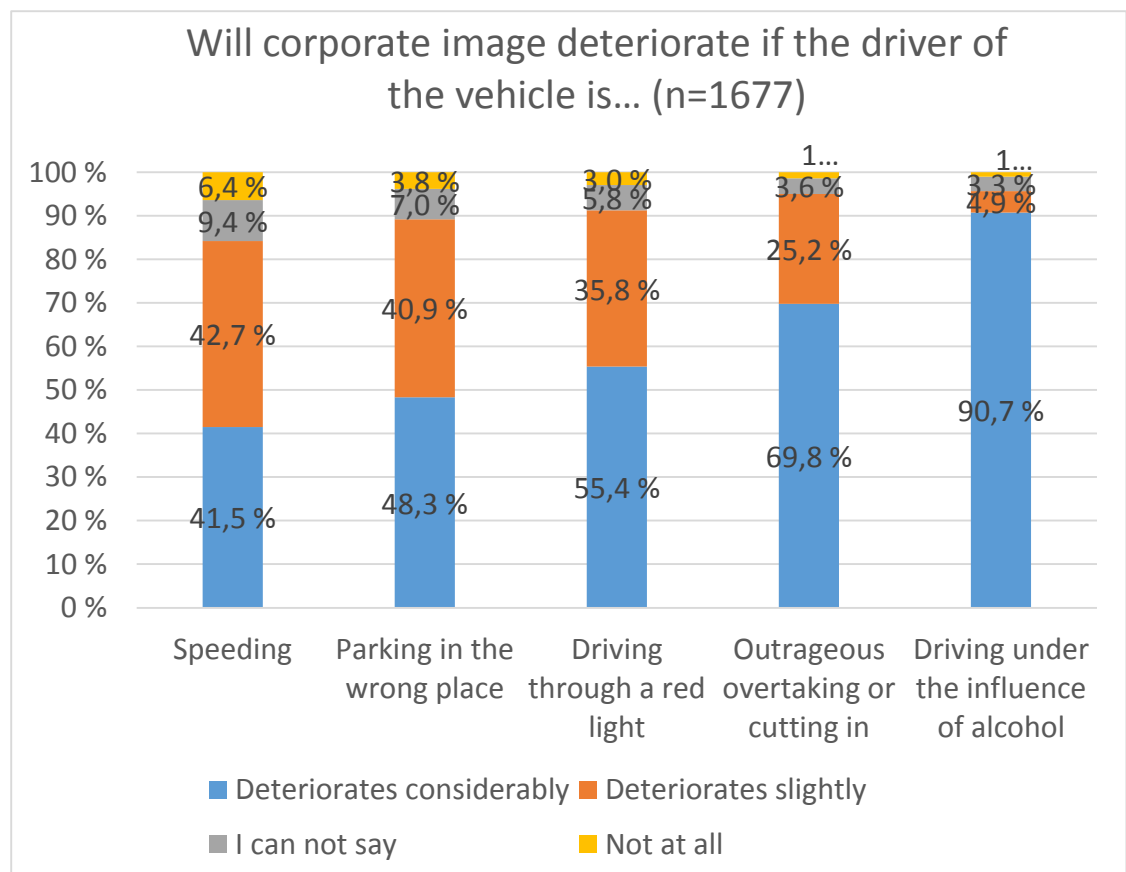


Figure 9. How different factors deteriorate corporate image

95.6 % of the respondents, said that "**driving under the influence of alcohol**" deteriorates the corporate image, 90.7 % said the image deteriorates considerably, and 1.0 % said it does not deteriorate at all. For 3.3 % of the respondents, the issue was neutral or they could not say.

The second most deteriorative impact on corporate image was "**outrageous overtaking or cutting in**", where 95.0 % of the respondents said it deteriorates the corporate image, 69.8 % said it deteriorates considerably, and 1.4 % said it does not deteriorate at all. For 3.6 % of the respondents, the issue was neutral or they could not say.

"**Driving through a red light**" deteriorates the corporate image for 91.2 % of the respondents, 55.4 % answered that the image deteriorates considerably, and 3.0 % answered that it does not deteriorate at all. For 5.8 % of the respondents, the issue was neutral or they could not say.

Of the respondents, 89.2 % said that "**parking in the wrong place**" deteriorates the corporate image, 48.3 % said the image deteriorates considerably, and 3.8 % said it does not deteriorate at all. For 7.0 % of the respondents, the issue was neutral or they could not say.

The least deteriorative impact on corporate image was "**speeding**", where 84.2 % of the respondents answered that the speeding deteriorates the company image, 41.5 % answered that the image deteriorates considerably, and 6.4 % answered that it does not deteriorate at all. For 9.4 % of the respondents, the issue was neutral or they could not say.

When the Chi square test was implemented, a statistically significant gender difference is shown in all the answer groups in three of the five propositions:

