Public transport 2.0: why (not) use the RandstadRail?

A study of travel behaviour

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Summary

This thesis tries to give a theoretically grounded and empirically based insight in the travel behaviour of people. The travel behaviour researched is the use of the RandstadRail, a light rail network in the Randstad area in the West of the Netherlands. The development and introduction of this network encountered many problems and made sure that the start of service was delayed by several months.

As one of the main goals of the project was to attract people to use public transport instead of their car, it is interesting to see if this was accomplished, and why (not). Therefore, the main question of this thesis was: *Which factors determine whether travellers use the RandstadRail or not?*

A survey was held among 119 respondents living near two RandstadRail stations (Leidschendam-Voorburg and Leidschenveen). In addition, five interviews were held to further explore the motives for (not) using the RandstadRail.

The most important findings are the value of information and knowledge. These factors prove to be of influence on attitude towards the RandstadRail, desire and intention to use it, and actual use. Also, it would be advised to invest in more parking space at the stations, and in ticket buying possibilities at the stations. Both features appeared to be influential on the likelihood to use the RandstadRail. Finally, regarding to possible future developments of the RandstadRail, a better marketing and information campaign would be necessary, since many people regarded this as insufficient.

Preface

A little over twelve months have gone by since I started writing this thesis. There is one important lesson I learned while writing it: no matter where you are, you are always hunted by the idea that you still have work to do for your thesis. This partly has to do with my 'luck' of my parents living near a RandstadRail station, but also with the fact that there are also light rail developments in other parts of the world…

When I started my master Urban Geography in September 2009, I quickly became bored by the extensive attention for housing and all the related themes. I already followed all available courses on Urban Geography in the bachelor, so this theme was one I was very familiar with. Therefore, I started following courses Political Geographies at the University of Amsterdam as well in the second half of the year. But as I still had to write a thesis for Urban Geography, I choose a thesis subject in a different direction I was not that familiar with: transport. And while I had to get into it a little at first, I quickly started to enjoy it.

However, after a summer holiday in South Africa, the desire to go abroad and to do something related to the courses in Political Geographies I followed in Amsterdam made that I impulsively applied for an internship at the Dutch Embassy in Tel Aviv. And sure enough, in January, I went to Israel for six months, with the idea to make some progress on my thesis as well. Of course, that idea got nowhere. But every time I went to Jerusalem (and that was quite a lot), I was reminded of my thesis by the unfinished light rail there. While there were many other reasons for the delayed start of use of this light rail network (most of them concerning politics or money), there were also many similarities. As I had to read the Israeli paper every day, I learned that there were also many failures and accidents, which made the process look a lot like that of the RandstadRail.

Back in Holland at the end of June, I still had my thesis to finish. After three weeks on holiday (of which one was devoted to a lost attempt to finish my statistical part…), I finally started working on it again in August. By that time, I had encountered many unsuspected problems and it became clear that I would not make the September deadline. But with a little effort, only a few weeks extra were required to finish it.

There are of course many people I have to thank who contributed to this thesis. First of all, I want to thank my supervisor, Jan Prillwitz, for all his feedback and pushes in the 'right' direction. Your knowledge on the subject made the start a little easier for me, as I did not have much knowledge on the field of travel behaviour to begin with. Our meetings were always fun and helpful, and made sure I was motivated again. Secondly, I want to thank all the respondents in the survey. Without so many responses, it would have been impossible to do the empirical research for this thesis. Even more thanks goes out to the five people who filled in a survey ánd agreed to have an additional interview.
Next, I want to thank Egbert for his endless motivation and patience, the latter especially when my statistical knowledge once again proved to be long forgotten. Also, I want to thank my parents for not minding the extra month of thesis writing, even after already seven years of studying... And last (but not least), I want to thank all the people that were present at the university to have coffee, lunch and cola breaks with, whether or not following the 'pauzeschema'!

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1. Introduction

"Is the RandstadRail ever going to work?", *"Overloaded trains because of failure RandstadRail causes passengers to be gasping for breath"* and *"Claims after delays RandstadRail"* (ZoetermeerOV, 2007; De Pers, 2008) were just a few of the many news headlines about the RandstadRail. This light rail-based network in the West of the Netherlands connects the cities of The Hague, Zoetermeer and Rotterdam in the southern part of the Randstad area. The network consists of one metro line between The Hague and Rotterdam; and two light rail lines between The Hague and Zoetermeer. The network mainly uses former train- and existing tram tracks (Onderzoeksraad, 2008). The main purpose of the development of the RandstadRail is to improve the accessibility of the Rotterdam and The Hague regions (Onderzoeksraad, 2008, p. 23). Also, the goal was to tempt more people to use public transport instead of their car.

The development of the RandstadRail encountered many problems. The implementation of the network led to the longest disturbance of public transport in an area in the Netherlands since 1945. For seventeen months after the Dutch National Railways ended their services on the old rail network and for another fourteen months after the planned start of the use of the new RandstadRail network, travellers between The Hague and Zoetermeer had to use a bus service as a substitute. Malfunctioning material and derailments caused that many people used the name "RampstadRail" (RandstadRail disaster) for the transport network (AD Rotterdam, 2006).

After its somewhat disastrous start, the RandstadRail is currently functioning as it should be. However, it is questioned if the network is used as much as was intended and predicted by the stakeholders. Apparently, many travellers still stick to their 'old' modes of transport, which they developed before the RandstadRail was introduced and during the delays of the start of use. However, there are already plans to extend the current network with additional lines (ARCADIS, 2006).

1.1 Research questions and conceptual model

In light of this possible future development, but also regarding the current use of the network, it is interesting to look at why people decide whether or not to use the RandstadRail. Therefore, the central research question of this thesis will be:

Which factors determine whether travellers use the RandstadRail or not?

The decision to use the RandstadRail or not involves a choice: the use of the RandstadRail or a different mode of transport. Often, people become familiar with using a certain mode of transport for a specific movement they regularly make. This makes that the choice for a type of transport can become more or less automatic. In that case, the alternatives are not (or hardly) considered anymore, until there is reason to consider them again (Moeller, 2002).

In the international literature, choice behaviour has become a key issue of social science environmental research over the last decades (Bamberg & Schmidt, 2003). There are two approaches to this issue, namely an economic approach and a social approach. The economic models try to predict consumer choice and behaviour by math models. In contrast, the social psychological approach tries to explain the decision making process itself (Peter & Olsen, 2005; Gärling e.a., 1998b). Since the central theme of this thesis is *why* people choose to use something as their mode of transport (the RandstadRail or an alternative), the social psychological approach is more of value for this thesis. This lies in the fact that it studies how certain behaviour comes into existence, and therefore also how it can be altered.

There is some consensus in the international literature on the factors that influence a person's (choice) behaviour. First of all, every individual is different, and will have different characteristics that influence a choice. For the study of travel behaviour, many researchers make a distinction between different types of travellers regarding their likelihood to use public transport (see for example Koolen & Tertoolen, 2006; Van Beynen de Hoog, 2004; Ministerie van Verkeer en Waterstaat, 2006). The general idea is that the type of traveller that is the most likely to be tempted to use public transport usually earns an income that is above average; is likely to have a high level of education; and chooses between the car and public transport for work-, education- or shopping trips (Ministerie van Verkeer en Waterstaat, 2006).

Next, the general view is that the process of choice starts with the availability of information (see for instance Peter & Olsen, 2005; Ben-Akiva e.a., 1999). While people are trying to make sense of all the information available to them, they create beliefs about the various options between which they are going to make a choice. Beliefs are seen as part of people's cognitive mental responses (Peter & Olsen, 2005). These beliefs about the expected positive effects of performing the behaviour can outweigh the negative effects. Then, people are more likely to perform that specific behaviour, and vice versa (Ajzen & Fishbein, 2005).

The well-known Theory of Reasoned Action (TRA) of Ajzen and Fishbein (1991), and its successor the Theory of Planned Behaviour (TPB) (see Ajzen, 1991), indicate the same factors to bee of influence on the attitude of an individual towards a choice. However, the TRA adds subjective norms to be of influence as well. This subjective norm concerns an individual's beliefs about perceived social pressure. This pressure can come from anyone a person has contact with.

These assumed relations lead to the first research question of this thesis (see also Figure 1.1), namely: **Q*1: To what extent is the attitude of a traveller towards the RandstadRail influenced by his or her personal characteristics, knowledge about the RandstadRail and the subjective norm?***

Ajzen changed the TRA into the TPB by adding the concept of Perceived Behavioural Control to the TRA. Perceived Behaviour Control (PBC) concerns an individual's perception of ease or difficulty to perform the behaviour. Thus, it involves both past experiences as anticipated obstacles. It is believed that the more favourable the attitude towards a behaviour and the greater the PBC, the stronger the intention of an individual would be to perform the behaviour (Ajzen, 1991).

Some researchers add intention as another research topic in between attitude and choice (behaviour) in order to further understand the cognitive process. If people do not intend to perform certain behaviour (for example to travel by Randstadrail), then people will most likely not do so. This makes intention the an important predictor of (choice)behaviour (Eagley and Chaiken, 1993).

This presumed relation between attitude, PBC and intention (see Figure 1.1) is reflected in the second research question: ***Q2: How do the attitude of a traveller towards the RandstadRail and his or her Perceived Behaviour Control influence the intention to use the RandstadRail?***

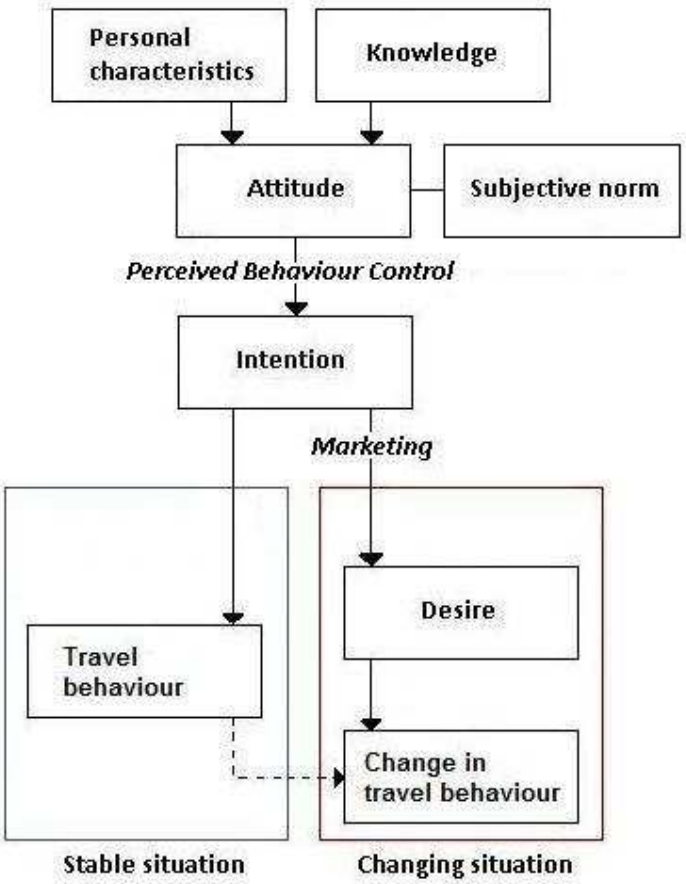
Despite the fact that the TPB if well-known and often used in social research, some point to shortcomings in the theory. One of these critics involves an assumed *"missing link"* in the relation between attitude and intention assumed in the TPB: the subjective experience of desire (Bagozzi, 1992, p. 184). According to these critics on the TPB, an attitude alone is not enough: there has to be desire to perform certain behaviour. Desire is the link that makes that an attitude is transformed into an intention. These relations (see Figure 1.1) are explored through the third research question: ***Q3: To what extent does the attitude***

towards the RandstadRail influence desire to use the RandstadRail, and what is the relation of this desire with the intention to use the RandstadRail?

In addition to all the already mentioned factors of influence, the final step for possible behaviour change is to make the alternative attractive: to create desire. Especially when the change is initialized, the alternative must be really attractive compared to the old habit (Tertoolen, 2009, p. 5). Therefore, the fourth research questions looks at the relation between desire and the actual use of the RandstadRail (see Figure 1.1): ***Q4: How does desire influence the actual use of the RandstadRail?***

In 2007, after the RandstadRail became operational, the actual use of the lines of the RandstadRail seemed to be lower than expected. The number of travellers was apparently far below the estimates of the number of travellers which were made before the RandstadRail was developed, predicting an increase in travellers with 19,5 percent a year (HTMFoto, 2009). Especially line E between Rotterdam and The Hague was not used that much. However, after the track was completed in the summer of 2010, the number of travellers seemed to have increased (RET, 2010). The actual use of the RandstadRail will be further explored along the fifth and last research question: ***Q5: Is there a difference in frequency of use and use for different purposes between the different RandstadRail lines (respectively line E and line 3 and 4)?***

Figure 1.1: Conceptual model



1.2 Social and scientific relevance

The available research material on travel behaviour is quite extensive. The Theory of Planned Behaviour (TPB) (see Chapter 3: Theoretical background) is one that is often used to explain behaviour in research in the social sciences. For this thesis, the factors from the TPB will be combined with those from other theories in order to address the weaknesses found in the TPB. Therefore, it can hopefully add more valuable information to the field of research on travel behaviour.

The question why people use the RandstadRail or not is interesting because it can give an insight in people's motives for using a certain type of transport. As most transport developments are quite costly, both in terms of money and time, it is crucial that they make profits once they are operational. When the number of travellers would be too low, it would be costly to keep a service operational, besides the large investments already made in the development of the transport mode.

As noted above, one of the main reasons why the RandstadRail network was developed was to tempt more people to use public transport instead of their car. However, it remains to be seen if this goal is reached, or even if it can be reached, since it is possible that some people cannot be tempted to change their travel behaviour. However, as noted in Paragraph 1.1, it is assumed to be difficult to alter behaviour, and therefore also travel behaviour. This makes it interesting to look at the motives behind the choices people make regarding travel behaviour, since this can help attract more people to using the new mode of transport. And with a new mode of transport available, such as the RandstadRail was when it was introduced, it is very relevant to look at the motives determining whether people use it or not. As there are already extensions planned on the RandstadRail network (see ARCADIS, 2006) and as there always will be new transport projects that will be developed, these future developments might benefit from findings on shortcomings or missed chances appearing from this research.

1.3 Structure of the thesis

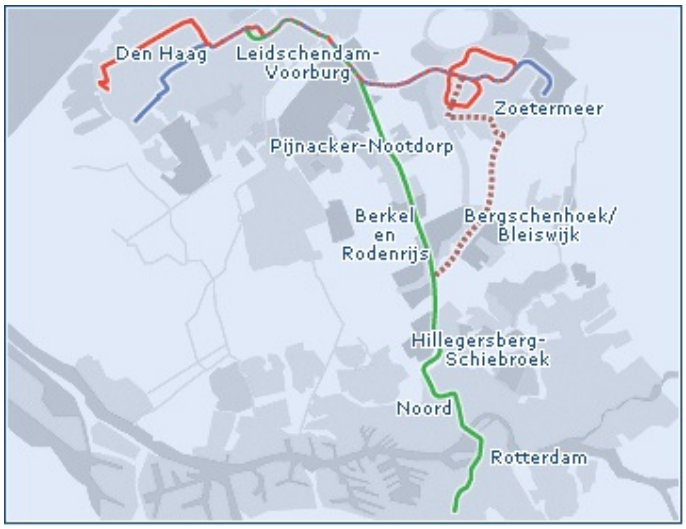
The structure of this thesis will be the following. Firstly, an overview of the development of the RandstadRail will be given. This will involve a description of the development and the problems that occurred in this process; the current use of the RandstadRail; and the plans for future development. Secondly, relevant theories from the international literature for the research subject will be outlined. After that, the methodology of the empirical part of this thesis will be discussed. The empirical part will involve both quantitative and a small qualitative study. The results from these studies will be discussed in the subsequent chapter. Finally, conclusions will be drawn in order to answer the central question, which will be followed by a discussion and some recommendations.

2. Development of the RandstadRail network

2.1 Reasons for developing the RandstadRail

The RandstadRail network in the west of the Netherlands connects the cities of The Hague, Zoetermeer and Rotterdam in the southern part of the Randstad. It is a transport system that is a combination of both high-speed tram (light rail) and subway systems (Onderzoeksraad, 2008, p. 23). The subway line runs between The Hague and Rotterdam; and two light rail lines run between The Hague and Zoetermeer (see Figure 2.1). The network mainly uses former train- and existing tram tracks.

Figure 2.1: The network of the RandstadRail



Source: NABB (2006)

The overall purpose of the development of the RandstadRail is to improve the accessibility of the Rotterdam and The Hague regions, and to decrease the amount of traffic on the surrounding highways (Onderzoeksraad, 2008, p. 23). Between 1983 and 2008, the population of the southern part of the Randstad increased with approximately 15 percent to 1.5 million people. At the same time, the number of jobs grew with more than 20 percent (Van der Toorn, 2003). These developments led to the planning and construction of several large housing projects in Pijnacker, Nootdorp, Leidschenveen and Ypenburg. Congestion on the highways intensified after the population increased and the volume of travellers from home to work increased. This made clear that the public transport network needed to be upgraded in order to increase the use of it (Van der Toorn, 2003). The idea was that this would relieve the highways somewhat, as the number of car travellers would decrease.

In this chapter, the development of the RandstadRail network will be discussed. The planning process and the construction of the network will be outlined, as well as the problems that were experienced during the start of the use of the network. This background to the network is considered to be important for the following research on the use of the RandstadRail, since it might provide an insight in the reasons why people use the network, or not.

2.2 Planning and decision making process

The first initiatives towards the network that would later be named the RandstadRail network date from as far back as 1988 (Onderzoeksraad, 2008, p. 24). In that year, the city council of The Hague wrote a document which stated that there would be research of the

attainability of a regional high-speed tram (light rail) system in the agglomeration of The Hague (Termorshuizen & Van der Mark, 1988). The estimates during that time were that the increase in car traffic in the area of The Hague would be around 70 percent around the time of the millennium. The city wanted to improve its public transport network. By changing the Zoetermeer Stadslijn and the Hofpleinlijn (the railway network connecting the cities of respectively Zoetermeer and Rotterdam with The Hague) into light rail and to extend the network to the city centre of The Hague, a transfer at The Hague Central Station would not be necessary anymore. This last measure was planned because research showed that a transfer led to the decrease of the number of travellers (Onderzoeksraad, 2008).

With these improvements, the city council of The Hague estimated to be able to increase the number of travellers on the track of the old Zoetermeer Stadslijn with 26 percent. This would lead to a decrease of the volume of car traffic with 7 percent (Termorshuizen & Van der Mark, 1988). The proposition for a light rail network was discussed on 22 June 1988 by the The Hague city council. They considered the plan to be a feasible measure to decrease the car use and to increase the accessibility of the region. The city council of The Hague was not the only institution that was concerned about the increasing population and traffic volume in the Randstad. On 9 June 1988, the Traffic Department of Rotterdam (Verkeersdienst Rotterdam) launched the report *'Logistructuur Rotterdam, verkeers- en vervoerbeleid in de jaren negentig'* (Traffic- and transport policy of Rotterdam in the 1990s). The report discussed the increase of commuter traffic, because more and more people lived further away from their work. This led to an increase in the volume of traffic in the region of Rotterdam (Van 't Hoogerhuijs, 1988). The report suggested the construction of a subwayline from Rotterdam to Ridderkerk, with forks to Hendrik-Ido-Ambacht and Alblasserdam. An already existing tramline in Rotterdam would be extended to Vlaardingen. The suggestion was also made that the Erasmuslijn (the subway from Rotterdam to Spijkenisse) would be connected to the Hofpleinlijn. At the city of Pijnacker, a connection with Zoetermeer would be developed. Also, de Hoekse Lijn (the railway connection between Schiedam and Hoek van Holland) would be connected to the Rotterdam subway network (Van 't Hoogerhuijs, 1988).

The first cooperation under the name 'RandstadRail' was formed in July 1992 when the RandstadRail Cooperation (Stichting RandstadRail) was established. This was a cooperation between the HTM (the public transport company of The Hague), RET (the public transport company of Rotterdam), ZWN-Groep (a regional public transport company), the Dutch National Railway company (NS) and the involved regional governments. With the slogan 'RandstadRail, de files voorbij' (RandstadRail, the end of congestion), the purpose was to connect the urban networks of The Hague and Rotterdam with the Zoetermeer Stadslijn and the Hofpleinlijn. In Rotterdam, this would be accomplished by connecting the Hofpleinlijn to the already existing subway network in the city; in The Hague, the Zoetermeer Stadslijn would be connected with the already existing tram lines to Loosduinen and Scheveningen (RandstadRail, 2010). The plan was to run a light rail system consisting of high-speed trams on the entire new network.

The city region Haaglanden, the city region Rotterdam, the province of Zuid-Holland and the Directorate General for Public Works and Water Management (Rijkswaterstaat) presented an exploring study about these plans with the RandstadRail in November 1996. In this study, the following plans were presented (RandstadRail, 2010):

- Modification of the Zoetermeer Stadslijn and Hofpleinlijn into light rail lines;
- Extension of both lines to the city centers of respectively Zoetermeer and Rotterdam;
- Construction of a new, direct light rail connection between Zoetermeer and Rotterdam.

The estimates were that the realization of the plans would cost approximately 1,5 to 3 billion euro (RandstadRail, 2010).

The Minister of the Ministry of Transport (Ministerie van Verkeer en Waterstaat) during that time, Annemarie Jorritsma, was hesitant about the plan. She proposed a pilot with light rail or modified existing material to test it. On 8 July 1997, the four involved governmental institutions signed a governmental agreement about the RandstadRail (Bestuurlijke Overeenkomst RandstadRail), which consisted of agreements about the study of the costs and benefits of the network (Ministerie van Verkeer en Waterstaat, 1997). However, it did not take long before it became clear that the pilot was not well thought-through and resulted in large delays. It was unclear how the high-speed trams would be combined with the existing, high platforms at the station; it was also unknown where the trams would be purchased (RandstadRail, 2010).

The Advisory Committee on the RandstadRail (Stuurgroep RandstadRail) presented the main details of a new study in April 1998, which was followed by a final version in November of the same year. Because of the high estimated costs of the RandstadRail project, there was decided that the plan would be divided into two phases (RandstadRail, 2010). The first phase would consist of changing the already existing parts of the network into light rail lines. The second phase was the construction of the new parts of the tracks, including the construction of new stations near the new large housing projects and new extensions of the network. All these plans would cost approximately 0,6 billion euro (RandstadRail, 2010).

However, the governmental actors thought this proposition was not enough, and the Advisory Committee had to work out another plan. The new plan included a combination of the RandstadRail network with the existing subway network of Rotterdam. This proposed combination resulted in complaints from both the HTM as the RET. In the city center of The Hague, the combination with the subway would mean that there would be vehicles used with an access height of at least 90 centimeter, because the already existing subway stations in Rotterdam that would be connected to the network required vehicles of this access height. The implications of this for the urban images were thought to be unacceptable for the involved parties. However, the city of Rotterdam would not allow high-speed trams on their subway lines. The RET thought that the capacity of the trams would be too small for the transport demand of the subway in Rotterdam (RandstadRail, 2010).

Therefore, the RandstadRail project was once again split. It was decided that the Hofpleinlijn would be changed into a subway line, connected to the existing subway network of Rotterdam; and a high-speed tram (light rail) network would be developed on the old Zoetermeer Stadslijn track. On the part of the network where both lines would run (between Leidschenveen and Laan van Nieuw Oost-Indië), so-called 'hybrid platforms' would be developed: platforms with both a low and a high part to service both types of transport. With these adjustments, the modification- and construction costs rose from 0,6 billion euro to 0,9 billion euro, even excluding the transport material that would be used on the network. The Advisory Committee on the RandstadRail defended this increase in costs with the expectance that the transport value and the cost coverage would grow because of the improvements. However, the Ministry of Transport would not increase the budget (RandstadRail, 2010). Because of this decision, expenses had to be cut down, and money had to be saved on different projects of the plan. There also was some money available from another project, because that turned out to be less expensive than expected. The national government gave an additional 200 billion euro for the project, which partly came from the report *'Bereikbaarheidsoffensief Randstad'* (Accessibility boost for the Randstad) (RandstadRail, 2010).

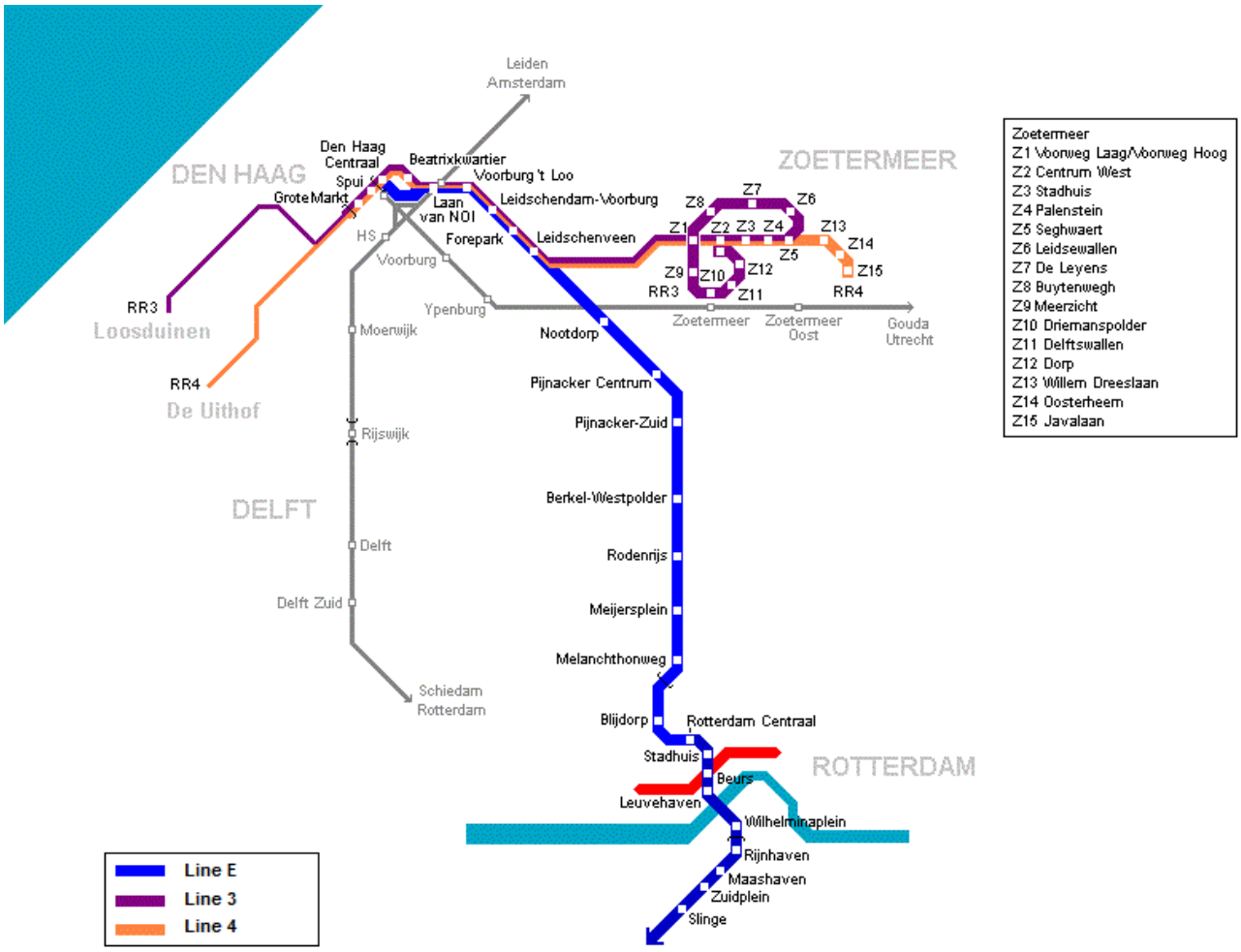
In 2000, the financial details were arranged with the involved parties, and on 12 July 2000, the involved regions and the Minister of Transport signed the principal agreement.

Because of all the adjustments of the original plans, the start of the use of the RandstadRail was delayed from 2004 to 2006. Construction work formally started on 21 November 2002 in Leidschenveen. However, it still took almost five years for the RandstadRail to be fully operative.

2.3 The network and its services

The RandstadRail currently consists of three network lines (see Figure 2.2). These are line 3 and 4, which are serviced by the HTM; and subway line E, serviced by the RET. The vehicles used on line 3 and 4 are low-floor trams; the line of the RET is serviced by specially modified subway vehicles.

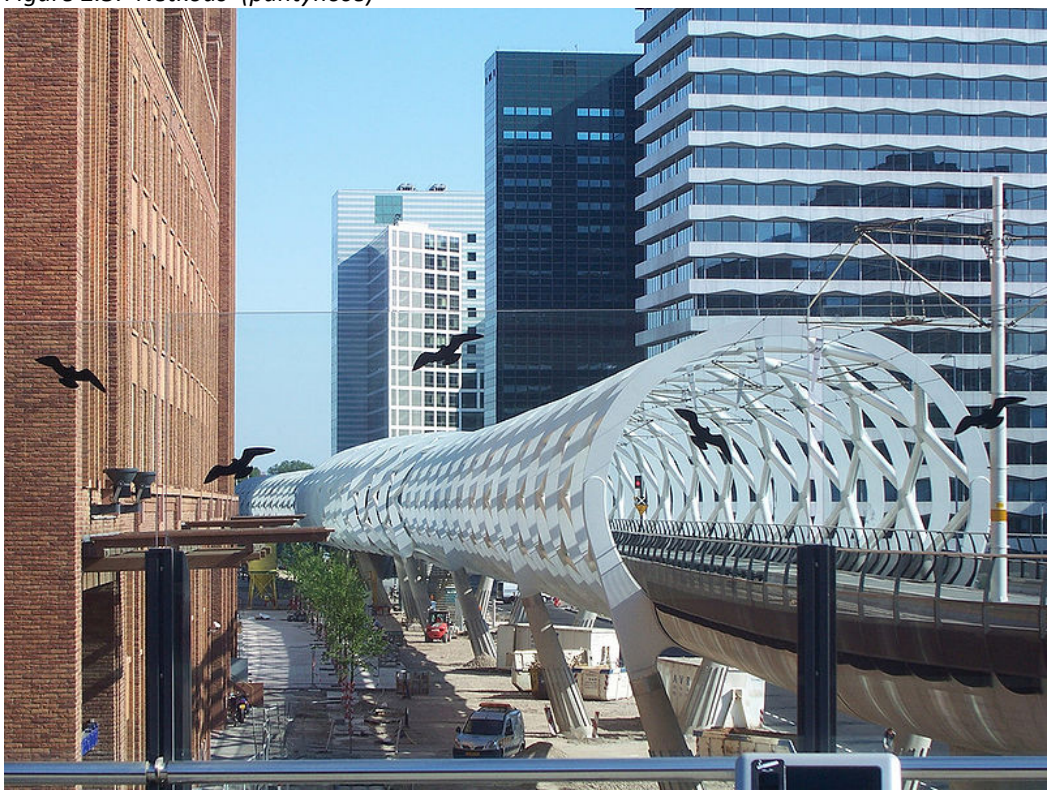
Figure 2.2: Network of the RandstadRail



Source: based on UrbanRail.net (2010)

RandstadRail line 3 (The Hague Loosduinen – Zoetermeer Centrum West)
RandstadRail line 3 runs from Loosduinen to Zoetermeer Centrum-West (see Figure 3.2). On this track, there is a combination of two former lines. The track between Loosduinen and The Hague Central Station is on the track of the already old tram line 3 of The Hague, which was no longer in service after the RandstadRail started its services. Between The Hague Central Station and Zoetermeer Centrum-West, the track has been taken over from the old Zoetermeer Stadslijn. For this line, one new part had to be build: between Ternoot and station Laan van Nieuw Oost-Indië, the so-called ' Netkous' (pantyhose, see Figure 2.3) was built.

Figure 2.3: 'Netkous' (pantyhose)



Source: Tukka (2007)

The line is serviced every 10 minutes during weekdays. Since 20 October 2008, there is an additional line 3K (short) during rush hours, which services the busiest part of the line (between De Savornin Lohmanplein in The Hague and Zoetermeer Centrum-West). On this part of the line, there is a service every 5 minutes during rush hours. On the part of the track which is shared with RandstadRail line 4 (between The Hague Central Station and Seghwaert), this is even every 2,5 minutes on average. Recently, the services of line 3K were cut back, because the number of transport vehicles on this part of the track was too much (RandstadRail, 2010).

RandstadRail 4 (The Hague De Uithof – Zoetermeer Javalaan)
RandstadRail line 4 runs between The Hague De Uithof and Zoetermeer Javalaan (see Figure 2.2). This line is also a combination of two former Lines. Between De Uithof and Leyenburg, the track of the old tram 6 has been taken over. This line has been shortened after it became part of the RandstadRail network. The track between The Hague Central Station and Seghwaert has been developed on the old Zoetermeer Stadslijn rail track. For the development of RandstadRail 4, four new parts had to be constructed. These were

connections between different parts on the route, and the construction of the 'Netkous', which is shared with line 3.

Line 4 has the same service frequency as line 3 during weekdays: every 10 minutes. Since October 2008, the busiest part of the line was also additionally served by a rush hour line 4K (short). There is a service once every 5 minutes on this part. On the part of the track that is shared with line 3, this is even every 2,5 minutes, until the number of services has recently been cut back as well.

RandstadRail line E (The Hague Central Station – Rotterdam Central Station)
Line E has been named so as from 13 December 2009, as it was named RandstadRail Erasmuslijn before that. The track has been fully taken over from the old Hofpleinlijn. Since August 2010, the line has been connected by a tunnel with the subway of the city of Rotterdam at Rotterdam Central Station. Another part of this tunnel is still under construction (RET, 2010). In 2011, construction works on the tunnel will be completed, and line E will be extended to station Rotterdam Slinge (see Figure 2.2). Following this, the service frequency can be increased as well. Subway line E is currently serviced every 15 minutes on weekdays (RandstadRail, 2010).