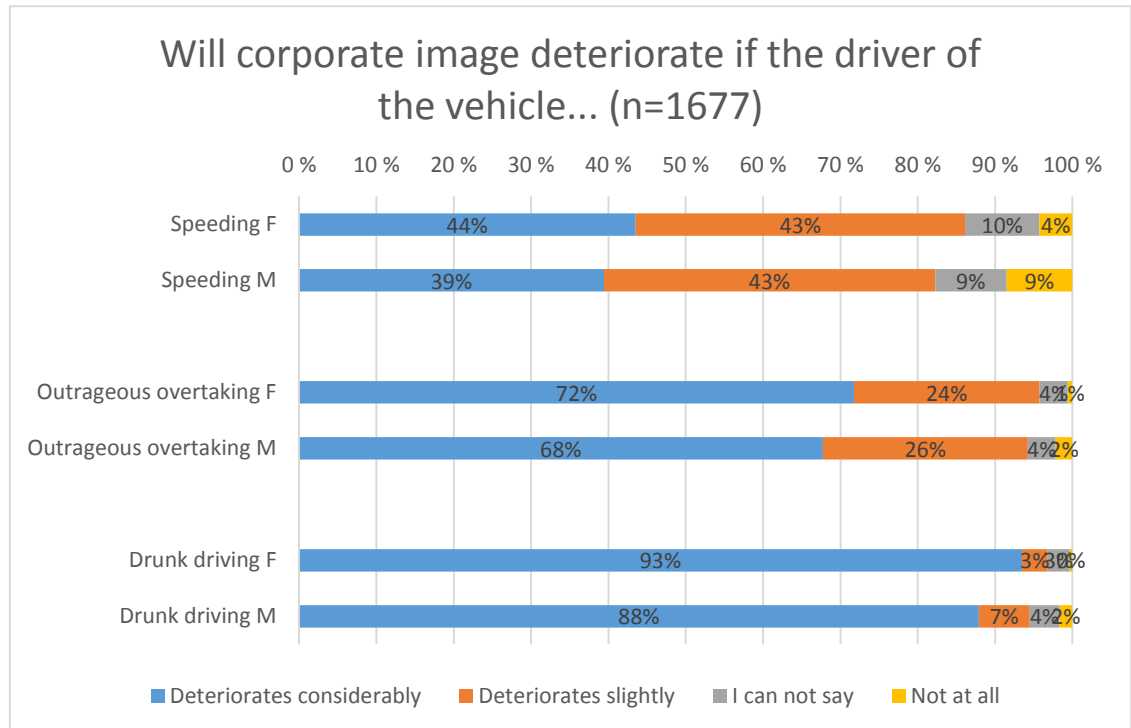


Figure 10. How different factors deteriorate corporate image by gender

Of the women, 93 % considers that “driving under the influence of alcohol” deteriorates corporate image considerably, whereas 88 % of the men consider the impact of drunk driving to be considerable.

72 % of the women and 68 % of the men consider “Outrageous bypassing or pushing” to deteriorate the corporate image considerably.

For 44 % of the women, “speeding” deteriorates corporate image considerably where the same number for men is 39 %. For not deteriorating at all, 9 % of the men and 4 % of the women.

When the Chi square test was implemented, a statistically significant age difference is shown in all the age groups and four of the five propositions:



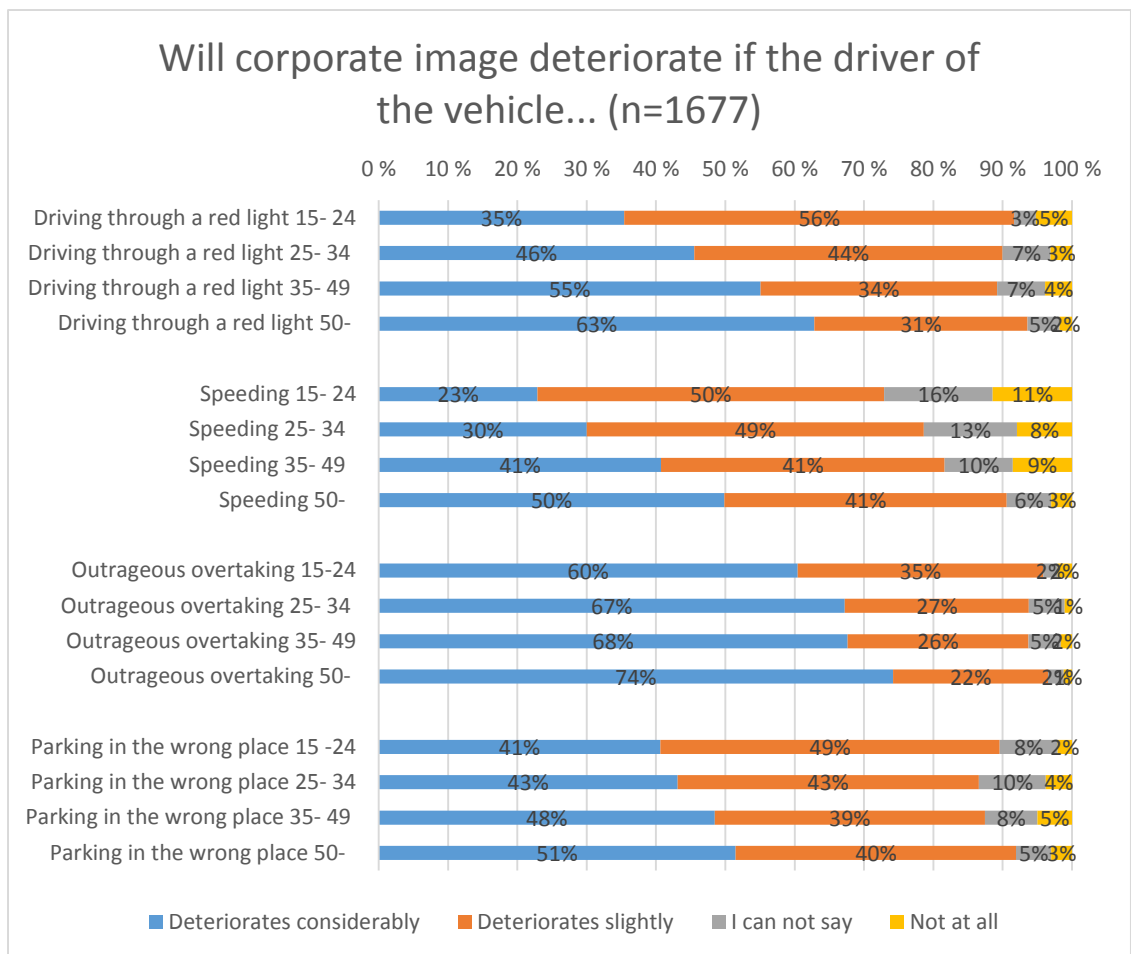


Figure 11. How different factors deteriorate corporate image by age

The biggest statistical difference between the age groups lies in between the 15-24 years old and those over 50 years old. 63 % of the respondents over 50 years old consider “driving through a red light” in traffic to deteriorate corporate image considerably. In the group of 15-24 years, the same percentage is 35 %.

The statistical significance of “speeding” on corporate image grows as the age increases. Where 23 % of the 15-24 years old think it deteriorates corporate image considerably, the same number in the age group of over 50 years old is 50 %.

“Outrageous overtaking or cutting in” deteriorates corporate image less in younger age groups and more in older age groups. In the age group of 15-24, 60 % consider it to deteriorate corporate image while in the age group of over 50 years, 74 % consider it to deteriorate corporate image.

51 % of the respondents over 50 years old consider “parking in the wrong place” to deteriorate corporate image considerably. In the age group of 15-24 years, the same percentage is 41 %.

## 4.2 Impact of Traffic Behavior on the Purchasing Behavior

**The third question** was about what factors have an impact on the purchasing behavior. It does not directly answer to the research question. The purpose of this question was to see how traffic behavior scales to other similar factors that influence the buying and purchasing decision. The question was: “How much do the factors presented have an impact on how you actually make a purchase and acquisition decisions?” The Claims and response options are available in “Figure 12”.