2.4 Construction and start of use

On 25 May 2006, the services on the old Zoetermeer Stadslijn and Hofpleinlijn were officially ended. After this, both railway networks were out of order as from 3 June 2006. In the time between the end of train service and the start of the use of the RandstadRail, there were temporary bus services available. Travellers between The Hague and Zoetermeer Centrum-West (the old Zoetermeer Stadslijn station, which is the most important station in Zoetermeer) could use a high-speed bus. At Zoetermeer Centrum-West, a transfer could be made to other bus lines, which serviced the different places in Zoetermeer where the Zoetermeer Stadslijn had its stations. The track between The Hague and Rotterdam was covered by another high-speed bus line (RandstadRail, 2010). All the bus services were executed by the HTM. The company used not only its own material and employees, but rented various other transport material and foreign employees.

According to the new planning, the start of the use of the RandstadRail would be on 3 September 2006. Because of several failures of the power supply, there was not enough time left to test the security of the rail tracks and the vehicles. Therefore, the city regions Haaglanden and Rotterdam decided to again postpone the start of the use of the network. As already noted in the introduction (see Chapter 1), the development of the RandstadRail led to a disturbance of 32 months in public transport in the area. But also after the start of the use of the network was already delayed, the further start of use turned out to be problematic.

Zoetermeer – The Hague
At the end of October in 2006, RandstadRail line 4 was used on the track Oosterheem (Javalaan) to Monstersestraat. This part of the track kept experiencing malfunctions during the first weeks of use. On 3 and 4 November 2006, two vehicles with passengers derailed nearby The Hague Central Station. This resulted in several injured people. The Onderzoeksraad voor Veiligheid (Dutch Safety Council) later discovered that this was caused by outworn rail parts (Onderzoeksraad, 2008). After two new derailments during tests on 29 November 2006 at station Forepark (a RET transport vehicle) and near station Ternoot (HTM material), all RandstadRail traffic was cancelled until further notice by the Inspection on Transport (Inspectie Verkeer en Waterstaat).

After research by the Dutch Safety Council, it became clear that the subway of the RET had derailed after a malfunctioning track switch; and the tram of the HTM had most likely derailed because of a lack of possible movement between the wheels of the tram and the rail. As a result, part of the track near Ternoot was replaced in the beginning of 2007. Besides that, at least ten track switches turned out to be damaged. The Inspection of Traffic concluded in a report that the safety checks were not sufficient (De Volkskrant, 2007). Track switches had been damaged while they were constructed, which had remained unnoticed. Traffic control experienced a lot of technical disturbances, and service supervisors were not sufficiently trained. Finally, the communication between the drivers of the vehicles and the service supervision was poor (De Volkskrant, 2007). During the repair works, travellers had to use the bus services again.

As from 12 February 2007, the line RandstadRail 3 was already used on the track between Loosduinen and The Hague Central Station after a period of intensive testing without passengers. On 16 May 2007, the track between The Hague Central Station and De Uithof followed. RandstadRail line 4 serviced its full track between De Uithof and Zoetermeer Javalaan as from 8 October 2007, when the new station Forepark (at the sight of a large business area) was put into use. At the end of October 2007, also RandstadRail line 3 was used on its full track between Loosduinen and Zoetermeer Centrum-West. Because of the long time it took for the area of Zoetermeer to be fully serviced by the RandstadRail, the bus services were kept until 2 November 2007. There were a lot of complaints about this transport substitution: there was not enough material for the amount of travellers (ZoetermeerOV, 2007). This was due to the inability of the HTM to get enough vehicles and employees on short notice, because the bus services had to be reinstated quickly after the services stopped on demand of the Inspection of Transport.

Rotterdam – The Hague

The first line of the RandstadRail which was partially used was subway line E; on the part of the track between Rotterdam Hofplein and Nootdorp (RandstadRail, 2010). This RandstadRail line proved to be the least problematic part of the network to be put into use. Despite the two derailments near The Hague Central Station in November 2006, the full line was serviced as from 11 November 2006. After the Inspection on Transport shut down all RandstadRail traffic between Zoetermeer and The Hague at the end of November in 2006, subway line E was allowed to continue its service on the track from Rotterdam Hofplein to Nootdorp, because this part of the track had not experienced any trouble since the several malfunctions in the beginning. As there were no further problems with the lines between Zoetermeer and The Hague, in September 2007, subway line E serviced its full track from Rotterdam Hofplein to The Hague Central Station again.

As from 2 November 2007, the whole network of the RandstadRail was finally in service when line 4 was fully serviced. This was more than one year after the expected date.

2.5 Usage of the RandstadRail

As noted before, one of the main goals of the RandstadRail was to increase the number of travellers on its network and to take some pressure of the surrounding highways. In March 2008, the HTM did a count of the number of travellers on line 3 and 4 on an average workday (ZoetermeerOV, 2007). On the line between Zoetermeer and The Hague, approximately 17.000 people travelled daily on the old train line. After the transformation into the RandstadRail, this number had increased to approximately 27.000 daily travellers in March 2008. However, this rise can be explained for some part through the addition of a new link to the neighbourhood of Oosterheem, which had not been part of the old Zoetermeer Stadslijn. On the line of the RandstadRail which runs through the city centre of

The Hague, the number of travellers was disappointing (ZoetermeerOV, 2007). Therefore, the HTM decided to increase the frequency of services in order to increase the number of travellers on the line.

In January 2009, another research showed a different picture (HTMFoto, 2009). These numbers indicated that in March 2008, 75.000 travellers daily used line 3 and 4 of the RandstadRail. In the fall of 2009, this number had increased to 94.000 daily travellers.

However, despite these more positive figures, these numbers are far below the estimates of the number of travellers which were made before the RandstadRail was developed. These predicted an increase in travellers with 19,5 percent a year (HTMFoto, 2009).

Subway line E transported approximately 8.200 travellers in 2008, which was a yearly increase of 2,3 percent (RET, 2010). But since the tunnel at Rotterdam Central Station was put into use in August 2010, the number of travellers increased enormous. In September 2010, the number of travellers was not the expected 14.000 daily travellers, but an estimate of 17.200 a day. After the line will be extended to Rotterdam Slinge in 2011, and the frequency of the services can be increased, the expectations are that the number of travellers on the line will increase to 28.000 travellers in 2014 (RET, 2010).

2.6 Future plans with the RandstadRail network

The development of the RandstadRail network is not finished with the completion and full use of the current network. ARCADIS, a planning agency, investigated the possibilities for a further extension of the network for the Department of Urban Development of the city of The Hague and Stadsgewest Haaglanden. This project, describing the so-called ‘ second phase’ of the development of the RandstadRail, has been named ‘*Netwerk RandstadRail*’ (RandstadRail network) (ARCADIS, 2006).

In the report that came out in 2006, ARCADIS proposes several measures to extent the public transport in the Haaglanden-area. The idea is to extent the current RandstadRail network with three already existing tram lines in The Hague: 1 (Delft - Scheveningen), 9 (Den Haag Vredenrust - Scheveningen) and 11 (Voorburg Station – Scheveningen). These tram lines would be transformed into RandstadRail lines, with an increased service frequency. Also, other parts of the region will be connected with the lines of the RandstadRail with high-quality bus lines. The whole transport system in the area will be improved by creating more transfer possibilities, a higher service frequency and improved flows in and around the city centre of The Hague (ARCADIS, 2006).

Also, the planned connection between Rotterdam and Zoetermeer is still not established. In the original plans of 1996, the intention was to develop a light-rail connection between the two cities (RandstadRail, 2010). However, research showed that such a connection would not be profitable. There were not enough potential travellers in the area to use this part of the track (ARCADIS, 2006). Therefore, the plans for a light-rail connection were changed into a high-speed bus line between Zoetermeer Centrum-West and Berkel en Rodenrijs (see Figure 2.4). The bus was named ‘ZoRo-bus’ (ZoetermeerRotterdam-bus), and would run on a designated bus lane with a length of seven kilometres. As both ends of the line were stations, travellers would be able to make a quick transfer to the RandstadRail (ARCADIS, 2006).

The city councils of the three municipalities where the ZoRo-bus would be running through (Berkel en Rodenrijs, Bergschenhoek and Bleiswijk) were positive about the development of the line. Therefore, the Commissie Verkeer & Vervoer (Commission Traffic & Transport) of the city region Rotterdam approved the plans in September 2004 (ARCADIS, 2006).

However, the ZoRo-bus is still not in service. Firstly, lengthy appeal processes from inhabitants of the surrounding areas of the line made the decision process slow. Further inabilities to obtain the land required for the bus lane have delayed the expected start of the services of the ZoRo-bus until at least 2011 (Algemeen Dagblad, 2009). These problems have to do with the route of the bus line: it was partly running through a nature reserve, which resulted in much protest.
After years of problems, the involved parties finally signed an agreement in April 2011, which meant that the construction of the ZoRo-network can finally start. The bus line must be completed in December 2012 (RandstadRail, 2011).

Figure 2.4: The route of the ZoRo-bus (indicated with the green line)

Source: RandstadRail (2010)

2.7 Summary

As becomes clear from the background study of the development of the RandstadRail, the construction and following introduction did not go smoothly. Once the RandstadRail was ready to be used, derailments and accidents made sure that the service was halted until there became clear what the reason for the failures was. This led to an even longer disturbance of services. An apparent result was that the RandstadRail seemed to be struggling at first to attract passengers. But over the years and with the connection to Rotterdam Central station, the numbers seemed to have gone up. There are already plans to extend the RandstadRail network with additional lines, but these plans are at a starting point and nowhere near reality yet. The last planned development of the RandstadRail network and the link that is still missing, the ZoRo-bus line between Zoetermeer and Rotterdam, finally got approval in April 2011 and still has to be completed, which will happen in December 2012.

3. Theoretical background

3.1 Choosing a mode of transport

Most individuals frequently have to move from one place to another in their daily life. For each of these movements, they can choose between different modes of transport. Often, the same situations where this choice has to be made are recurring, for example the choice how to travel from home to work. This makes that people become familiar with using a certain mode of transport for a specific movement. Therefore, this choice becomes more or less automatic and the alternatives are not considered anymore, until there is reason to consider them again (Moeller, 2002).

The initial choice for a certain type of transportation is subject to many factors and influences. The decision making process is a cognitive process in which a choice is made based on beliefs which are influenced by affect, attitudes, motives and preferences (Ben-Akiva e.a., 1999). This complexity makes the choice for a certain type of transport difficult to grasp. Many disciplines of science attempt to deal with this so-called 'modal choice'. Modal choice can be approached from several viewpoints. Because it is a form of consumer choice, it has been investigated by many marketing scholars. Marketing is also considered to be an important tool for influencing the use of a certain mode of (public) transport, like the RandstadRail. Peter & Olsen discuss in their book '*Consumer Behaviour and Marketing Strategy*' three approaches: one deriving from cultural anthropology; one from social psychology; and an econometric one (Peter & Olsen, 2005). Two of these approaches will be further explained: the econometric and the social psychological, as the approach of cultural anthropology is not relevant for the research topic of travel behaviour.

The economic approach is derived from the Micro Economic Theory (MET). This theory states that a consumer will gather all the possibilities and then evaluate the economic consequences when one of these options will be taken. MET uses the assumption of economic rationality and therefore assumes that individuals (called 'homo economicus') will base their choices on maximising their utility (Jager e.a., 2000). Also, the assumption is that all people have perfect knowledge of all options available. Therefore, the theory states that an individual's choice can be predicted when his/her attitude towards the economic risk and what when his/her budget restrictions are known (Gärling e.a., 1998b).

In the social sciences, and especially psychology, the assumption of the existence of a 'homo economicus' is often criticized. The main critique is that people do not always tend to optimize the outcome of their decisions, but just want to satisfy their needs (Simon, 1976 in Jager e.a., 2000, p. 360). Psychologists also argue that because people have only limited cognitive resources, much of their daily choices are automated. People will stick to the same choice over and over again, as long as the outcome is satisfying for them.

The question of how to predict and influence human behaviour has become a key issue of social science environmental research over the last decades (Bamberg & Schmidt, 2003). Where the micro-economic decision models are valuable in predicting consumer choice and behaviour by math models, the social psychological approach seeks to explain the decision making process itself (Peter & Olsen, 2005; Gärling e.a., 1998b). The value of the social-psychological approach lies in the possibility to alter behaviour for example by influencing beliefs (by marketing) or changing the attributes of the subject under investigation. Since it is important for this research to understand *why* people choose to use something as their mode of transport (the RandstadRail or an alternative), the social psychological approach will be used in this thesis.

3.2 Social psychology: the study of behaviour

Consumers have to make many choices about each journey they make, and one of these is the mode of transport. The actual choice behaviour which can be characterised as the

decision-making process is further investigated by scientists from many disciplines (for example: Ben-Akiva e.a., 1999). One of the main fields of research is that of social psychology. The general consensus in this field is that the process of choice starts with the availability of information. In the process of making sense of all the information available to consumers, they create beliefs about the various options between which they are going to make a choice. Beliefs are seen as part of people's cognitive mental responses, referring to thinking (Peter & Olsen, 2005). Ben-Akiva and his co-authors further explain that beliefs and perceptions are *"(…) influenced by affect, attitudes, motives and preferences"* (1999, p. 188). The notion of affect(ion) refers to certain feelings consumers may have about an object, often expressed as 'like' or 'dislike'. For example, someone can dislike using the car to get from home to work because he/she is always delayed by traffic jams. Affection is a natural response of people. Therefore, it is said that the affective system is largely reactive (Peter & Olsen, 2005).

When the expected positive effects of performing the behaviour outweigh the negative effects, people are more likely to perform that specific behaviour, and vice versa (Ajzen & Fishbein, 2005). Ben-Akiva and his co-authors define attitudes as *"(…) stable psychological tendencies to evaluate particular entities (outcomes or activities) with favour or disfavour"* (1999, p. 188). Motives can be defined as stimuli to reach certain goals, for example the wish to be 'green' (environmental friendly). Preferences express judgements on different entities and their outcomes, for example preferring one mode of transport over another. Since an affect about a certain object (emotion, feeling, mood, evaluation) can alter the cognitive system (knowledge, meaning, beliefs) in that way that it will be altered the next time a choice has to be made, the cognitive and affective system are related (Peter & Olsen, 2005). In the earlier used example of a person disliking to use the car to get from home to work because of delays by traffic jams, this dislike can result in a change of travel mode, for example the use of public transport instead of the car.

After extensive research on the relationship between attitude and choice (behaviour), intention has been added in between these two concepts as a research topic in order to further understand the cognitive process. If people do not intend to perform certain behaviour (for example to travel by Randstadrail), then people will most likely not do so. Therefore, intention is regarded as being the most proximal predictor of (choice)behaviour by Eagley and Chaiken (1993). In this line, Gärling and Axhausen (2003) name past behaviour, intention and the situation as the potential determents of behaviour.

One of the well-known theories in the international literature about the relationship between intention and attitude as well as other behavioural factors is Ajzen's Theory of Planned Behaviour (TPB) (Ajzen, 1991). Therefore, this theory will be discussed in the next paragraph.

3.3 The Theory of Planned Behaviour

In the 1970s and 1980s, many of the researches conducted on people's behaviour were found to be lacking a strong theoretical basis. After these 'empirical problems' came to light, the research on the subject carried out in the 1990s consisted of the application of well-established social-psychological theories on the prediction and explanation of behaviour. The most famous examples are the norm activation model of Schwartz (1977) and the theory of reasoned action (TRA) of Ajzen and Fishbein (2005). The latter theory was later succeeded by the Theory of Planned Behaviour (TPB).

The TRA assumes that choice behaviour is influenced by an individual's intention to perform that certain behaviour, or to make that choice. For example, if an individual has the intention to travel by RandstadRail next time, he is likely to do so when he/she has to choose a mode of transport for this journey. In general, the stronger the intention, the more likely it

is an individual will perform the behaviour. Secondly, the TRA also assumes that the intention is influenced by an individual's attitude towards a certain object. In this thesis, this 'object' is to travel with the RandstadRail. Finally, the TRA assumes subjective norms to be of influence as well. The subjective norms involve an individual's beliefs about perceived social pressure. For example, whether or not an individual's believes his/her colleagues find it important to travel by RandstadRail. Ajzen changed the TRA into the Theory of Planned Behaviour (TPB) by adding the concept of Perceived Behavioural Control, or also termed self-efficacy, to the TRA. Perceived Behaviour Control reflects an individual's perception of ease or difficulty to perform the behaviour. It thus both involves past experience as well as anticipated obstacles. For example, whether or not an individual believes to have a good connection to other transport modes by using the RandstadRail. In general, it is believed that the more favourable the attitude towards a behaviour and the more favourable the SN and the greater the PBC, the stronger the intention of an individual would be to perform the behaviour (Ajzen, 1991).

The TPB is used in a wide variety of social psychological studies, but is also useful for explaining travel behaviour (see for examples Bamberg e.a., 2003; Dijst e.a., 2008; Haustein & Hunecke, 2007). Haustein and Hunecke summarise three reasons why the TPB forms a good framework for explaining mobility behaviour: *"First, it contains the central predictors to explain mobility behaviour. Second, comprising five parameters only, the TPB can be operationalized efficiently in the context of survey studies. Third, the TPB is open to the inclusion of additional predictors to increase its predictive power"* (2007, p. 1858). The five parameters Haustein and Hunecke are referring to are the personal characteristics; attitude; perceived behavioural control; social norm; and intention. However, as was discussed before, also knowledge and preferences are believed to influential on the beliefs which are formed by people. In the case of this thesis, knowledge about the possibilities of the RandstadRail (for example, destinations and travel times) can for example influence the intention to make use of the network.

Despite its wide appraisal, there is also critique on the Theory of Planned Behaviour. Bagozzi refers to a *"missing link"* in the relation between attitude and intention assumed in the TPB: the subjective experience of desire (Bagozzi, 1992, p. 184). According to him, an attitude alone is not enough: there has to be desire to perform certain behaviour. Bagozzi distinguishes between two different kinds of desire: appetitive and volitive. The first is concerned with desire for some kind of consumption (for example, to eat a sandwich); the latter is about the desire to do something (for example, to visit a friend), and is more alike to an attitude towards something. According to Bagozzi, people only transform an attitude into an intention if either the appetitive or volitive desire is stimulated, or both (Bagozzi, 1992, p. 186).

Verplanken, Aarts and Van Knippenberg (1997) point out that the TPB provides the field of science with a *"(…) solid model, which has proved useful in a large variety of domains"*, but it has led to an underestimation of *"(….) the importance of daily, repetitive, and habitual behaviours"* (Verplanken, Aarts & Van Knippenberg, 1997, p. 540). Their argument is that the fact that individuals develop habitual behavioural patterns (for example, to always use the car to get from home to work) makes that the study of habits should receive more attention in the field of social psychology (Verplanken, Aarts & Van Knippenberg, 1997, p. 558). Therefore, habits will be the subject of the next paragraph.

3.4 Habits: making and breaking them

Everyday life consists of many repeated patterns of behaviour. It a subject that is most concerned with the field of social sciences, and especially psychology. In psychology, a habit has been defined as *"(…) learned sequences of acts that have become automatic responses*

to specific cues, and are functional in obtaining certain goals or end-states" (Verplanken & Aarts, 1999 in Moeller, 2002). Habits can be divided into general and specific habits. A general habit is characterized by the appearance of its cues to trigger the habit in many different situations. In contrast, the trigger of specific habits is restricted to particular behaviour in a certain context (Moeller, 2002).

Bargh claims that one of the main characteristic of habits is its automaticity, which is reflected in four features (Bargh, 1996 in Moeller, 2002):

1. *Intentionality*
   Habits are functional in the sense that they help a person to reach a certain goal or to fulfill a certain need. Therefore, they are to some degree intentional (or volitional).
2. *Controllability*
   Most of the actions of human beings are breakable through conscious deliberation. This means that habits can be controlled to a certain level; beyond this level, the actions are not even considered anymore. However, the existence of for example action-slip and occurrence indicate that people cannot always control their habits, even when they intend to do so.
3. *(lack of) Awareness*
   Related to the conscious deliberation is that many routine decisions in life are taken by human beings without them being conscious about making them.
4. *Efficiency*
   A habit requires little mental effort of a person to execute this habit. This makes it possible for people to execute complex behaviour under tough conditions (for example, driving a car under time pressure) or in combination with other activities (for example, making a conference call on a hands-free mobile phone while driving a car).

Each of these four features can differ in its degree in a certain habit (Bargh, 1996 in Moeller, 2002). However, the controllability, (lack of) awareness and efficiency are considered to be of the most importance for the automatic character of habits (Verplanken & Aarts, 1999 in Moeller, 2002). It should also be noted that habits are only functional to the owner of the habit, because a certain habit can be automatic for one individual, but be less obvious for someone else. For example, someone who uses his car to get from home to work every day will think of this habit as natural, but his colleague who uses public transport to get from home to the same office every day, may think of it as not so natural.

In order for behaviour to become a habit, a learning process is required (Moeller, 2002). The first condition for this to happen is repeated behaviour. Many of the special characteristics of behaviour only show when behaviour is repeated frequently and extensively. But this is not the case for all behaviour; some behaviour does not require that much repeating to become a habit. This has to do with the strength of the habit. The second prerequisite involves the presence of a stable and supporting environment, that is: a constant context which helps the habit to be developed. However, the environment does not have to stay completely the same once the habit is taken on. The third and last condition is that the habit gives benefit to the individual performing it (Moeller, 2002).

Once a habit is established, the question remains how this habit can be changed. According to Moeller (2002), an intention to change certain behaviour is required before an individual will consider doing so. The general assumption is that the development of an intention is preceded by a process of deliberate gathering of information. This process may include choosing a decision strategy, the search for information, the selection or construction of alternatives, and the evaluation of these alternatives (Moeller, 2002). If

behaviour is strongly determined by a habit, then this process is less intensive, because (parts of) this process is repeated.

Prillwitz, Harms and Lanzendorf (2006) use the so-called 'life course approach' to explain changes in travel behaviour. This means that they render the effect of changes in the *"behavioural context"* (for example, a residential relocation or the birth of a child into a family) as possibilities for a change in travel behaviour. These possibilities are considered as *"windows of opportunity"*, where the *"(…) evaluation and choice of alternative transport modes"* can take place (Prillwitz, Harms & Lanzendorf, 2006, p. 3). These windows of opportunities do no regularly occur; they are rare.

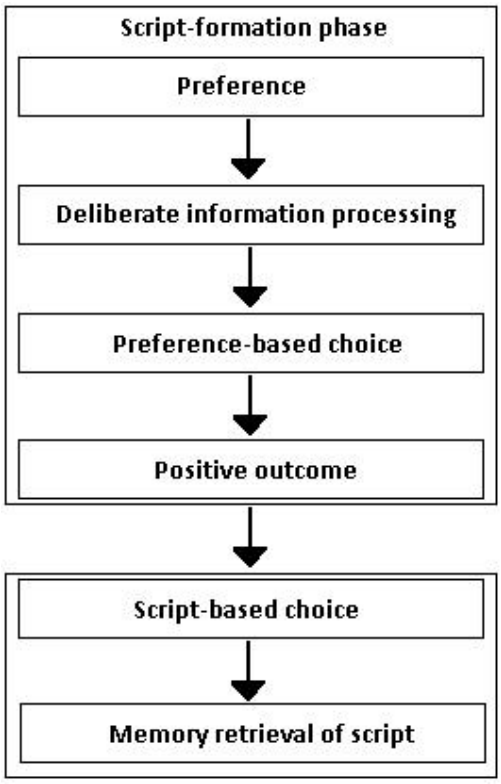
Therefore, according to Aarts, Paulussen and Schaalma, the implementation of behaviour change is not so easy. They consider it to be more difficult if the change only has rewarding effects for the individual on the long-term (Aarts, Paulussen & Schaalma, 1997 in Ouelette & Wood 1998). Because the new behaviour does not give much evidence of reward on the short-term, many people will not hold on to their new behaviour. The new behaviour has to become more or less automatic and show the rewards for the long-term before people will continue to execute the new behaviour. However, the old behaviour will be maintained when it is easy to fall back into it. The most effective strategies for behaviour change are the ones that still maintain the old habits, but meanwhile facilitate the formation of new habits (Ouelette & Wood, 1998).

Moeller (2002) identifies two strategies for changing undesirable habits. The first is disturbing the automatic process, and thus to create some deliberation about the performed behaviour. The second one is to change the context the behaviour takes place in. The more general the habit is (and thus the more contexts create cues for the behaviour), the more difficult it is to alter the habit (Moeller, 2002).

Gärling and Axhausen (2003) also present a distinction between the level of deliberation in habits, which they divide into planned and impulsive behaviour. However, they make a difference between deliberate and script-based choice instead of habits (see Figure 3.1). According to them, certain behaviour (for example, the use of public transport to get from home to work) is repeated because the intention is repeatedly formed. They claim that attempts to influence non-deliberate choices are useless; these choices need to become deliberate before anything can be done to change them (Gärling & Axhausen, 2003).

In the next paragraph, the attention will shift to changing travel behaviour, since that is the main topic of this thesis.

Figure 3.1: The formation of habits



Source: Gärling & Axhausen (2003)

3.5 Changing travel behaviour

In the international literature, it has been frequently noted that individual's travel patterns seem to repeat themselves on a regular basis. This means that it is widely assumed that they are habitual of character (Gärling & Axhausen, 2003). From the viewpoint of management strategies of travel demand, this is an important reason to be interested in theories about habitual characteristics. As Gärling and Axhausen put it, *"(…) it must also be asked how habits are broken, that is, how choices become deliberate and rational again"* (Gärling & Axhausen, 2003, p. 1). Because habits are not easy to break, it presents transport planning with a challenge.

Tertoolen (2009) therefore emphasizes the importance of bringing the improvements of the alternative to the attention. People are only tempted to change if the alternative provides advantages compared to the old situation (Tertoolen, 2009). According to Tertoolen, a modification in behaviour can only be accomplished when the alternative meets a variety of competencies (see Figure 3.2).

Figure 3.2: Behavioural model for behaviour modification

Source: based on 'Gedragsmodel' (Tertoolen, 2009)

All aspects from Tertoolen's model are important for establishing a change in behaviour. Firstly, the alternative must be observed ('observation'). Without knowledge of an existing alternative, it is impossible to use it. Secondly, the target group must understand ('understanding') the possibility that the alternative offers. Therefore, it is important that

the advantages of the alternative are known. According to Tertoolen, this makes marketing of the alternative necessary, because this will aid both the observation and the understanding of the (benefits of the) alternative. The third step is being able to show the new behaviour, or being able to use the alternative ('being able'). As Tertoolen puts it: *"to ask someone to use public transport in a place where there is none, will lead to nothing"* (Tertoolen, 2009, p. 5). The final step is the motivation of the target group ('desire') to change the behaviour. This means that, especially at the start, the alternative *"… must be extremely attractive, with a clear and easy to comprehend advantages for the individual"* (Tertoolen, 2009, p. 5). When all these requirements are met, travel behaviour can be altered ('change').

According to Tertoolen, earlier research has shown that the opinion about public transport is mainly negative (Tertoolen, 2009). The negative aspects (for example delays) are remembered and the positive aspects are rendered 'normal', and are not noted anymore. To accomplish a change in travel behaviour from car use to public transport, it is therefore necessary to improve the image of public transport, so that people associate it with more positive things. This will create a more positive value of experience, which will increase the use (Tertoolen, 2009).

The Kennisplatform Verkeer en Vervoer (KpVV) has implemented a Swedish strategy for projects involving changing travel behaviour. The method is called 'Sumo', which stands for system of evaluation of mobility projects. In a total of nine steps (see Figure 3.3), the relation between a certain (policy) measure and its result can be analyzed. Central in this analysis is the user of the offer (the new mode of transport) (KpVV, 2010, p. 5). This policy tool is now widely used in the Netherlands by both government departments and consultancy companies in the field of transport.

Figure 3.3: The nine steps of Sumo

Supply	
A	Measurements and communication
B	Familiar with the offer
C	Interest in the offer
D	Satisfied with the information
Desired behaviour	
E	Appeal
F	Trying offer
G	Satisfied with the offer
Result	
H	Change in behaviour
I	Effects of the new behaviour

Source: based on KpVV (2010)

In line with the centre position of the user of the (new) mode of transport, Tertoolen (2009) emphasizes the importance of thinking in target groups for the analysis of transport behaviour. These target groups can be formed out of many characteristics, for example similar destinations, motives or modes of transport (Tertoolen, 2009). Koolen and Tertoolen (2006) also point out that there is no single potential 'public transport traveller', but different groups that each have different patterns of expectations (Koolen & Tertoolen, 2006). To further elaborate the importance of different groups, Tertoolen (2009) identifies five guidelines that should establish that the car-captives become less fixated at their cars and become more flexible in their choice of travel mode. These are the availability of

attractive choices; transfer points that are of high quality; 'Self Explaining Environments'; mouth-to-mouth advertising; Internet and similar channels. These five guidelines form the starting point for an attempted change in travel behaviour. However, each of these guidelines requires measured application per target group (Tertoolen, 2009). To gain an insight in the groups of travellers, the next paragraph will discuss different types of travellers.

3.6 Types of travellers

Koolen and Tertoolen (2006) make a distinction between three types of travellers. The first ones are the so-called 'car-captives'; those people that never use public transport because they do not want to, or because there are no sufficient possibilities in their neighbourhood. The second type is the group that always uses public transport: the so-called 'public transport captives'. This group does not have a car. Less and less people belong to this group; the expectation of the authors is that more and more people will own a car (for a longer period in their lives). The last group consists of the so-called 'choice-traveller'. About half of all the people that use public transport belong to this third group of people. Koolen and Tertoolen make the division between these three groups to identify the opportunities for public transport (see Table 3.1) (Koolen & Tertoolen, 2006).

Table 3.1: Types of travellers and their opportunities for the public transport sector

Type of traveller	**Opportunities for public transport**
Car-captive	None
Public transport captive	Choice between using public transport or no mobility
Choice-traveller	Group which consists of the potential growth of public transport

Source: based on Koolen & Tertoolen (2006)

The Ministry of Transport (Ministerie van Verkeer en Waterstaat, 2006) argues that the number of choice-travellers increases in the Netherlands (see Table 3.2). They point to a growing unreliability of travelling by car because of traffic jams and parking problems; and to its growing user costs because of fuel prices and parking costs.

Table 3.2: Share of the different travel types in the Netherlands (2006)

Type of traveller	**Share (% of total travellers)**
Choice-travellers	45
Car-captives	31
Public transport captives	20
Cyclists and pedestrians	4

Source: Ministerie van Verkeer en Waterstaat (2006)

According to research by the Ministry of Transport, the choice-traveller has more or less the same characteristics as the average Dutch traveller (Ministerie van Verkeer en Waterstaat, 2006). People who are captives of their car or public transport are disproportionally either young or old, and most likely to be female. The label 'forced traveller' is given to a person who is a car-captive or a public transport captive. In contrast to this forced traveller, the choice-traveller usually earns an income that is above average; is likely to have a high level of education; and wants to choose between the car and public transport for work-, education- or shopping trips (Ministerie van Verkeer en Waterstaat, 2006). Research of

research bureau Ferro and the province of Noord-Brabant shows a more or less similar image of the choice-traveller. However, these researchers add that a high amount of choice-travellers lives in the larger cities other than the biggest four cities in Holland (for example, in Arnhem or Amersfoort). The highest absolute number of choice-travellers can be found in the provinces of Noord- and Zuid-Holland, as the highest relative number can be found in the province of Utrecht. Another conclusion is that there is a disproportional high level of car-captives among people with a lower level of education. The public transport captives are mainly represented by people with lower than average incomes (Provincie Noord-Brabant, 2002; Stienstra & Smets, 2002).

Van Beynen de Hoog (2004) identifies two problems with choice-travellers. The first problem is the question what someone experiences as a travel mode possibility. Because one person can experience something as an opportunity, but another person does not have to experience the same thing. The process of choice for a certain travel mode is therefore no objective process, but a subjective one. The most important element in this context is the perception the traveller has of the surrounding area and the related travel options (Van Beynen de Hoog, 2004, p. 5). The second problem is the dynamic nature of the choice-traveller. Strictly speaking, a traveller can be a captive (of the car or public transport) at one point, but a choice-traveller at another moment. This makes that there is no fixed group of choice-travellers, because the size and composition of this group is situational; it depends on the time and place.

In a paper published in 2003, Tertoolen makes a useful division between different types of choice-travellers. This division does not only have attention for the actual use of transport modes, but also for personal opinion. Tertoolen distinguishes between potential choice-travellers, frequent choice-travellers and very frequent choice-travellers (Tertoolen, 2003). The first group consists of people that use public transport very sparsely (less than ones every four weeks), because they also have a car. Frequent choice-travellers use public transport frequently (between ones every four weeks and once a week), but also have a car. The last group travels very frequently with public transport (at least once a week), and also has a car.

Van Beynen de Hoog adds something to this division in groups of choice-travellers. He claims that there is one element lacking in Tertoolen's definition, as the choice-traveller *"(…) experiences choice!"* (Van Beynen de Hoog, 2004, p. 7). Therefore, Van Beynen de Hoog makes a slightly different division in three different types of choice-travellers (see Table 2.3). He distinguishes between objective choice-travellers, subjective choice-travellers and combination choice-travellers (Van Beynen de Hoog, 2004, p. 5). These groups are not mutually exclusive.