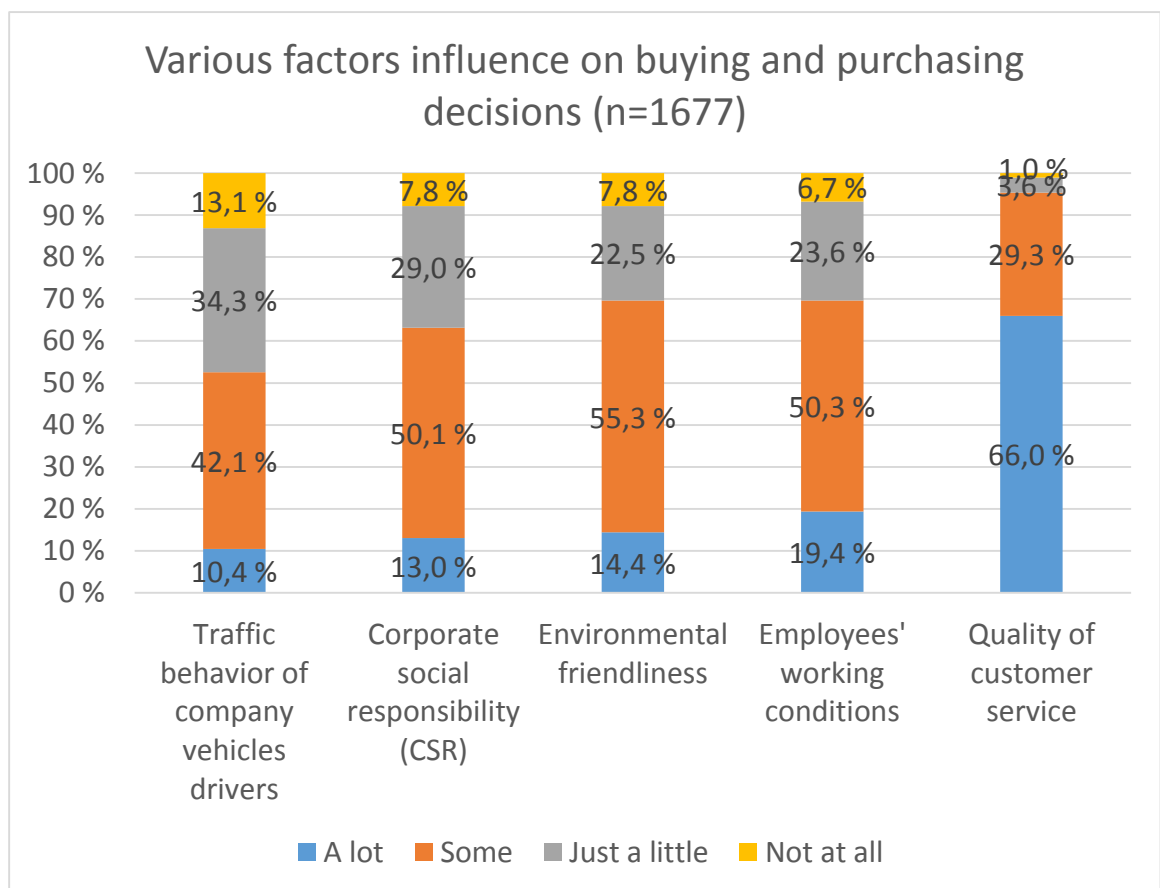


Figure 12. Various factors influence on the buying and purchasing decisions

When the respondents were asked how different factors influence their buying and purchasing decisions, the quality of customer service was the most important factor. **Quality of customer service** affected the buying and purchasing decisions of 95.3 % of the respondents, of which 66.0 % answered it to have a major influence on their decisions. For 1.0 % the quality of customer service did not have any influence. **The employees' working conditions** had an influence on 69.7 % of the respondents. For 19.4 % it had a significant influence on their buying and purchasing decisions and for 6.7 % it had no influence at all. **Environmental friendliness** had an influence on 69.7 % of the respondents. For 14.4 % it had a considerable influence and for 7.8 % it had no influence at all. The second least important factor was corporate social responsibility (CSR). For 63.1 % of the respondents it influenced their buying and purchasing decisions, of which 13.0 % answered CSR to have a lot of influence and 7.8 % not at all. **Traffic behavior of company vehicles' drivers** was considered an influencing factor by 52.5 % of the respondents, of which 10.4 % considered it to have a significant impact and 13.1 % not at all.

When the Chi square test was implemented, a statistically significant gender difference could be found in four of the presented factors of purchasing and buying decisions. These differences can be found in "Figure 13" below.

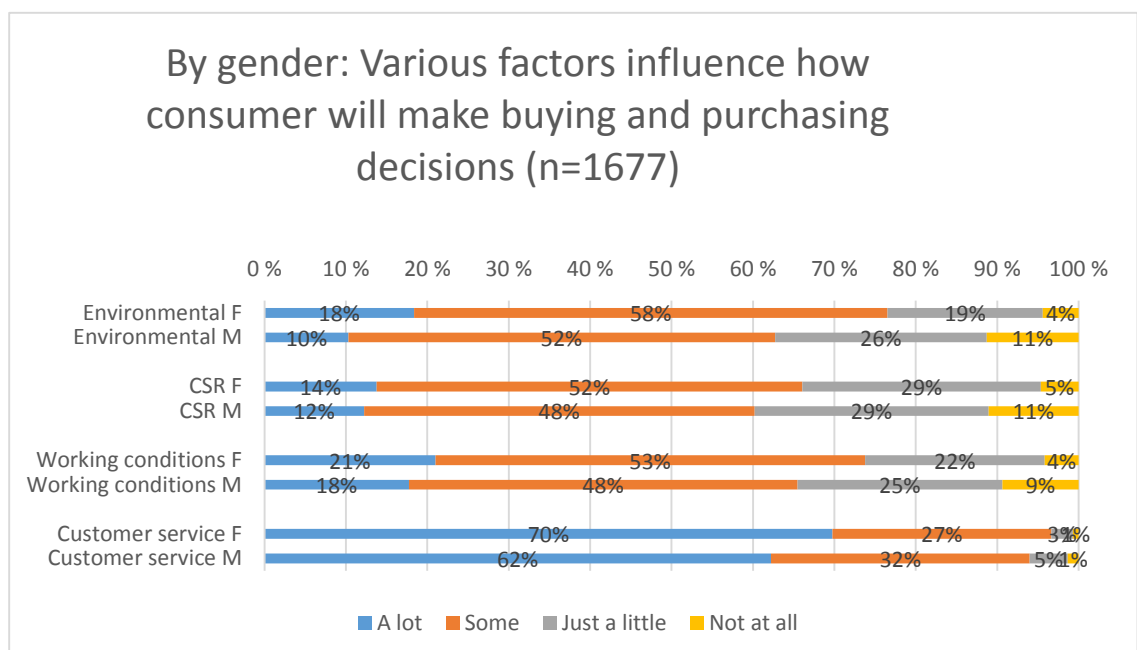


Figure 13. Various factors influence on the buying and purchasing decisions by gender

For women, all four factors from environmental friendliness to quality of customer service, have more influence on their buying and purchasing decisions than on those of men. The biggest statistical difference between women and men lies in environmental friendliness, which influenced the decision making of 76 % of the women and 62 % of the men. The second biggest difference lies in corporate social responsibility, which influenced the decision making of 66 % of the women and 60 % of the men. The third biggest difference lies in the employees’ working condition, which influenced the decision making of 74 % of the women and 66 % of the men. The smallest difference can be found in quality of customer service, which influenced the decision making of 97 % of the women and 95 % of the men.