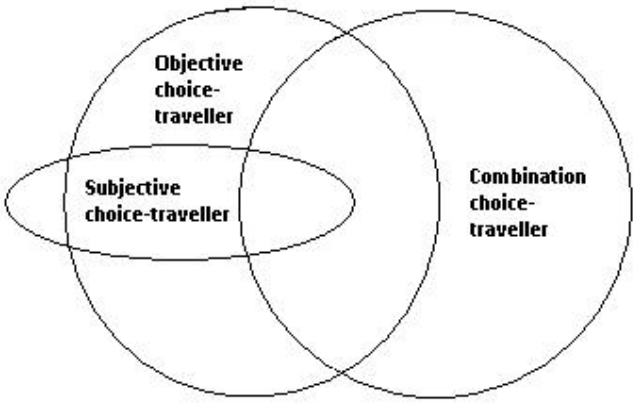
In this context, the subjective choice set is part of the objective choice set (see Figure 3.4). But the subjective set of choice can also contain perceptions that are actually no possibilities. There is also an overlap with the combination choice-traveller. This group can base his/her choice for a certain travel mode on convenience (for example the availability of a car or less frequent bus services during the weekend), but also on a well-weighted choice between the different travel modes (for example the choice to use the train instead of the car because he/she wishes to be more environmental-friendly).

Table 3.3: Types of choice-travellers

Type of choice-traveller	Description
Objective choice-traveller	In line with the classical transport models, which assume that there are identical, time-dependent choice sets that are considered by the traveller. This group of travellers bases his choice for its traveller mode on these objective choice sets.
Subjective choice-traveller	Group of travellers that makes the choice for its traveller mode on the base of perceived (subjective) choice sets. The actual choice is determined by characteristics of the traveller: education, knowledge, mode of living, interests, et cetera.
Combination choice-traveller	This group changes its mode of transport regularly, but does not make deliberate choices. The group of combination choice-travellers is more or less static, because the base is modes of transport, and not choice sets. For these travellers, there is no choice in mode of transport: the choice is made for them, as there is no alternative mode of transport available.

Source: based on Van Beynen de Hoog (2004, p. 5-6)

Figure 3.4: Graphical image of the different groups of choice-travellers



Source: based on Figure 1, Van Beynen de Hoog (2004, p. 6)

So the consensus is that the growth of public transport depends on the choice-travellers. However, this growth is conditional: it has to be clear under which circumstances the choice-travellers chooses to use public transport. As became clear from Figure 3.2, an important element in the process of choosing an alternative mode of transport is marketing. Therefore, this will be the subject of the next paragraph.

3.7 Marketing

Tertoolen was not the only one to identify the negative images of public transport among people. In a short publication of the Ministry of Transport, the same conclusion has been made from research figures from AVV/SCP (Ministerie van Verkeer en Waterstaat, 2006). They claim that public transport works better than most people think. But still, it has to be constantly improved, and it has to be presented to the right target group at the right moment (Ministerie van Verkeer en Waterstaat, 2006).

In the publication of the Ministry of Transport (2006), the image of public transport among people is considered to be an important tool to use for the improvement. However, marketing in public transport is not so well developed yet. The conclusion is that *"marketing of public transport can be so much better, much more thought-through, daring, on a larger scale, offensive, professional, structural and naturally"* (Ministerie van Verkeer en

Waterstaat, 2006). Policy makers from the government mainly believe in 'hard' policy measures, for example new infrastructure and different transport systems.

However, much can be gained through the use of 'soft' policy measures like marketing and management measures. According to Jones, *"these measures are often effective because many people lack information about alternatives to the car, even for journeys where good alternatives already exist"* (Jones, 2003, p. 1). Prillwitz, Harms and Lanzendorf reach the same conclusion about the benefits of 'soft' policy measures in their research on the influence of people's residential relocations and other life course changes on their travel behaviour (2007).

But according to Jones (2003), transport planners have only recently started to appreciate the value of 'soft' policy measures. He identifies *"(…) a general lack of understanding of the ways in which marketing and management initiatives influence travel attitudes and behaviour"* (Jones, 2003, p. 2) as an important for the slow acceptance of these kind of policy measures. This is the result of the domination of the field by an economic paradigm, which assumes that travellers are rational decision makers, who want to maximize utility and value economic benefits the most (Jones, 2003).

Taniguchi and Fujii (2006) also advise the use of 'soft' measures, which they call 'Mobility Management' (MM). This transport management policy promotes the use of more sustainable transport modes like public transport or the bicycle instead of the car. The method for realizing this change is communication: the change will be voluntarily (Tanigyuchi & Fujii, 2006, p. 37-38). Results from a study that the authors have done on the 'Ring-Ring Bus' in Obihiro, Japan indicated that the MM-program of advertising by flyers resulted in an increase in the use of the bus; as well did mouth-to-mouth advertising (Taniguchi & Fujii, 2006, p. 47-48). Therefore, they conclude that 'soft' policy measures are the most effective ones.

The institute for Transport and Infrastructure Research, Socialdata, adds something more to 'soft policies'. They claim that if the orientation of the costumer (in this case the person who has to choose a mode of transport) is taken seriously, *"(…) information has to be brought to the costumer instead of expecting him/her to catch it from the provider"* (Brög, Erl & Mense, 2002, p. 1). Socialdata therefore developed the concept of Individualized Marketing (IndiMark). This program is *"(…) based on a targeted, personalized, customized marketing approach which empowers people to change their travel behaviour"* (Brög, Erl & Mense, 2002, p. 1). It is a dialogue-based technique, which has the intention to make people think about their travel behaviour. This is in line with the idea amongst researchers that a choice has to be made deliberate before it can be changed (see Paragraph 2.4).

3.8 Summary

From this review of international literature on the subject of travel behaviour, some things become apparent. Firstly, this is the fact that behaviour is difficult to change or influence. People tend to stick to the behaviour they are used to (habits), and will only chose to perform different behaviour if the alternative is more attractive when looked at the benefits. Marketing and promotion is very important in this process.

Secondly, some concepts are thought to be decisive in the process of choice. These are personal characteristics; knowledge; the subjective norm; Perceived Behaviour Control; attitude; intention; desire; and marketing. The relations between these concepts can also be found in the conceptual model (see Chapter 1: Introduction). In the next chapter, these relevant concepts will be translated into variables which can be used in the subsequent empirical research.

4. Methodology

4.1 Introduction

The subject of this thesis is which factors determine whether or not people use the RandstadRail network as their mode of transport. One of the main reasons why the RandstadRail network was developed was to tempt more people to use public transport instead of their car (see Chapter 2: Development of the RandstadRail network). Theoretical contributions from the international literature have showed that changing (travel) behaviour is not easy: people tend to stick to their habits (see Chapter 3: Theoretical background). Because the RandstadRail was introduced as a new transport mode in 2007, people had to change their travel habits to start using the RandstadRail.

As outlined before in the Introduction of this thesis, the central research question that will be answered in this thesis is: ***Which factors determine whether travellers use the RandstadRail or not?*** This methodological chapter will discuss and justify the research methods that are used for the empirical part of this thesis. The choices in methodology in this chapter are based on Baarda and De Goede (2001) and Bryman (2008). In the empirical part, the sub questions formulated for this study (also discussed in the Introduction) will be answered.

The structure of this methodological chapter will be the following. In the first paragraph, the design of the empirical part of this thesis is outlined. Next, the population that is studied will be discussed, along with the methods used to select and recruit respondents for the sample study. The different research methods used in the empirical part of this study will be covered in the subsequent paragraphs. The last part of this methodological chapter consists of a description of the analytical tools that are used to analyse the data gathered during the research for this thesis.

4.2 Research design

Bryman (2008) indicates that there has been a substantial growth over the years of the use of a combination of quantitative and qualitative research methods. According to him, combining them would "allow the various strengths to be capitalized upon and the weaknesses offset somewhat" (Bryman, 2008, p. 603). Therefore, the choice was made to use a combination of both quantitative and qualitative research methods for this thesis. The first section of the empirical part consists of a quantitative analysis: a survey which was held among households living near one of the RandstadRail stations (see Paragraph 4.3). In addition, some interviews were held with a small selection of the respondents from this survey. The number of these interviews is only small (five). The purpose of this was to gain a deeper insight in their travel behaviour, with a focus on the use of the RandstadRail (see Paragraph 4.4).

The concepts that were used for the empirical part were derived from the international literature (see Chapter 3: Theoretical background). These include knowledge about the RandstadRail, attitude towards the RandstadRail, subjective norm, Perceived Behaviour Control, and intention and desire to use the RandstadRail. Also the personal characteristics of respondents are thought to be an influential factor. In the empirical part of this thesis, the concepts that are thought to be of influence on the dependent variable (whether or not someone uses the RandstadRail) will be statistically tested to research this presumed relation.

4.3 Quantitative research: survey

The study population of this research consists of potential users of the RandstadRail. Generally speaking, every person has the possibility to use the RandstadRail if he or she wants to use it. This makes the potential study population very large and difficult to grasp.

However, it is likely that the majority of people who uses the RandstadRail will be living near one of the stations, as this will make it relatively easy to make use of the network. But besides these potential users with relatively easy access to the network, everyone has the possibility to use this mode of transport.

For the success of this research, it is important that both users and non-users of the RandstadRail network respond. In order to have relatively easy access to a group of people with both users and non-users among them, the choice was made to focus the sample study on people living near a RandstadRail station. This was done because this group of people has an important general basic feature: they live close to a station of the RandstadRail network, which makes that they are likely to consider the use of the RandstadRail when they make a choice about which mode of transport they will use. For people living further away from a station, it is likely that the use of the RandstadRail is not always considered when a travel mode is chosen (see Chapter 3: Theoretical background). Therefore, people living near a station make up an interesting group for this study. However, there still has to be noted that there cannot be assumed that all the people in the study have exactly the same possibility of access to the RandstadRail because of, for example, their age or financial situation.

Also, as became clear from background information about the RandstadRail, there is an expected difference between the use of the two lines between Zoetermeer and The Hague; and the track between Rotterdam and The Hague. The first two lines still seem to be disappointing in the number of travelers; but the latter seems to be more successful in attracting travellers (see Chapter 2: Development of the RandstadRail network). Therefore, the survey is held in neighbourhoods near stations with access to all three lines of the RandstadRail. Not only does this choice result in a greater number of potential RandstadRail users (since the people living in these neighbourhoods have access to the destinations on all the lines), it can also help to identify differences between the lines that can provide an answer to the question why there is a difference in success.

The number of these stations is limited: only five stations in the whole network have access to all three RandstadRail lines. From the five possible stations, the neighbourhoods near the stations of Leidschenveen and Leidschendam-Voorburg were selected (see Figure 4.1 and Figure 4.2: red areas are areas where the survey was taken; blue dots are the RandstadRail stations). A main reason for this is that these stations are closely located to large residential areas, which makes the potential number of respondents high.

The survey had the form of a structured interview (Bryman, 2008). This means that all respondents completed the exact same survey. It also means that the sequence of the questions is fixed in advance; and the majority of the questions are ‘closed’ (the answers are divided into fixed categories, from which the respondent has to choose the most accurate one for its own situation). The main reason why this research method is used is because the number of respondents has to be sufficient to be able to use a statistical analysis on the results afterwards.

The survey is taken through a random sampling method. This means randomly selected households in the selected neighbourhoods received a survey in their mailbox. The survey (see Appendix II - Survey) was delivered to 250 households on 3 December 2010. The survey was printed and a cover page was added to attract the attention. To assure a more or less random selection, the survey was delivered to every third door in the neighbourhoods.

A couple of options were given to submit the survey:

- The survey could be filled in on paper. On the cover page of the survey, there was indicated that the survey would be picked up on Wednesday the 8th of December between 14:00 and 16:00. This time was chosen because children attending primary

school have a free afternoon on Wednesday; therefore, it is the most likely day during the week that someone is home;

- If the paper survey was filled in, but someone would be away on the Wednesday the 8th of December, there was indicated on the cover page that the survey would also be picked up if it was left sticking out of the mailbox;
- Also, an online version of the survey was created, which was exactly the same as the paper version. A hyperlink to the online survey was indicated on the cover page of the paper survey that was delivered to the households.

In total, 119 respondents submitted the survey, most of them through the online version of the survey. This makes that the non-response is 131, or a little over 50 percent.

Figure 4.1: Leidschenveen

Source: Google Map (2011)

Figure 4.2: Leidschendam-Voorburg

Source: Google Maps (2011)

4.4 Qualitative research: interviews

In addition to the data gathered in the survey, some interviews were held with users and non-users of the RandstadRail. The people that were interviewed were selected from the respondents of the survey. This was done through adding a question if they are willing to participate in an additional interview about their travel behaviour at the end of the survey. From all the positive responses, two users and two non-users of the RandstadRail were randomly selected.

The interviews with the users of the RandstadRail focused on the reasons why they choose to use the RandstadRail, and whether or not their car-use changed because of travelling with the RandstadRail. The interviews with the non-users of the RandstadRail focused on why they do not choose to use the RandstadRail

4.5 Operationalisation of the variables from the survey

In December 2010, 250 households received a survey about their travel behaviour related to the RandstadRail. This paragraph will provide an insight into how the concepts recognized to be of influence were translated into variables that could be used in the quantitative analysis. First, the operationalisation of the dependent variable, the actual use of the RandstadRail, is elaborated. Next, the measurement of the independent variables will be discussed. At the end of the paragraph, the analytical tools that will be used in the empirical section to analyse the data will be elaborated.

4.5.1 Dependent variable

The dependent variable that is central to this thesis is whether or not an individual makes use of the RandstadRail. This is measured in the survey through two questions: one about the use of RandstadRail line E from Den Haag to Rotterdam; and a second about the use of RandstadRail lines 3 and 4 from Den Haag to Zoetermeer. The respondents were asked to indicate their average weekly use of the RandstadRail lines on the following scale: never; not more than one day; between 1 and 3 days; and on more than 3 days.

The separation of the use of the different lines of the RandstadRail was made in order to see if there is a difference in use of the lines, as this is one of the research questions of this thesis.

The independent variables that are used will be tested to see what their influence is on this dependent variable. This will be done through various statistical tests. In the following section, the measurements for the independent variables will be outlined, along with the tests that are used.

4.5.2 Independent variables

There are seven concepts derived from the international literature that are thought to be of influence on the dependent variable in this thesis: the actual use of the RandstadRail. This paragraph will first discuss for each of these concepts how they are measured in the survey. Next, the different research questions (see Introduction) will be discussed with the formulated hypotheses and the analytical tools that will be used in the empirical study to test these estimated relations.

Personal characteristics

Regarding the personal characteristics of a respondent, there are many things that are thought to be relevant for this study (see Chapter 3: Theoretical background).

Survey question	Answer categories
Gender	0=female 1=male
Age	Age (in years)
Household situation	1=single 2=living together/married 3=living together/married with children 4=single with children 5=other
Highest obtained level of education	1=primary/middle school 2=LBO/MBO 3=HBO 4=WO 5=other
Presence of a job	0=no 1=retired 2=yes
If available: job/study location	Location (name city)
If available: job time	1= I don't have a job 2=part-time (as a second job) 3=part-time 4=fulltime
Mean monthly household income	1=below modal 2=modal 3=two times modal 4=more than two times modal
Availability of a driver's license	0=no 1=yes
Number of cars available in the household	Cars (number)
- Availability of an OV chip card - Availability of an OV discount card	0=no 1=yes
Travel time to nearest RandstadRail station	Travel time in minutes (on foot)

Knowledge about the RandstadRail

For the operationalisation of the variable knowledge, this concept is divided into three dimensions. The first is the opinion about the availability of information about the RandstadRail, since it is important to know how a respondent values the amount of information available and the ease with which this information can be gathered.

The second category is knowledge about the actual service frequency and opportunities to reach a certain destination with the RandstadRail. This is thought to be of influence, because if someone knows all the possibilities of the RandstadRail, he or she will be more likely to use the RandstadRail as its mode of transport (see Chapter 3: Theoretical background).

Thirdly, knowledge about where to buy a ticket for the RandstadRail is questioned. This is thought to be influential on the actual use because you need a ticket in order to be able to travel with public transport, and also the RandstadRail.

Category	Survey question	Answer categories
Opinion of the availability of information about the RR	- I feel well-informed about the services of the RR - The start of the services of the RR was well-announced - I do not have to make an effort to get information about the RR	1=strongly disagree 2=disagree 3=neutral 4=agree 5=strongly agree
Knowledge about the services of the RR	- Frequency of line E - Frequency of line 3 and 4 - Transfer to Rotterdam Central Station - Transfer to Zoetermeer Centrum-West - Transfer to De Uithof	0=wrong 1=right
Knowledge about where to buy a ticket for the RR	I know where to buy a ticket for the RR	0=no 1=yes

Subjective norm

The social context, or subjective norm, is thought to be of influence for the choice for a certain mode of transport (see Chapter 3: Theoretical background). As this is difficult to measure, the choice was made to ask the preferred mode of transport (car or public transport) for three groups that belong to the social context of a respondent: family, friends and colleagues.

Survey question	Answer categories
Most of my family travels by...	0=car 1=public transport
Most of my friends travel by...	0=car 1=public transport
Most of my colleagues travel by...	0=car 1=public transport

Attitude

The attitude of a traveller towards the RandstadRail is divided into two levels, among which the variable is measured. The first one is the image of the RandstadRail among a respondent. This is operationalised in ten statements about the nature of the RandstadRail, with answer categories in the Likert-scale: varying from 1 (strongly disagree) to 5 (strongly agree).
The second category is the importance a traveller gives to certain characteristics of travelling. Seven of these are asked, with answer categories in the Likert-scale.

Category	Survey question	Answer categories
Statements about the image of the RR	The RR is: - Environmental-friendly - Comfortable - Safe - Reliable - Easy - Relaxing - Luxurious - Fast - Pleasurable - Cheap	1=strongly disagree 2=disagree 3=neutral 4=agree 5=strongly agree
Importance of aspects of travelling	For me, it is important that my mode of transport: - Is the cheapest - Is the fastest - Has one or no transfers - Be able to work - Have to pay attention - Relax - Has a flexible departure time	1=strongly disagree 2=disagree 3=neutral 4=agree 5=strongly agree

Perceived Behaviour Control

The Perceived Behaviour Control (PBC), or perceived ease of use, of the RandstadRail is a difficult concept to grasp. Based on earlier research from Tertoolen and Dijst (see Chapter 3: Theoretical background), some questions were added to the survey. The first dimension has to do with some of the statements about the image of the RandstadRail, which were used in Q3 as well. Also, the knowledge about where to buy a ticket is again relevant for the operationalisation of this sub question. Next, the ease to reach the RandstadRail station is an important fact, since this can determine how easy a respondent thinks it is to travel with the RandstadRail. Finally, once again, the attitude on parking facilities for both a bike and a car are seemingly relevant.

Category	Survey question	Answer categories
Statements about the image of the RR	The RR is: - Reliable - Easy - Fast	1=strongly disagree 2=disagree 3=neutral 4=agree 5=strongly agree
Knowledge about where to buy a ticket for the RR	I know where to buy a ticket for the RR	0=no 1=yes
Ease to reach the nearest RR station	It is easy for me to reach the nearest RR station by: - On foot - By bike - By car	1=strongly disagree 2=disagree 3=neutral 4=agree 5=strongly agree
Attitude on parking facilities at the nearest RR-station	- There is enough parking space for my bike at the nearest RR-station - There is enough parking space for my car at the nearest RR-station	1=strongly disagree 2=disagree 3=neutral 4=agree 5=strongly agree

Intention

Intention is thought to be one of the decisive factors for the choice to use a certain mode of transport (see Chapter 3: Theoretical background). This is measured in the quantitative research through two questions, with answer categories in the Likert-scale (varying from 1 to 5).

Survey question	**Answer categories**
Whenever I can, I use the RR	1=strongly disagree 2=disagree 3=neutral 4=agree 5=strongly agree
I am going to use the RR some time during next week	1=strongly disagree 2=disagree 3=neutral 4=agree 5=strongly agree

Desire

According to the literature (see Chapter 3: Theoretical background), there has to be a desire to use a certain mode of transport, or a desire to use another mode of transport in order to change travel behaviour, before this is done. Therefore, two questions measuring desire are added to the survey, both with answer categories on the Likert-scale.

Survey question	**Answer categories**
I do not use the RR as often as I would like	1=strongly disagree 2=disagree 3=neutral 4=agree 5=strongly agree
I want to use the RR some time during next week	1=strongly disagree 2=disagree 3=neutral 4=agree 5=strongly agree

Use of the RandstadRail

From documents about the development of the RandstadRail network, it became clear that the first time period after the RandstadRail was introduced, the actual use was still disappointing. This was particularly the case for the RandstadRail line E, between The Hague and Rotterdam (see Chapter 2: Development of the RandstadRail network). Therefore, two separate questions asking the respondent to indicate its average weekly use of the different RandstadRail lines is added in the survey.

Survey question	Answer categories
Number of days RR line E is used	1=never 2=max. 1 day 3=1-3 days 4=more than 3 days
Number of days RR lines 3 and 4 are used	1=never 2=max. 1 day 3=1-3 days 4=more than 3 days

4.6 Research questions and methods

In the next section, the research questions that were formulated (see Introduction) are discussed. Some statistical tests were done in advance to prepare the data for the empirical study that will be done later. These tests will be described. Also, the analytical tools that will be used to research these relations in the empirical part of this thesis will be discussed.

Q1: To what extent is the attitude of a traveller towards the RandstadRail influenced by his or her personal characteristics, knowledge about the RandstadRail and the subjective norm?

The first research question will be tested through a Regression analysis. In order to be able to do this, some recoding of the variables needs to be done first, because all the variables that will be put into the Regression model need to be either on the nominal (or dummy); or on the interval/ratio scale.

The variable attitude is built up out of two different levels. The levels show a relatively high level of correspondence with each other (Cronbach's Alpha is 0,73, see Table 1 in Appendix I - Statistical appendix). This means that they can be used together to test attitude.

The ten elements of the first of these levels, indicating someone's perception of the RandstadRail, appear to have a very high level of correspondence with each other: the value of Cronbach's Alpha is 0,912 (see Table 2 in Appendix I - Statistical appendix). This means that there can be assumed that almost all respondents answered more or less the same on all these ten questions (environmental-friendly, comfortable, safe, reliable, easy, relaxing, luxurious, fast, pleasurable, cheap). Therefore, the scores for these ten statements will be added and divided by ten, to make up a new variable indicating the opinion about the RandstadRail of the respondent. This new variable has a value between 1 (very low) and 5 (very high). A low score indicates that a respondent does not think very highly of the RandstadRail; a high score indicates a positive opinion about the RandstadRail.

The second level (Attitude B), indicating aspects of travelling which are important or unimportant for the respondent, also shows a relatively high value for Cronbach's Alpha testing the relation between the seven questions (see Table 3 in Appendix I - Statistical appendix). However, the choice was made not to transform these seven variables into one variable, as no single variable could be named which would cover all the characteristics of the seven variables. Thus, no valuable conclusion could be drawn if the seven variables would be recoded into one variable for the analysis. Therefore, the variables indicating various aspects of travelling will remain separate. This implies that seven separate Regression analyses have to be used in order to look into the second level of attitude.

The personal characteristics contain many different variables. For the analysis, some of these need to be recoded.

The household situation is recoded into three different dummy variables (single household (1) or not (0); couple (married or unmarried) (1) or not (0); and single or couple (married or unmarried) with child(ren) (1) or not (0)).

Level of education is recoded into a dummy indicating low (0) or high (1) level of education (low contains people who have primary/middle school and LBO/MBO education; high consists of HBO and WO educated people).

The variables indicating if someone has a job or studies are transformed into one dummy variable: whether a respondent has a job or studies (1); or not (0).
The location of the job or the study is recoded into two dummy variables (if someone has a job or studies at a city with RandstadRail access (1) or not (0); and if someone has a job or studies at a city without RandstadRail access (1) or not (0)). Through this recoding, the people that do not have a job and do not study are filtered out.

The variable indicating the time that someone is working, is recoded into two dummy variables, filtering out people without a job (working fulltime (1) or not (0); and working part-time (1) or not (0)).

The mean household income is transformed into one dummy variable: low (below modal or modal income) (0) and high (two times modal and more than two times modal income) (1).

Since the questions about the knowledge of the service frequency of the RandstadRail lines and the questions about whether or not a transfer has to be made to get from the nearest RandstadRail station to a certain destination both concern knowledge about the services of the RandstadRail and have the same scale in answer categories (namely 0 (wrong) or 1 (right)), they will be combined into one category, indicating the total score of a respondent's knowledge about the services of the RandstadRail, for the analysis. As all the other questions measuring the knowledge about the RandstadRail also have scoring categories on the same scale (0 is wrong; 1 is right), a total score for all the questions about knowledge is calculated, forming one new interval/ratio variable which will be used in the analysis.

The subjective norm has three variables which are already on the nominal score, and are therefore already suitable for the Regression analysis.

After the recoding, the dependent variable in this research question, the attitude, is built up out of two variables. Therefore, two Regression analyses will be executed to test the influence of the independent variables on each dimension of a respondent's attitude towards the RandstadRail. The second Regression analysis will consist of seven Regression analyses, as the seven different variables are not recoded into one variable, but remain separate in order to give a more detailed analysis.

All the variables used in the Regression analyses for the first research question show a level of correlation which is low enough to be able to use them in the analysis (see Table 5 and Table 6 in Appendix I - Statistical appendix).

Q2: How do the attitude of a traveller towards the RandstadRail and his or her Perceived Behaviour Control influence the intention to use the RandstadRail?

Again, a Regression analysis will be used to test this research question. But as the dependent variable is on the dummy scale, this time, a Binary Logistic Regression will be used. However, before this can be done, some variables that are used for the analysis need to be recoded. All the variables used in the regression model show a sufficiently low level of correlation (see Table 7 in Appendix I - Statistical appendix).

For this second research question, the first recoded variable indicating opinion about the RandstadRail (Attitude A) which was used for Q1 will be used again.

The second level of attitude, indicating aspects of travelling which are important or unimportant for the respondent, showed as said a relative high score for Cronbach's Alpha testing the relation between the seven questions (see Table 3 in Appendix I - Statistical appendix). While this was not done for the first research question, the seven variables will now be recoded into one new variable, which indicates the importance of aspects of traveling, as this will be easier for this analysis. This is done in the same way as with the ten elements of opinion about the RandstadRail: the total score of the seven variables is added, and then divided by seven. The new variable also has a value between 1 (very low) and 5 (very high). A low score indicates that a respondent does not care very much about different aspects of travelling (cheapest mode of transport, fastest mode of transport, one or no transfers have to be made while travelling, I can work while travelling, I do not have to pay attention while travelling, I can relax while travelling, my departure time is flexible); while a high score indicates that a respondent does care about these aspects.

Perceived Behaviour Control is made up of a few variables, which will be discussed separately.

The three variables indicating a respondent's ease to reach the nearest RandstadRail station through three different transport modes (respectively: on foot, by bike and by car will all be recoded into dummy variables, whereby the old values strongly disagree, disagree and neutral will be negative (0); and agree and strongly agree will be positive (1). This creates two new variables.

The same will be done with the variables indicating the respondent's perception of the parking possibilities for both bike and car at the nearest RandstadRail station, also creating a dummy variable.

The variable indicating whether or not a respondent thinks it is easy to reach the platform of the RandstadRail station shows to be constant in the analysis; nearly all respondents answered that they think it is easy to reach the platform. Therefore, it is excluded from the analysis, as it is excluded in SPSS when put into a regression model.

Intention is measured into two questions, and will be recoded into one variable. For each of the questions, the respondents that show no intention (who answered a question with strongly disagree, disagree or neutral), will receive a score of 0. The respondents that answered positive with strongly agree or agree will get a score of 1. Next, the respondents who have a score of 0 on both questions will receive also a 0 in the new variable, indicating the intention to use the RandstadRail. Also, all respondents who have a total score of 1 will get a 0. This is done because otherwise the division of the variables would be skewed and make the variable unusable for analysis (most respondents would receive a score of 1 in the new variable as they answered one of the two questions with 'yes'). Therefore, only the respondents who show intention on both questions measuring intention (and thus have a total score of 2) will score a 1 in the new variable.

Q3: To what extent does the attitude towards the RandstadRail influence desire to use the RandstadRail, and what is the relation of this desire with the intention to use the RandstadRail?

As well as for the second research question, the first recoded variable indicating opinion about the RandstadRail (Attitude A) which was used for Q1 will be used again. Also, the recoded variable indicating the importance given to different aspects of travelling (Attitude B) by a respondent will be used for this third research question.

Desire is, similar to intention, measured in two questions. More or less the same process of recoding will be done for this variable: for each of the questions, the respondents that show no desire (who answered a question with strongly disagree, disagree or neutral), will receive a score of 0. The respondents that answered positive with strongly agree or agree will get a score of 1. Next, the respondents who have a score of 0 on both questions will receive also a 0 in the new variable, indicating the desire to use the RandstadRail. All respondents who have a total score of 1or 2 on the two questions measuring desire will score a 1 in the new variable. This is done because the division of the values would be skewed if the same division as with the intention variable would be used: not many people answered both questions with 'yes'.

To test intention, the same recoded variable used for Q2 will be used.

As both attitude variables are scores and desire is a dummy variable, a Chi-Square test will be used here. The same can be done in order to answer the second part of the third research question, as both desire and intention are dummy variables. However, the test for attitude and desire shows that the requirements for cell filling are not met (see Table 4 in Appendix I - Statistical appendix), so an ANOVA test will be used instead.

Q4: How does desire influence the actual use of the RandstadRail?
For this research question, the actual use of the RandstadRail needs to be computed first, because this was split in two questions in the survey about the use of RandstadRail line E and of line 3 and 4. Firstly, the average use of all the RandstadRail lines is computed through calculating the mean score of the use of both RandstadRail line 3 and 4; and line E. This score is then recoded into three (never (score below 1,50); sometimes (score between 1,50 and 2,49); and often (score of 2,50 or higher)) instead of four values.

To test desire, the same computed variable as created for Q3 will be used, which indicates a respondent's total score on the two questions measuring desire.

The actual use of the RandstadRail is a categorical; desire is a nominal (dummy) variable. Therefore, a Chi-Square Test will be used.

Q5: Is there a difference in frequency of use and use for different purposes between the different RandstadRail lines (respectively line E and line 3 and 4)?
In order to be able to answer the final research questions, frequency tables will be used to look at the difference in use of the different RandstadRail lines.
Next, the frequencies of use for different purposes will be analysed for both car and RandstadRail in frequency tables resulting in graphs indicating the difference.

As all the statistical tools and the methods that will be used are now summarized, the statistical analysis itself can now be done. In the next chapter, the results from this empirical research on the sample study will be discussed.

5. Statistical analysis

In this chapter, the results of the survey that was held will be discussed. Also, the statistical methods that were used for the analysis of the data will be outlined. For the analysis of the quantitative data, the statistical program SPSS 16 was used.

This chapter will have the following structure. Firstly, the results from the quantitative research will be discussed. In the first paragraphs, some general characteristics of the research population will be discussed. Next, the research questions formulated in the Introduction will be answered.

After this quantitative outline, the results from the qualitative research will be outlined briefly.

5.1 General characteristics of the quantitative study sample

Before an analysis of the results from the survey will be discussed, it is useful to first introduce and explore the population from the study sample. Therefore, the most remarkable findings from an analysis of the population from the study sample will be discussed in the following paragraph.

As well as discuss these remarkable details, this paragraph will compare the details with available data about the general characteristics of the population living in both areas where the survey was taken. This information is only available about the municipality of Leidschendam-Voorburg, and not about Leidschenveen. The latter area was annexed by the municipality of The Hague, and the municipality offers only numbers about the whole municipality of The Hague on their website. Since The Hague is one of the largest cities of the Netherlands, and Leidschenveen has a somewhat skewed composition of inhabitants as it is a so-called VINEX-neighbourhood (for instance, there will be a relatively large number of families with children, and only a small number of single household; compared to presumably the opposite division in most of The Hague), these statistics will have very little relevance for the Leidschenveen-area. Therefore, only the statistics from the municipality of Leidschendam-Voorburg will be used to compare the characteristics from the study sample with, although it is noted that this will not provide a complete picture. The neighbourhood where the survey was taken in Leidschendam-Voorburg is called Voorburg Midden-Oud (see Chapter 4: Methodology for more details).

5.1.1 Personal characteristics

The main features of the personal characteristics are summarized in Table 5.1.
The first remarkable characteristic is the apparent abundance of male respondents in the study sample (61,3 percent). Data from the municipality of Leidschendam-Voorburg shows that Voorburg Midden-Oud has slightly more female than male inhabitants than (Gemeente Leidschendam-Voorburg, 2010). The high number of male respondents in the survey could be explained by the fact that the subject might be more of interest to males than females, and that the first are therefore more likely to respond. This could explain the somewhat skewed division of gender in the study population.

The second thing that is remarkable is the age of the respondents. The mean age is 55,2, which seems quite old. Data from the municipality of Leidschendam-Voorburg indicates that the average age was 45 years in 2010 for the inhabitants of Voorburg Midden-Oud (Gemeente Leidschendam-Voorburg, 2010). A possible explanation is that older people on average will have more time, as they will have older children and will work less hours than younger people (or even are retired). Therefore, they are more likely to spend time on completing the survey than younger people.

The largest share of the population participating in the survey is living with a partner, either married or unmarried (60,5 percent). The level of education of the

respondents is quite high. More than 70 percent has completed a HBO- or WO-level education, which is the highest level in the Netherlands. Only a small share of respondents only completed primary or middle school (9,1 percent).

The majority of the people has a job or studies (66,4 percent). Since there were only two respondents who indicated to be studying, the two variables indicating whether someone is working or not; and whether someone is studying or not, were added together into one variable for the analysis (see Chapter 4: Methodology). From the people with a job, almost half of this group has a fulltime job (42,0 percent). This is reflected in the mean monthly household income, which is quite high: the largest share (44,1 percent) of the study population earns an income which is two times modal. It is however quite remarkable that no respondent in the survey indicated to be earning an average monthly household income which is below modal. There could be various explanations for this. Besides the possibility that the study population is quite wealthy (which is plausible looking at the mean level of education and the share of the population that has a job), it is also possible that people are ashamed to fill in that they earn an income which is below modal.