When the Chi square test is implemented, a statistically significant age difference can be found in all age groups and in all the five propositions. The differences are shown in “Figure 14” below.

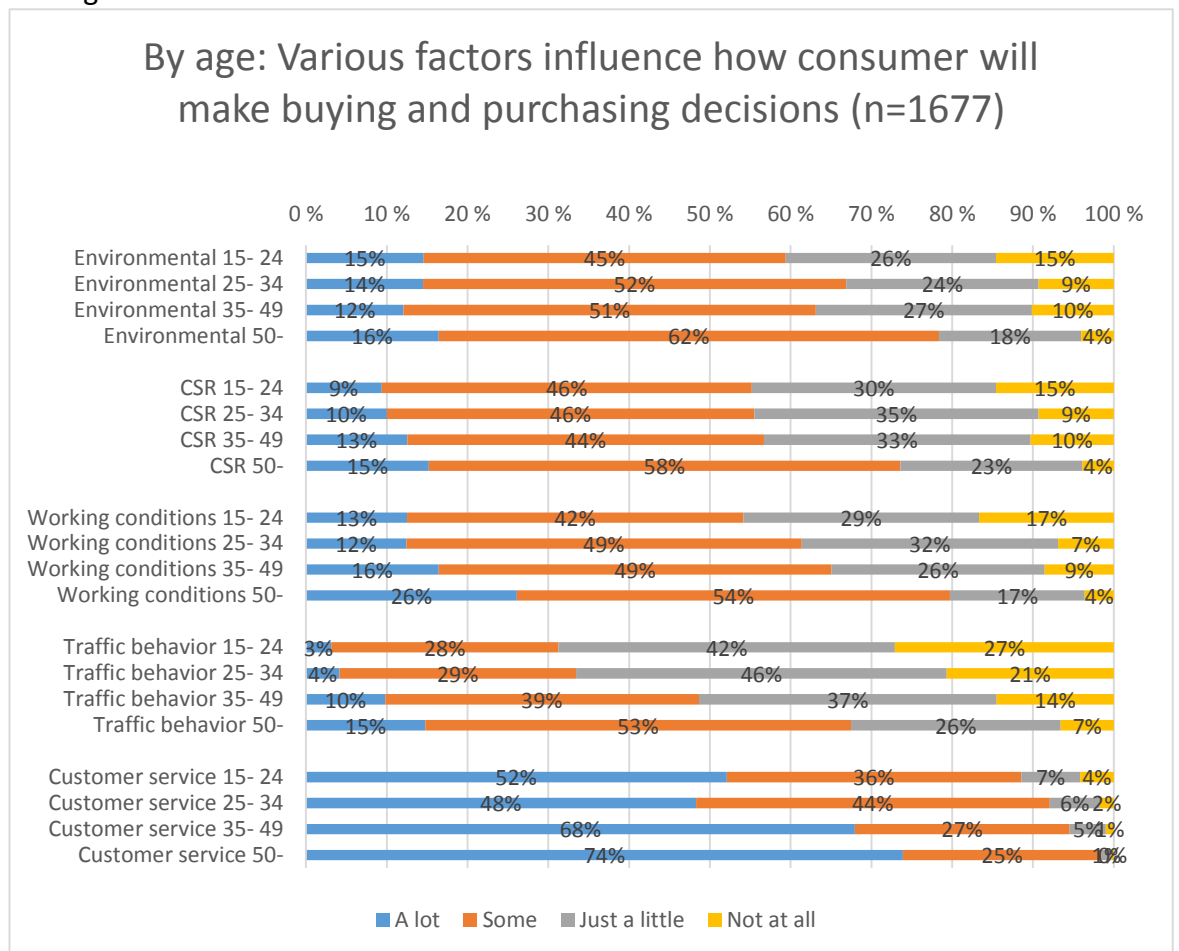


Figure 14. Various factors influence on the buying and purchasing decisions by age

The influence of all the factors on the buying and purchasing decision grows with age. The biggest statistical difference between age groups can be found between the 15-24 years old and those over 50 years old.

Of the respondents over 50 years old, 68 %, consider “traffic behavior of company vehicles’ drivers” to influence their buying and purchasing decisions. In the group of 15-24 years, the same percentage is 31 %. For 27 % of the respondents in the age group 15-24, the traffic behavior of the drivers of company vehicles did not have any influence at all. In the age group 50 years and older, 7 % of the respondents answered that the traffic behavior did not have any influence at all.

In “quality of customer service” the biggest age difference is in the answer group where the factor has “a lot” of influence on the buying and purchasing behavior. The factor is most significant for the respondents of 50 years and older with 74 % and the least significant for those in the age group 25-34 with 48 %.

The “employees’ working conditions” is an important factor for 50 years old and older. Of the respondents in this age group, 80 % consider it to have influence on the buying and purchasing decisions. In other age groups, the same percentage is between 55-65 %.

“Corporation social responsibility (CSR)” is an important factor for those who are 50 years old and older. Of the respondents in this age group, 73 % consider it to influence the buying and purchasing decisions. In other age groups, the same percentage is between 55-57 %.

“Environmental friendliness” is an important factor for 50 years old and older. Of the respondents in this age group, 78 % consider it to have influence on the buying and purchasing decisions. In other age groups, the same percentage is between 60-66 %.

**The fourth question** was about the negative impact of traffic behavior on purchasing behavior and whether the respondents had ever thought about or actually boycotted a company based on the traffic behavior of a company vehicle driver. The question was: “Have you ever thought about boycotting or have you ever boycotted a

company because of the traffic behavior of vehicles with company logos?" The claims and response options are shown in "Figure 15".