Nearly all respondents have a driver's license (94,9 percent). The mean number of cars present in the household from the population studied is above one (1,4), so this means that most household in the study population will have a car. Most respondents (77,1 percent) possess an OV-card, but only a small share (31,4 percent) has an OV discount card. When asked about the time it takes to get to the nearest RandstadRail station, the average answer given was seven minutes on foot. While respondents were free to indicate the travel time to the nearest station by preferred mode of transport, all of them choose to answer in minutes on foot. This shows that this is the preferred way to get to the station.

Finally, the majority (60,7 percent) of the study sample indicates that they sometimes use the RandstadRail. There are slightly more frequent users (21,3 percent) than people that never use the RandstadRail (16,7 percent) among the respondents in the survey.

Table 5.1: Main characteristics of the study sample

Gender	**Male: 61,3%**
Age	Mean: **55,2** (std. dev.: 14,5)
Household situation	**Living together/married: 60,5%** With children: 21,0% Single: 18,5%
Level of education	Primary/middle school: 9,1% LBO/MBO: 19,3% **HBO/WO: 70,6%**
Job/study	**Yes: 66,4%**
Fulltime/part-time job	**Fulltime job: 42,0%**
Mean monthly household income	Modal: 33,1% **Two times modal: 44,1%** More than two times modal: 22,9%
Driver's license	**Yes: 94,9%**
Number of cars in household	Mean: **1,4** (std. dev.: 0,6)
OV (discount) card	**OV-card: 77,1%** **OV discount card: 31,4%**
Minutes from nearest RandstadRail station (on foot)	Mean: **7,0** (std. dev.: 3,4)
Frequency of use RandstadRail (all lines)	Never: 16,7% **Sometimes: 62,0%** Often: 21,3%
Information about the RandstadRail	Mean: **3,3** (std. dev.: 1,0)
Knowledge where to buy a ticket for the RandstadRail	**Yes: 73,0%**
It is easy to buy a ticket for the RandstadRail	**Yes: 64,6%**
It is easy to reach the platform of the RandstadRail	**Yes: 96,0%**

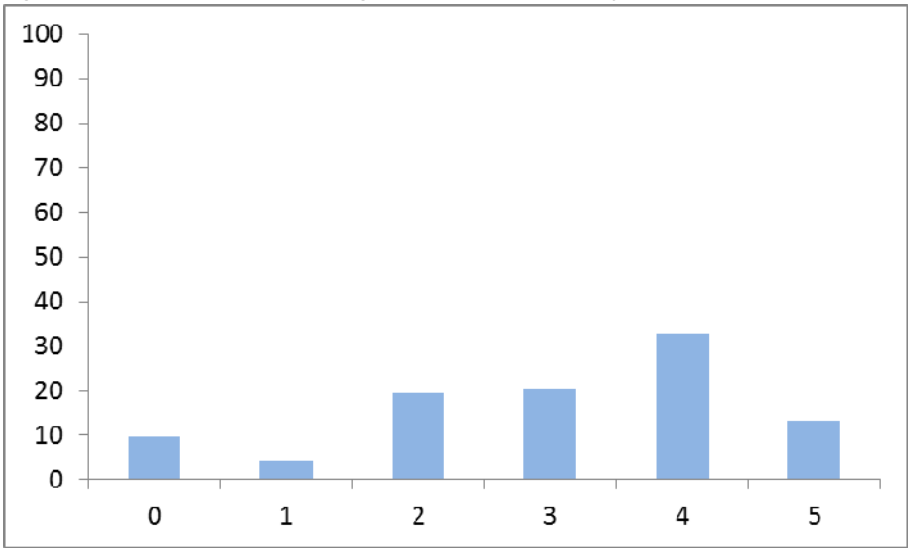
5.1.2 Information and knowledge

When asked about the satisfaction with the ease of accessing information about the RandstadRail and the level of information about this travel mode which is available, the respondents gave a mean score of 3,3 (see Table 5.1) to these questions (on a scale of 1-5). This means that on average, the people from the study sample are quite satisfied with the availability of and access to information about the RandstadRail.

The second indicator of knowledge about the RandstadRail, the score on various questions about the services of the RandstadRail, is relatively high. Less than 15 percent of the population reached a low score (see Figure 5.1) of 0 or 1. Nearly 50 percent of the population earns a score of 4 or 5, which indicates that the general level of knowledge about the services of the RandstadRail among people in the study sample is quite high.

The third and last indicator of knowledge, namely knowledge where to obtain a ticket for the RandstadRail, shows that more than 70 percent of the researched population knows where this can be bought (see Table 5.1).

Figure 5.1: Mean score knowledge about the services of the RandstadRail



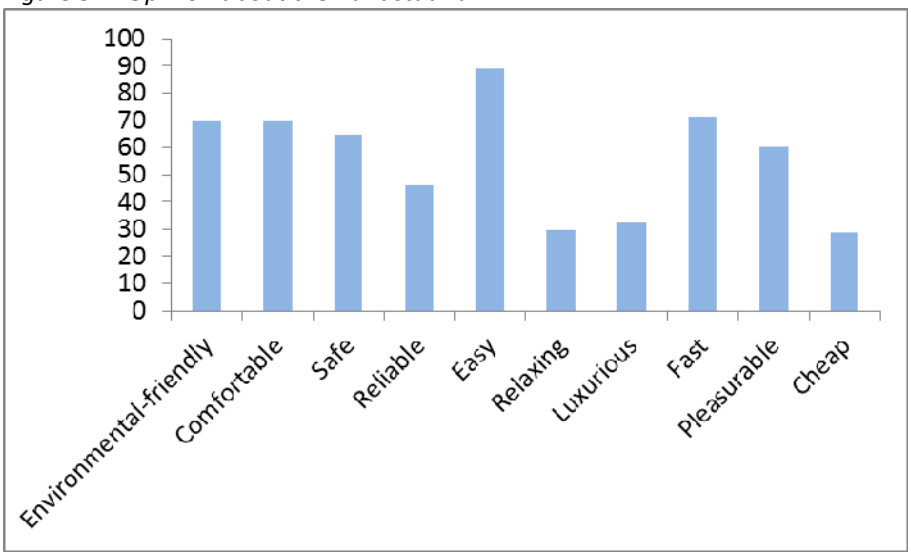
5.1.3 Attitude

The attitude towards the RandstadRail is measured on two levels: the opinion about the RandstadRail; and the importance given to different aspects of travelling.

Regarding the first level, the opinion that the RandstadRail is easy to travel with shows to be the indicator where most respondents in the survey agree on: 80 percent thinks it is easy to travel with the RandstadRail (see Figure 5.2). This is followed by the characteristics fast (a little over 70 percent); environmental-friendly and comfortable (a little over 60 percent); and pleasurable (60 percent). Only a small share of the respondents think that the RandstadRail is relaxing or cheap (both nearly 30 percent); and luxurious (a little over 30 percent).

The relative low scores of the indicators relaxing and luxurious and the high scores of easy, fast and environmental-friendly indicate that most people from the study sample are likely to see travelling with the RandstadRail as mainly functional. This means that they look at the obvious advantages, and do not think that the RandstadRail offers much secondary benefits like comfort while travelling.

Figure 5.2: Opinion about the RandstadRail

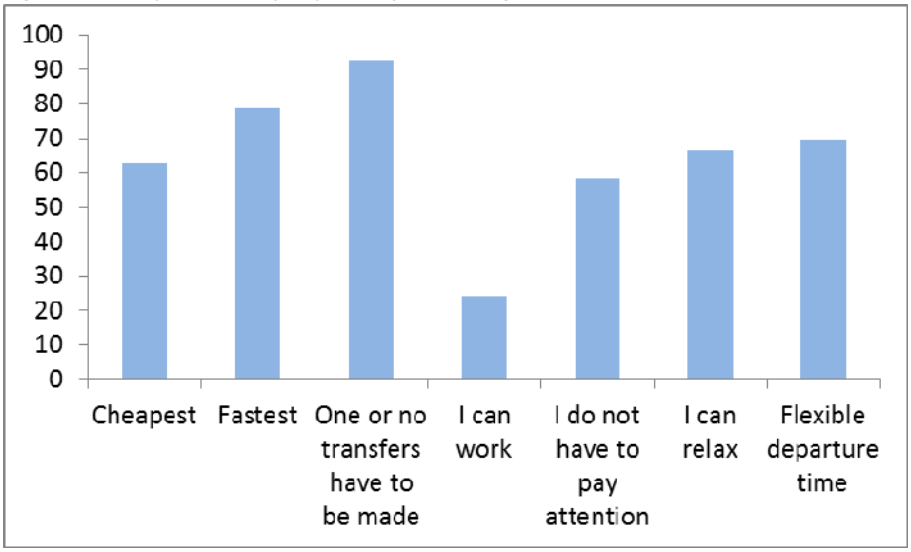


Regarding the second level of attitude (see Figure 5.3), it becomes apparent that the most important feature of travelling for many respondents is the fact that one or no transfer has to be made on the journey. This is followed by the factors whether or not the travel mode is the fastest and the cheapest. The lowest level of agreement is found on the fact that there is an opportunity to work while travelling.

"For me, the RandstadRail is very practical. I walk a few minutes to the station, maybe have to wait a couple of minutes, but then I have a straight connection to Zoetermeer Centre. There is never a problem with getting a seat, and if I take my laptop, I can work while travelling as well."

S.J. van het Schip (31 years, living alone in Voorburg, fulltime job in Zoetermeer, no car)

Figure 5.3: Importance of aspects of travelling



5.1.4 Perceived Behaviour Control

The Perceived Behaviour Control (PBC) of a respondent is measured on several levels. Firstly, it becomes clear that the largest share of the respondents think that the nearest RandstadRail station is easy to reach on foot: a little over 75 percent of the respondents agree with this statement (see Figure 5.4). This is in line with the earlier finding that all respondents answered the travel time to the nearest RandstadRail station in minutes on foot (see Paragraph 5.1.1).

When the second level of PBC is studied, it is remarkable that the largest share of respondents think that there neither are enough parking spaces for their bike (only 20 percent thinks there is enough space) nor their car (only 10 percent agrees) (see Figure 5.5). However, this can be explained through the apparent preference of respondents to reach the RandstadRail station on foot. This is reflected both in the answers on the question how many minutes it takes to get to the station, which all of the respondents answered in minutes on foot; and in the largest share of respondents that indicated to find it the easiest to reach the station on foot, compared to bike and car.

Regarding the ease to buy a ticket, nearly 65 percent of the respondents of the study population think it is easy to obtain a ticket for the RandstadRail (see Table 5.1). This is not a large majority, especially compared with the share of respondents who know where to buy a ticket for the RandstadRail, which is 73,0 percent. Apparently, some respondents do not think it is easy to buy a ticket for the RandstadRail, although they know how to obtain it. Finally, nearly all respondents think it is easy to reach the platform of the RandstadRail (96,0 percent, see Table 5.1), so this will not be an obstacle to use the RandstadRail.

Figure 5.4: Ease to reach the nearest RandstadRail station

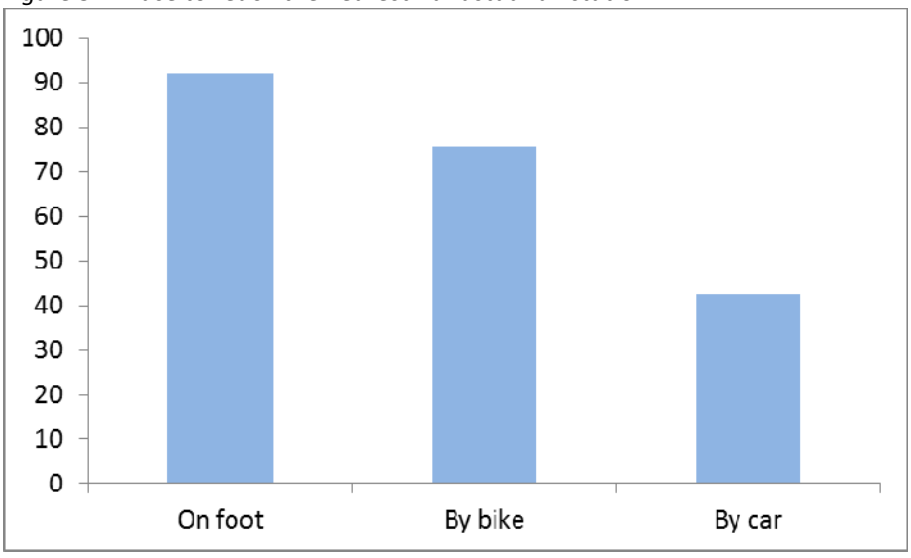
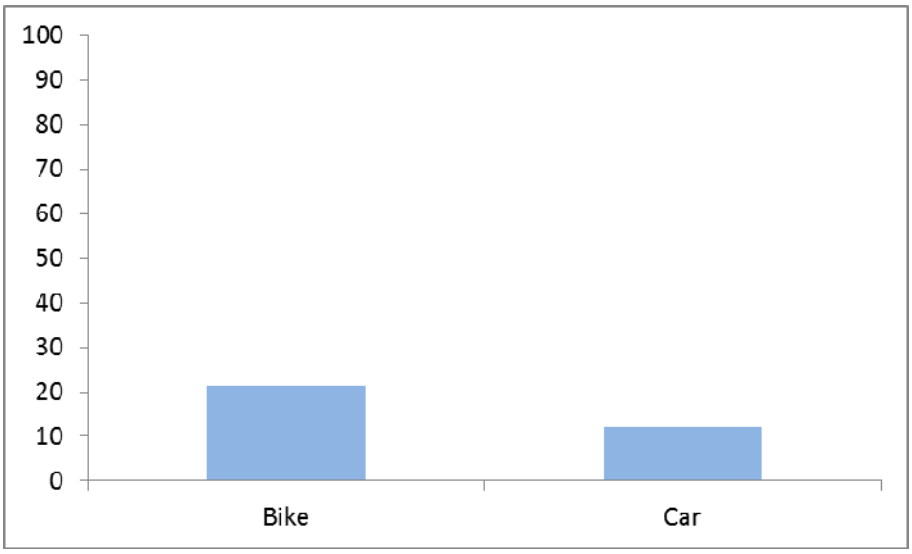


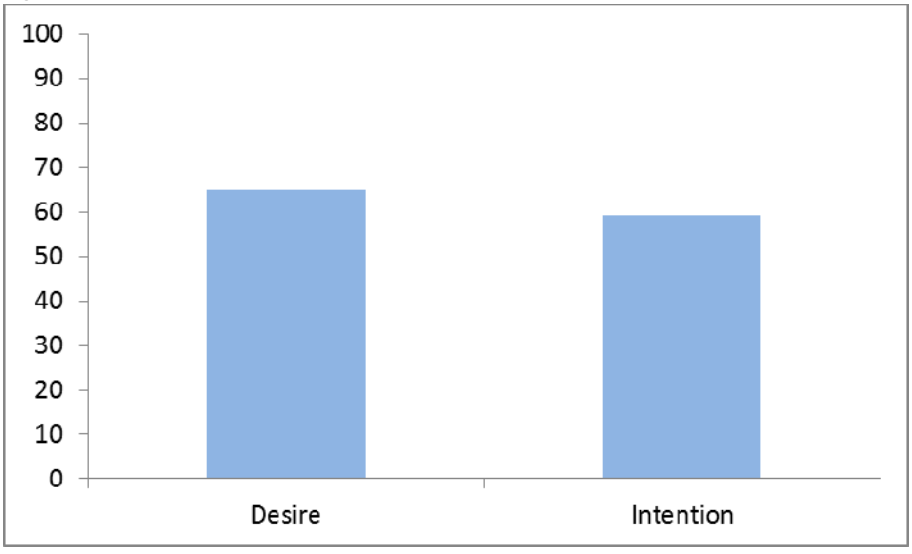
Figure 5.5: Parking space at the RandstadRail station



5.1.5 Intention and desire

With regards to intention and desire, almost the same share of respondents indicates to have desire as the share that indicates to have intention: a little over 60 percent of the study population (see Figure 5.6). This could mean that the questions regarding these two concepts are not seen as different by the respondents, but maybe desire and intention are really that related to each other. This relation will be further explored in research question Q3.

Figure 5.6: Intention and desire to use the RandstadRail



5.2 Attitude of a traveller

In the Theoretical chapter (see Chapter 3), it becomes clear that the processes of choice and behaviour are difficult to grasp. According to Gärling and his co-authors (1998b), the attitude of an individual towards something can be a major predictor of choice, and therefore of

behaviour. This is also reflected in the Theory of Reasoned Action (Ajzen & Fishbein, 2005) and its successor, the Theory of Planned Behaviour (Ajzen, 1991).

Therefore, it is relevant to first look at elements that are influential on the process of forming an attitude. Peter and Olson (2005) argue that the creation of an attitude is a natural response of people, and starts with the availability of information. As every person will have different access to and a different perception of information, the personal characteristics can also be of great importance. Ajzen and Fishbein (2005) add the subjective norm to the factors of influence on the formation of an attitude. The subjective norm, or social pressure, is thought to be able to influence someone's attitude.

The first research question deals with these three factors that presumably influence attitude: ***Q1: To what extent is the attitude of a traveller towards the RandstadRail influenced by his or her personal characteristics, knowledge about the RandstadRail and the subjective norm?*** Each of the three concepts is measured through a number of variables tested in the survey (see Chapter 4: Methodology). Therefore, the first research will be answered through a Regression analysis in order to be able to incorporate all these variables into one analysis. This test can be used as all the variables are either on the dummy or interval/ratio scale, which is a requirement.