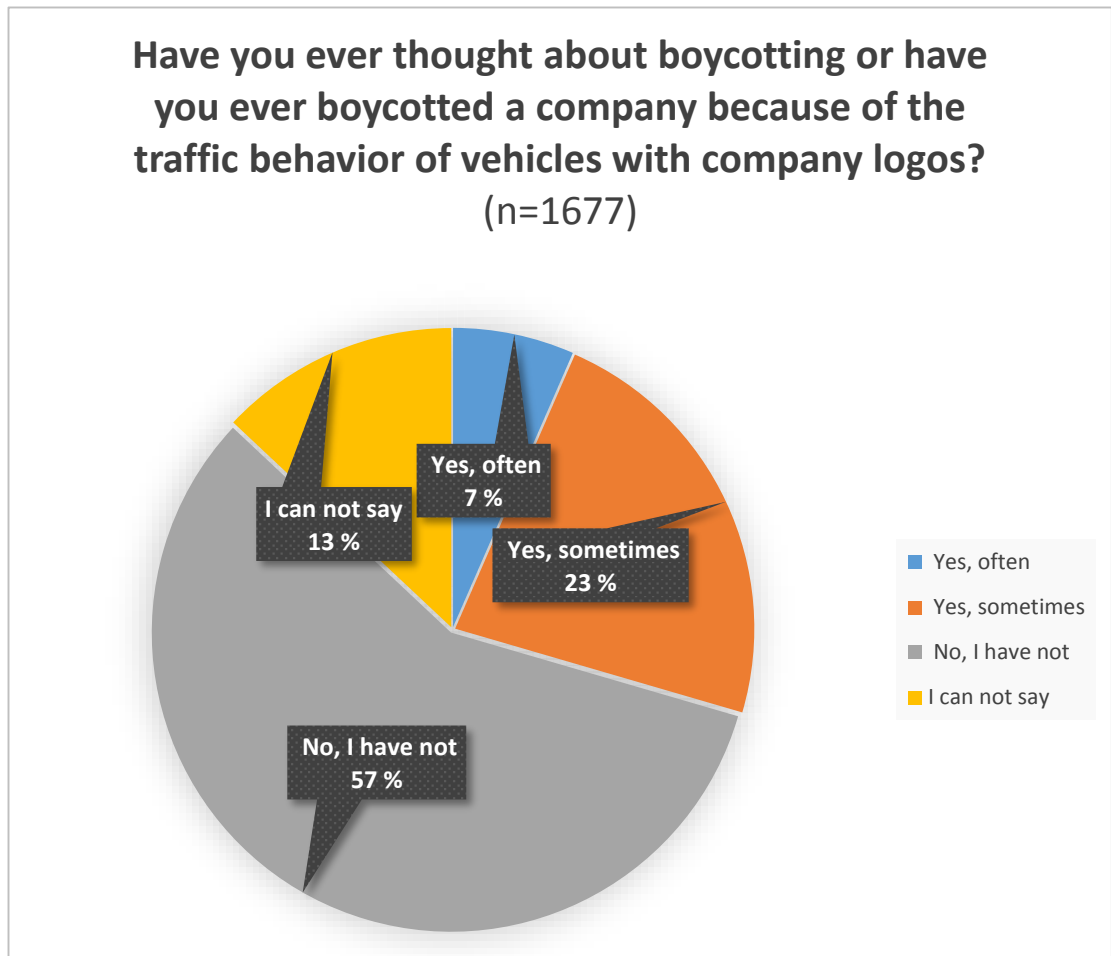


Figure 15. Boycotting

Of the respondents, 30 % answered that they have often or sometimes boycotted or thought about boycotting a company, based on the traffic behavior of a company vehicle driver. Those who have often boycotted or thought about boycotting, consist 7 % of all the respondents. Those who have never boycotted or thought about boycotting, consist 57 % of all the respondents. Of the respondents, 13 % cannot say an opinion.

When the Chi square test was implemented, a statistically significant gender difference can be found. The difference is shown in the "Response graphic 11" below.

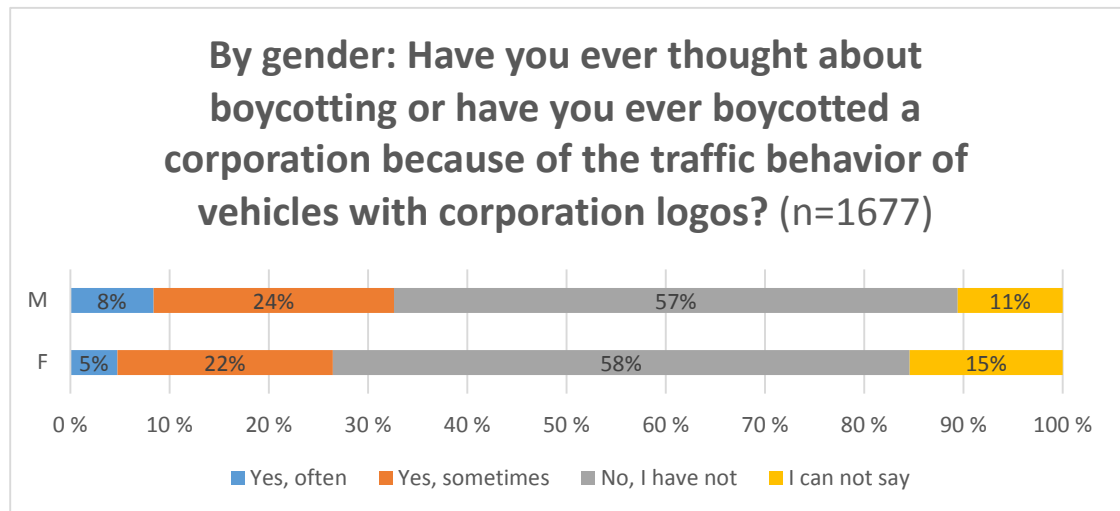


Figure 16. Boycotting by gender

Based on gender, boycotting or thinking about boycotting because of the traffic behavior of a company vehicle driver is more common for men (32 %) than for women (27 %).

When the Chi square test was implemented, a statistically significant difference could be found between the age groups. The difference is shown in “Response graphic 12” below.

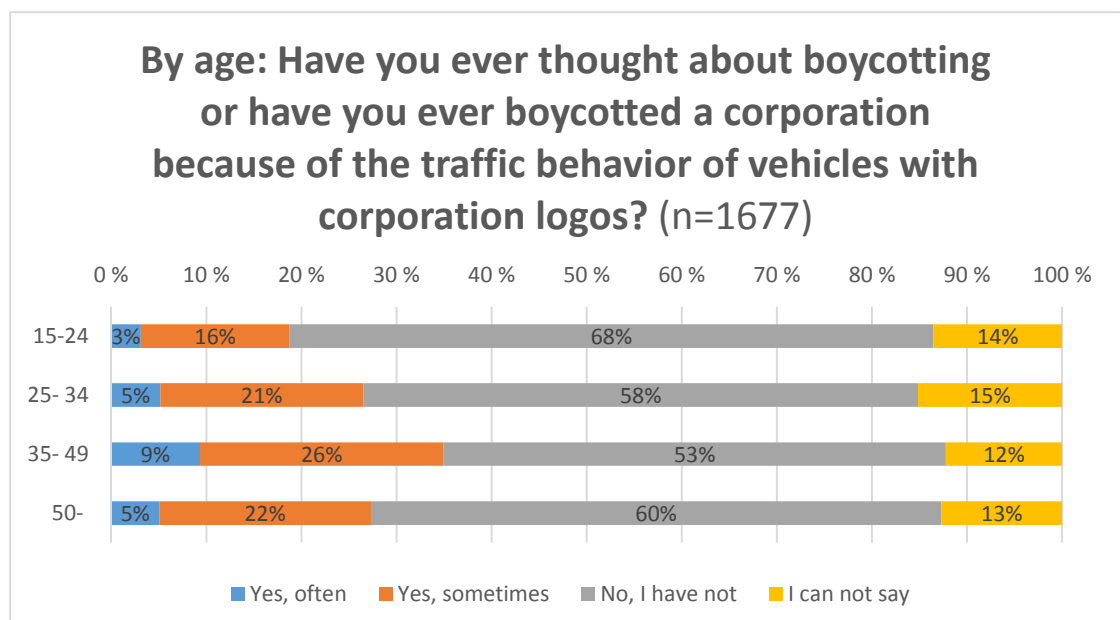


Figure 17. Boycotting by age

Boycotting or thinking about boycotting a company because of the traffic behavior of a company vehicle driver was most common in the age group of 35-49 (35 %) and least common in the age group of 15-24 (19 %).

**The fifth question** was an open question: “Have you ever thought about boycotting or have you ever boycotted a company because of the traffic behavior of vehicles with company logos? **Can you describe the situation?**” Of the 1677 respondents, 419 respondents answered this question with an informative response. Answers, such as “cannot remember” were not counted. The answers revealed the names of some companies and various companies working in different fields. Some of the respondents answered, that they had given direct feedback to these companies with more or less success.

These open answers included one or more reasons for boycotting. Each reason was counted by word or content. The reasons and the number of occurrences are shown in “Table 4” below.

Table 4. Reason for boycotting

Reason for boycotting	Number of occurrences
Cutting in	80
Bypassing	79
Speeding	57
Situations in pedestrian crossings	41
Parking issues	38
Driving against a red light	31
Reckless driving	26

The open answers also included splashing mud, driving in a wrong place, disobeying the traffic rules, arrogance while driving a heavy vehicle, not keeping a safety distance, not using turning signs, and talking to a cell phone or smoking while driving.



All of these answers occurred more than once but their number of occurrences were less than one percent.

## 5 Discussion

The purpose of this chapter is to go through the findings from this research and their connections with the literature review. It will also be reflected whether these findings have any practical implications in the real life and how the knowledge obtained in this study could be utilized in the future. Suggestions for the future studies are presented.

### 5.1 Answers to Research Questions

When people were asked directly, the traffic behavior of company vehicle drivers affects corporate reputation positively or negatively. **Over 90 %** of the survey respondents answered that the **company vehicle driver's traffic behavior affects corporate reputation** either some or a lot. Bad traffic behavior affects the corporate reputation more than good traffic behavior. The link between traffic behavior and purchasing behavior is not as direct. Other factors mentioned in the survey questionnaire, which may affect buying and purchasing behavior, were more meaningful to the respondents than traffic behavior. The quality of customer service influenced 90 % of the respondents' buying and purchasing behavior, whereas traffic behavior influenced only 53 % of the respondents. All the other answer options influenced buying and purchasing behavior more than traffic behavior, including corporate social responsibility CSR (63 %), environmental friendliness (70 %) and the employees' working conditions (70 %). The negative traffic behavior in its most powerful form was reflected to buying and purchasing behavior as boycotting. Of the respondents, **30 % had boycotted or considered boycotting a company because of the traffic behavior of company vehicle drivers.**

“The vehicle from a building supplies company drove recklessly in the city center, so I went to a rival store.” – Man, 40 years old

When answers and the percentages are analyzed by gender, it can be seen that positive **traffic behavior of a company vehicle driver improves the corporate reputation more among women** than among men. The average gender difference was 2-3 percentage point, depending on the answer option. When the negative traffic behavior is reviewed (Question 2, Figure 10), a similar occurrence can be seen, that the meaning and influence of traffic behavior is more substantial for women than for men. The average gender difference is 2-4 percentage point, depending on the answer option. However, there is no significant gender difference, when the influence between traffic behavior and buying and purchasing behavior was studied (Question 3, Figure 13). The matter is similarly important to women and men. **Men are more prone to boycott than women.** 32 % of the men have either boycotted or considered boycotting based on traffic behavior of a company vehicle, where the same percentage for women was 27 % (Question 4, Figure 16).

In older age groups, the traffic behavior of company vehicle drivers affects corporate reputation more. **The older the respondent, the more traffic behavior of a company vehicle driver affects the corporate reputation.** The biggest difference between age groups lies in respondents' reaction to speeding. In the group of 15-24 years old, 56 % answered that corporate reputation improves as company vehicle drivers comply with the speed limits in built-up areas, whereas 95 % of those over 50 years said the same. Instead, speeding deteriorates company reputation for 73 % of the respondents in the age group of 15-24 years old. In the age group of over 50 years old, 91 % of the respondents said speeding reduces company reputation. The age is a significant factor also to the connection between traffic behavior and buying and purchasing behavior. The traffic behavior influences buying and purchasing behavior of 31 % of the respondents in the age group of 15-24 years old and 68 % of over 50 years old. **The biggest age group of respondents either willing or considering boycott is 35-49 years old,** of which 35 % have boycotted or considered boycotting a

company. The age group that is the least keen to boycott is 15-24 years old, of which 19 % have boycotted or considered boycotting a company based on the traffic behavior of a corporate vehicle.

## 5.2 Practical Implications

When studied, which customers are affected most by the traffic behavior, it is important to remember who has the most money to spend and who in a family makes the buying and purchasing decisions. If a company thinks about its clientele and the effect of traffic behavior, an important result to keep in mind is that traffic behavior has the most positive or negative effect on women and on elderly people. Women make the buying and purchasing decisions in many families and today elderly people have the most money to spend. It would be wise for companies to consider, which values are important to those people that make the purchasing decisions and have the means to execute these decisions.

According to behavior theory, women should react more to the feeling of danger. However, the research points out, that 35-49 years old men are the most susceptible to boycott companies because of the traffic behavior of corporate vehicles. The explanation for this bias against theory may be, that men in that age group have better financial means for boycotting. Another valid reason may be that traffic imposes strong feelings, which bear an increasingly significant role in the buying and purchasing behavior today (Goodman & Helin 2009, 62).

The quality of customer service in a company affects the customers' buying and purchasing behavior more than the traffic behavior of company vehicle drivers. But, at its best, corporate reputation can be improved just by obeying the traffic rules and behaving well in traffic. Driving under the influence of alcohol, outrageous overtaking or cutting in deteriorates the corporate reputation the most. An interesting result was that parking in the wrong place was experienced more negatively than speeding. Parking in the wrong place, outrageous overtaking and driving through a red light are experienced more negatively than speeding, which is more dangerous to other

people and the environment. Speeding is the most dangerous human factor in road traffic. When the speed increases the less time the driver has to take in and process information from the surroundings (Fuller 2004, 464). Speeding increases the risk of crashing and the likelihood of severe injuries and death (European Commission 2014). Only driving under the influence of alcohol is more dangerous to other people than speeding.

People do not base their actions on statistics but on their feelings and emotions. An average person does not acknowledge the true risk of speeding. The Finns should be taught through communication, how big a risk a speeding heavy vehicle truly is, and how much speeding increases its carbon footprint. The ethics of pineapple juice or sneakers made using child labor can be questioned by civic organizations, but national traffic cannot be seen as an ethical problem. When a question about corporate social responsibility (CSR) was asked in the survey, it was considered to have more effect on buying and purchasing behavior than traffic behavior. In fact, traffic behavior can be seen part of CSR, but it is perhaps too mundane to stand out.

While ethical issues can be dismissed, traffic offences may still arouse strong feelings and cause boycotting. 30 % of the respondents have boycotted or considered boycotting due to the traffic behavior of company vehicle drivers. The answers to the open question reveal the fact, that most of the situations, where a customer has felt that he or she has been wronged in traffic, could have been easily avoided with instructions and control from the corporate management. The traffic offences mentioned by the respondents did not bring any financial benefit to the companies. They were merely executing the driver's secondary motives in the traffic. Positive traffic behavior is definitely not going to increase sales. A person will not gain a need to buy due to a well handled traffic situation, but the corporate reputation will improve and there will not be a need to boycott the company.

Based on this research, surprisingly many Finns observe corporate vehicles in traffic and are able to associate their driving behavior with their opinions about the corporate reputation.

“Vehicle of a moving company was cutting in outrageously, I was just organizing a large move, I did not ask an offer from that company.”

– Woman, 64 year old

The research revealed reasons, that may cause changes in corporate reputation and consumer buying and purchasing behavior. With the practical measures that are presented in the literature review, **these issues can be tackled cost-effectively at the company level**. A corporate management should make a clear statement, that everybody in the company must uncompromisingly obey the traffic rules and thus improve traffic safety. This would also bring savings through lower transport costs. A company can pay attention to what kind of education the drivers receive during their obligatory professional competence training days. There are hard and soft methods to improve traffic safety of company vehicles. As hard methods, the corporate vehicles can be equipped with breath alcohol ignition interlock devices (BAIID aka “alcolock”), speed limiters with maximum 82 km/h, and GPS tracking. All the offenses, these devices prevent, may lead to warnings and punishment if violated. Softer methods to improve traffic behavior include education, public monitoring, rewarding and devices that “comment” driving style in real-time. If the staff is committed and it works towards the company goals, the efforts to improve traffic safety can be included in the company values.

Current legislation requires five days of education for professional drivers during a five-year period. Even today the companies have a possibility to influence the contents of these training days, they are able to choose what will be trained, and they are in a position to demand results from this training instead of taking the easy way out. The change in corporate reputation can be caused by secondary motives of drivers and following traffic behavior (speeding and cutting in) and not transportation between locations A and B. One aspect that cannot completely be explained with motives is parking in a wrong place. It is not always a driver’s fault if they have to deliver merchandise to difficult targets. However, this problem can also be solved with up-front planning and instructions.

Some companies have already acknowledged the risk of using corporate logos on the vehicles even before this research. There are some bigger companies and a few smaller ones, which do not want to give out their names in public and which have made the choice not to put their logos or names on corporate vehicles. The reason is that they are afraid, that the traffic behavior of these vehicles will have a negative impact on their sales and reputation. Putting a company logo and name on the vehicle and decent traffic behavior may be beneficial for companies. It can bring out positive visibility and reputation. An advertisement on the side of a bus costs about 2500 € per year (Hinnasto [Pricing list] 2016). A constantly moving vehicle is more visible to stakeholders than a billboard next to the road. Advertising in vehicles is considered as an effective way to advertise. That is why the parliament in Finland prohibited the advertisement of alcoholic soft drinks in vehicles (Alkoholimainonta [Advertisement of alcohol] 2015).

The author's personal opinion is that one of the reasons why the traffic behavior of company vehicle drivers does not affect corporate reputation more than the research revealed, is the way media communicates about traffic accidents to the public. News do not reveal names of companies that are involved in traffic accidents. The literature review revealed this media related bias.

In the future, a corporate that actively emphasizes an ecological and safe traffic behavior, may gain a competitive edge. The promised measures must be realized, because merely talking and then betraying the customers trust is not a good way to do long-term business. The term is called greenwashing and if a company is caught greenwashing, it must put a lot of effort to regain its reputation and old customers.

**Liikenneturva** maintains REAK® (heavy vehicle drivers' anticipatory driving course) material, in which these results will be attached when the material is updated. At present, the REAK® material presents a presumption of traffic behavior's effect on corporate reputation. This presumption will be completed with verified research results. Through REAK® educators, the companies will gain knowledge of how much the drivers' traffic behavior affects corporate reputation and consumers buying and purchasing behavior.

“There are some renovation company’s I would not even ask offer because their vehicle’s traffic behavior sends shivers up and down my spine” – Woman, 37 years old

### 5.3 Assessments of the Results in the Light of Literature

Since the author has not been able to find previous research on the subject, the results cannot be reflected in the light of literature. The theoretical framework that has been made based on the literature review, imposes eight hypotheses that are represented in Figure 5 and the research results support six of these hypotheses (hypotheses 3 and 4 were not part of this research).

The observed traffic behavior of company vehicle drivers improves or deteriorates corporate reputation. When the observed experience is negative enough, the customers change their buying and purchasing behavior, which may even lead to boycotting.

### 5.4 Limitations of the Study

If the research focus and purpose are taken into account, this research fulfills the set goals well. The scale and dimensions of the phenomena, and factors that influence it, now have perspective and proportions. The scale of the research data is adequate at least and the meters are reliable.

The number of questions in the survey could have been increased and especially the number of the direct control questions. An interesting additional question might have been, for example, has a traffic story by a friend affected the buying and purchasing decisions. Alas, the number of questions is limited in this method of data collection. Direct material to study the influence of the traffic behavior on buying and purchasing behavior or marketing and sales is not available. Previous study of this

subject has not been made, which makes it difficult to compare the results or their validity. Research for traffic safety and marketing research have so far been separate. Traffic safety has been interlinked with behavior influence and pedagogy, but sales and marketing are rarely mentioned. Traffic psychology is a topic that has been researched a lot, and there is a lot of talk about attitude change, but these theories very rarely mention sales or marketing.

Qualitative research methods may not have brought any addition in researching the scale of the phenomena. Instead, using interviews could have brought more information about the continuation and extension of boycotting. With the questions that were included in the survey, it cannot be clarified for example if the customership was moved elsewhere, how long the boycotting continued or has the customer replaced his or her needs with other products.

## 5.5 Suggestions for Future Studies

According to the author's knowledge this research is a pioneering study of the influence of traffic behavior on the buying and purchasing behavior. The results may open many possibilities for future studies and the same research can be repeated, when the overall economy improves to see whether safety or green values affect the buying and purchasing behavior more. It is also possible that the sensitivity for boycotting increases and the social media and future applications gain more influence. Another interesting approach could be to repeat the research in other countries to see, if there are cultural variances.

Further studies could explore how well the current further education of professional drivers corresponds to companies' reputation management. Education descriptions emphasizes that the driver needs to understand the company's reputation. To improve the customer orientation of this education, it would be useful to study how well the drivers comprehend the effects of their traffic behavior on the corporate reputation.



Risk identification and risk management are always an interesting subject for research, especially the factors that each of us individually experience as dangerous and issues that people are afraid of in their normal lives. This research also showed that some of the risk factors, that are actually proven to be the most dangerous in traffic are not experienced as such. The risk factors that are less dangerous in traffic actually affect the buying and purchasing decisions more than the more dangerous ones. For example, speeding is the most dangerous risk factor in traffic. Statistically, it causes more traffic accidents than any other traffic offence. The number of fatal accidents caused by parking in the wrong place is near zero, but it still affects the buying and purchasing behavior more than speeding. This topic could be researched from a corporate viewpoint and a possible development project could be beneficial, when targeted to traffic behavior from a working-life perspective and practical needs of the companies.

Traffic related writings in the social media could also be studied, and the video material analyzed, which increases year by year on the Internet. One of the most practical and beneficial research topics would be multidisciplinary research on the interconnections between traffic behavior, traffic psychology, buying and purchasing behavior, sales, and marketing.

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## Appendices

### Appendix 1. Original Questionnaire in Finnish

Liikenteessä on eri yritysten tunnuksilla varustettuja ajoneuvoja. Miten arvioisit näiden liikennekäyttämisen vaikuttavan käsitykseesi kyseisestä yrityksestä?

#### 1. Huonontuuko yrityskuva, jos ajoneuvon kuljettaja...

*Huonontuu paljon/ huonontuu jonkin verran /en osaa sanoa /ei huonone lainkaan*

- Ajaa päin punaista
- Ajaa ylinopeudella
- Ohittaa tai kiilaa törkeästi
- Ajaa päihtyneenä
- Pysäköi muuta liikennettä haittaavaan paikkaan

#### 2. Parantuuko yrityskuva mielestäsi, jos ajoneuvon kuljettaja...

*Parantuu paljon/ parantuu jonkin verran /en osaa sanoa /ei parane lainkaan*

- Antaa sinulle tai muille jalankulkijoille tilaa suojatiellä
- Noudattaa nopeusrajoituksia taajamassa
- Käyttäytyy huomaavaisesti ja ystävällisesti

3a Oletko koskaan boikotoinut tai harkinnut boikotoivasi jotain yritystä sen tunnuksilla varustetun ajoneuvon liikennekäyttämisen vuoksi?

- Kyllä, usein
- Kyllä, joskus
- En osaa sanoa
- En ole

3b Jos **kyllä** avoin kysymys: voit kertoa tarkemmin millaisesta tilanteesta oli kyse:

4. Miten paljon arvioisit alla olevilla tekijöillä olevan vaikutusta siihen, miten itse teet osto- ja hankintapäätöksiä

*Paljon- jonkin verran- vain vähän - ei lainkaan*

- Ympäristöystävällisyys
- Yrityksen yhteiskuntavastuullisuus
- Työntekijöiden työolosuhteet
- Yrityksen ajoneuvojen liikennekäyttäytyminen
- Asiakaspalvelun laatu



## Appendix 2. Translated Questionnaire

There are vehicles in traffic that are equipped with various corporate logos. How do you evaluate their driving behavior affect corporate image?

1. Will corporate image deteriorate if the driver of the vehicle is...

*Deteriorates significantly/ deteriorates slightly /I can not say /Does not deteriorate*

- Driving through a red light
- Speeding
- Outrageous overtaking or cutting in
- Driving under the influence of alcohol
- Parking in the wrong place

2. Will corporate image improve if the driver of the vehicle...

*Improves significantly/ improves slightly /I can not say /Does not improve*

- Providing space for you or others on pedestrian crossing
- Complying speed limits in built-up areas
- Behaving with consideration and kindness

3a Have you ever thought about boycotting or have you ever boycotted a company because of the traffic behavior of vehicles with corporate logos?

- Yes, often
- Yes, sometimes
- No, I have not
- I can not say

3b If **yes** an open question follow-up: Can you describe the situation?

4. How much do you assess the factors presented below, have an impact on how you do purchasing and procurement decisions?

*A lot- Some- Just a little – Not at all*

- Environmental friendliness
- Corporate social responsibility (CSR)
- Employees' working conditions
- Traffic behavior of company vehicles
- driver
- Quality of customer service