As the attitude of a traveller (the dependent variable) consists of two different levels, namely a respondent's opinion about the RandstadRail and the importance he or she gives to different aspects of travelling (see Chapter 4: Methodology), two separate Regression analyses will be used. The two levels are related to each other because the first indicates a respondent's specific opinion about the RandstadRail; and the latter gives a broader overview of his or her preferences concerning travelling. Combined, the levels will be able to give an indication of the attitude of a traveller towards both the RandstadRail and travelling in general.

The first regression tests the relation between the three groups of independent variables and the opinion about the RandstadRail. As became clear in the Methodological chapter (see Chapter 4), the ten variables indicating a respondent's opinion about the RandstadRail (environmental-friendly, comfortable, safe, reliable, easy, relaxing, luxurious, fast, pleasurable, cheap) showed a high level of internal correspondence with each other in their results (see Table 1 in Appendix I - Statistical appendix) and were therefore transformed into one new variable, which is used in the Regression analysis. This variable indicates the mean score of a respondent on the ten old variables, and has a value between 1 (very low) and 5 (very high).

From the first model (see Table 5.2), it becomes clear that the opinion about information availability (information score A) has the largest influence on a respondent's opinion about the RandstadRail (Beta-value of 0,726). This is in line with the claim from Peter and Olsen (2005) that the process of building an attitude starts with the availability of information. Clearly, the level of and availability of information is quite decisive in the process of forming an opinion about the RandstadRail. Apparently, people are more positive about the RandstadRail if they are satisfied with the level of and their access to information. In addition to the relevance of this kind of knowledge, also knowledge where a ticket can be bought for the RandstadRail shows a high Beta-value (0,494). This means that a respondent is more positive about the RandstadRail if he or she knows where a ticket can be bought.

A high mean monthly household income (two times modal or more) has a negative influence on the opinion about the RandstadRail (Beta-value of -0,442). This can be seen as related to the also negative influence of the number of cars in the household on the opinion (Beta-value of -0,448). When a household has a higher income and there are more cars available to a respondent, he or she is more likely to be negative about the RandstadRail.

This is probably related to the fact that people see a car as a luxury: not everybody can afford it, but when you can, you have one and use it.

The level of education is also of significant influence on the opinion about the RandstadRail. But strangely enough, this relation is negative. This means that someone with a higher level of education will think more negative about the RandstadRail then someone with a lower level of education, although the Beta-value is not very high (-0,265). This contradicts the assumptions made in some publications (for instance: Ministerie van Verkeer en Waterstaat, 2006), where the general idea is that people with a higher level of education are more likely to travel with public transport then people with a lower level of education. When the direct relation between the level of education and the actual use of the RandstadRail is tested, it appears that people with a low level of education are the most frequent users of the RandstadRail (however, this is not significant) (see Table 6 in Appendix I - Statistical appendix). Second is the group with the highest level of education (WO). People with a HBO-level of education use the RandstadRail slightly more than people with an LBO/MBO-level of education. In summary, the influence of education on the use of the RandstadRail is very mixed, but it becomes clear that people with a higher level of education tend to have a more negative opinion about it, regardless if they use it or not.

Not surprisingly, the availability of an OV-card to a person has a positive influence on his or her opinion about the RandstadRail (Beta-value of 0.494). As in many modes of public transport nowadays, an OV-card is also necessary to travel with the RandstadRail. When someone is in possession of an OV-card, it can be easier to choose the RandstadRail as a travel mode, as not much effort has to be made to have a valid ticket (you just have to charge it with money and check in at the RandstadRail, without having to buy a ticket somewhere) (OV chipkaart, 2011).

Finally, one of the three indicators of the subjective norm of a respondent appears to be significantly influential on the opinion about the RandstadRail. If a respondent indicated that most of his or her family travels by public transport (and thus also the RandstadRail), his or her opinion is more negative (Beta-value of -0.020), but only slightly. All three indicators of the subjective norm have a negative Beta-value, but only the family-variable is significant. This means that the subjective norm of a family member has a more significant influence on the opinion about the RandstadRail of a respondent than the subjective norm of friends or colleagues.

Overall, the first regression model shows a relatively high R-Square value (0,545), which means that more than 50 percent of the total variance of the variable opinion about the RandstadRail can be explained by the variables indicating personal characteristics, knowledge about the RandstadRail and the subjective norm of a respondent.

"Honestly, I am not very positive about the introduction of the RandstadRail. There was often no information available, and it took a long time before the RandstadRail finally was operational without problems. It was all very unclear, also when it would start to operate again. (…) This was not a good time to travel by public transport."

C. van Engelen (34 years, living together in Voorburg, fulltime job in Utrecht, 1 car)

Table 5.2: Regression analysis

	Opinion about the RandstadRail
Adjusted R Square	0,545 ***
Constant (B)	2,149 ***
	Beta
Gender (1=male)	-0,009
Age	0,000
Single household (1=yes)	-0,217
Couple household (1=yes)	-0,054
High level of education (1=-yes)	-0,265 ***
Work or study (1=yes)	0,098
Work/study location with RR access (1=yes)	-0,233 **
Fulltime job (1=yes)	0,031
Part-time job (1=yes)	0,317
High household income (two times modal or more) (1=yes)	-0,258 ***
Number of cars in household	-0,248 ***
Availability of OV card (1=yes)	0,186 **
Availability of OV discount card (1=yes)	-0,020
Minutes to RR station	0,084
Information score A (opinion about information availability) (1=low – 5=high)	0,626 ***
Information score B (knowledge about services of the RR) (1=low – 5=high)	0,155
I know where to buy a ticket for the RR (1=yes)	0,494 ***
Most of my family travels by… (0=car, 1=public transport)	-0,020 ***
Most of my friends travel by… (0=car, 1=public transport)	-0,071
Most of my colleagues travel by… (0=car, 1=public transport)	-0,081

***: Significant at the 0,010 level
**: Significant at the 0,050 level
*: Significant at the 0,100 level

The second regression (see Table 5.3) tests the same three groups of independent variables used in the first regression with the second group of variables measuring attitude towards the RandstadRail: the importance of aspects of travelling. Seven variables indicating the importance of aspects of travelling (cheapest mode of transport, fastest mode of transport, one or no transfers have to be made while travelling, I can work while travelling, I do not have to pay attention while travelling, I can relax while travelling, my departure time is flexible) are tested in the second regression. For each of them, a separate Regression analysis has to be done, so this implies the use of seven regression models.

From the models, the first thing that can be noted is that there are a number of variables that show no significant relation at all with the dependent variables (one of the seven aspects of travelling). These are gender; whether someone has a job or studies; whether the work or study location has access to the RandstadRail network; whether someone has a fulltime job; and the availability of an OV discount card. All other variables appear to have a significant relation with one or more of the seven dependent variables. The most important and remarkable relations will be described in the next section.

The age of a respondent shows a significant relation with five of the seven aspects of travelling. The older a respondent is, the less he or she cares if there is a possibility to work while travelling (Beta-value of -0,548). This can be explained through the fact that the older a respondent is, the less likely it will be that he or she still has a job. Therefore, the ability to work while travelling is no longer a valid concern for them. Somewhat related is the positive relation between age and whether the chosen mode of transport is the cheapest (Beta-value of 0,211). As a person gets older and stops working, it is understandable that they have to be more careful with spending, as they do not have a very high income, but a pension, which is

in general much lower than an average salary. However, this will differ between different people, as some will have a generous pension or large savings, while others have only a marginal income. But in general, apparently, the price of transport gets more important to people when they get older.

Secondly, both the need to pay attention (Beta-value of 0,438) and a flexible departure time (Beta-value of -0,438) show to have the same importance. Apparently, it gets more important for elderly people to not have to pay attention while travelling then for younger people. A possible explanation is that many elderly people do not like (or even are not allowed) to drive a car anymore, so they mainly use public transport for their movements. The lack of a need to pay (a lot of) attention is a characteristic of public transport, so the positive relation with age shows that elderly people indeed mainly (want to) use public transport.

"For me, travelling with the RandstadRail is very easy. Otherwise, it would be much harder to get to my son and my two grandchildren twice a week. Then, I could have to take the bus and that is not convenient. I prefer not having to make a transfer (…), what makes the RandstadRail ideal for me."

J.H. Veldhuijzen-de Bakker (74 years, married, retired, living in Leidschenveen, no car)

Concerning household situation, firstly, compared to single households and single or couple households with children, couples do not care as much that their mode of transport is the cheapest (Beta-value of -0,080). This can be explained through the fact that a couple household is likely to have the highest income of the three groups, as they mainly consist of two working adults without (expensive) children. Therefore, they can afford to not care that much about the cost of transport as the other groups.

Single household do not worry that much about the speed of their mode of transport as couples (Beta-value of 0,119 compared to 0,327) do. However, compared to the reference group of singles or couples with children, they both care more. A possible explanation is that singles have a more active social life as they are alone, and couples as well compared to families with children. For the latter, most of their activities will take place with(in) their household. Therefore, singles and couples value their time much more as they have to spread it over many social contacts and want a fast way to make a certain movement. More or less related, both singles and couples value the fact that they do not have to make more than one transfer while travelling more than households with children, although this is not a significant difference.

Singles and couples place most value to whether or not they are able to work while they are on the way. This could be related to age and stage of the career; singles and couples will often be younger and at an earlier stage in their career then people with children. Therefore, they are still working their way 'up' in a company and eager of promotions, while households with children will for the most part consist of adults with a more or less 'settled' career position. This will influence the general need to work while travelling.

Both single households and couples place more importance than singles or couples with children to the fact that they do not have to pay attention while travelling. As taking a car would be easier for households with children (especially with younger children) than using public transport, this finding fits this idea.

The higher the level of education of a respondent, the more importance is given to a flexible departure time (Beta-value of 0,340) and the opportunity to relax while travelling (0,287).

There also is a significant relation between the level of education and the need to pay attention while travelling (-0,120), but this relation is negative.

The household income, often more or less related to the level of education, shows a similar picture. Respondents with a high household income care less than people with a lower household income about whether or not they have to pay attention (Beta-value of -0,225). However, as well as people with a higher level of education, people with a higher income also value the fact whether they are able to relax while travelling more (0,078).

The significant variables from both the level of education and the mean monthly household income suggest that when a respondent earns a higher income, he gives more importance to travel aspects belonging to using a car. The exception is the ability to relax, which shows a positive relation with both level of education and income. The possibility to relax is a characteristic of public transport. However, a possible explanation for the positive relation could be that people do not see a car as a less relaxing mode of transport than public transport. This is proven through the negative relation between the need to pay attention and both the level of education and household income. Apparently, the respondents do not perceive driving a car as less relaxing than using public transport, as they do not mind paying attention. As you also have to pay some attention to travel by public transport (for instance, to catch the right service or to make a transfer), this is clearly seen by the respondents as not more relaxing as driving a car.

The number of cars available in a household shows to have a strong influence on the desire to use the cheapest mode of transport (Beta-value of -0,622). This could be explained by the fact that possession of a car is in general quite expensive. The more cars present in a household, the more a respondent values whether his or her mode of transport is the fastest (0,118). Also, the number of cars is of significant influence on the importance a respondent places on whether or not one or no transfers have to be made (0,430). This relation is the strongest, so this could be seen as the main reason why car-users use their car, as using a car implies almost always that no transfer has to be made. Apparently, this is valued by the respondents in this survey.

Whether or not a person possesses an OV-card only has a significant relation with whether or not one or more transfers have to be made (Beta-value of 0,324). This is in line with the earlier finding that travellers prefer to make as least transfers as possible during their movement (see Paragraph 5.1.3 and Figure 5.3).

The further away a respondent lives from a RandstadRail station, the more he or she values a flexible departure time. This is perhaps not surprising, as someone who lives closer to the station is more flexible in deciding to use the RandstadRail, as it takes less time to get there. More planning is required for people living further from a station, which makes that they will value a more flexible departure time more.

Both scores on the information variables show to have a generally positive impact on aspects of travelling. People who value the availability of information about the RandstadRail highly, give greater importance to whether or not their mode of transport is the cheapest and the fastest (respectively, a Beta-value of 0,319 and 0.318).

When a respondent has a high level of knowledge about the services of the RandstadRail, he or she gives more importance to the fact that he or she can work while travelling (0,243 and 0,329) and whether or not they have to pay attention while travelling (0,164 and 0.247). Both are characteristics of public transport, and therefore also of the RandstadRail. Apparently, when people are positive about the information about the RandstadRail and know more about its services, they are more positive about it. This is in line with assumptions from the international literature (see for instance Peter & Olsen, 2005).

However, when someone scores high on either levels of information (opinion about the information availability of knowledge about the services of the RandstadRail), they value a flexible departure time more negative (respectively, -0,202 and -0,130). This fits, seeing flexible departure time as a typical aspect of car-use.

From the variables indicating the subjective norm of a respondent, colleagues appear to be the most influential form of social context. When most of a respondent's colleagues travel by public transport, they place more importance at the fact to be able to work (Beta-value of 0,154), to not having to pay attention (0,279) and to be able to relax (0,294). All these variables are characteristics of public transport, so there can be concluded that this form of social context is important for their view on the importance of different aspects of travelling.

Table 5.3: Regression analyses

	Cheapest	**Fastest**	**One or no transfers**	**I can work**	**I do not have to pay attention**	**I can relax**	**Flexible departure time**
Adjusted R Square	0,583 ***	0,372 ***	0,468 ***	0,636 ***	0,491 ***	0,521 ***	0,692 ***
Constant (B)	4,202 ***	5,670 ***	4,998 ***	2,225 **	-0,901 **	3,212 ***	5,063 ***
	Beta	**Beta**	**Beta**	**Beta**	**Beta**	**Beta**	**Beta**
Gender (1=male)	0,011	-0,031	-0,144	-0,076	-0,069	0,025	-0,030
Age	0,211 **	-0,485 ***	0,050	-0,548 ***	0,438 ***	0,060	-0,438 ***
Single household (1=yes)	0,100	0,119	0,122 **	0,106	0,385 ***	-0,217 ***	0,461 ***
Couple household (1=yes)	-0,080 ***	0,327 *	0,221	0,125	0,299 *	0,209 ***	0,535 ***
High level of education (1=-yes)	-0,026	0,198	-0,049	0,025	-0,120 **	0,287 ***	0,340 **
Work or study (1=yes)	-0,245	0,181	0,044	-0,150	0,387	0,121	-0,050
Work/study location with RR access (1=yes)	0,079	0,089	-0,332	0,084	-0,066	-0,006	-0,121
Fulltime job (1=yes)	-0,210	0,407	0,066	0,251	0,376	0,014	0,296
Part-time job (1=yes)	-0,057 **	0,239	0,025	0,069	0,153	-0,249	0,361 **
High household income (two times modal or more) (1=yes)	-0,113	0,143	0,041 **	-0,037	-0,225 *	0,078 ***	-0,154
Number of cars in household	-0,622 ***	0,118 ***	0,430 **	0,000	-0,044 *	0,001	0,307
Availability of OV card (1=yes)	0,023	-0,071	0,324 ***	0,032	0,032	0,040	0,039
Availability of OV discount card (1=yes)	0,345	0,157	-0,304	-0,066	0,059	0,038	-0,225
Minutes to RR station	0,120	0,146	-0,617	0,101	0,010	-0,036	0,215 ***
Information score A (opinion about information availability) (1=low – 5=high)	0,319 ***	0,318 **	0,031 ***	0,243 **	0,164	-0,101	-0,202 *
Information score B (knowledge about services of the RR) (1=low – 5=high)	0,121	0,081 ***	0,101	0,329 ***	0,247 **	0,040	-0,130
I know where to buy a ticket for the RR (1=yes)	0,095	-0,206	-0,074 **	0,317 **	0,068	-0,376 ***	-0,332 ***
Most of my family travels by… (0=car, 1=public transport)	0,375	-0,134	0,024	-0,092	0,088	0,219 *	0,044 **
Most of my friends travel by… (0=car, 1=public transport)	0,176	-0,267 **	0,111 *	0,049	0,168	0,122 **	0,040
Most of my colleagues travel by… (0=car, 1=public transport)	0,212 *	-0,221	0,121	0,154 *	0,279 **	0,294 **	0,136 **

***: Significant at the 0,010 level
**: Significant at the 0,050 level
*: Significant at the 0,100 level

5.3 Intention to use a certain mode of transport

Eagley and Chaiken (1993) regard intention as the most decisive predictor of (choice-)behaviour. They are joined in this assumption by, among others, Gärling and Axhausen (2003), who name intention (among past behaviour and the situation) as potential determinants of current behaviour.

In the Theory of Planned Behaviour, Ajzen (1991) places the emphasis on the relation between attitude and intention. As well as in the earlier developed Theory of Reasoned Action, the TPB assumes that choice behaviour is influenced by an individual's intention to perform that certain behaviour, or to make that choice. For example, if an individual has the intention to travel by RandstadRail next time, he is likely to do so when he/she has to choose a mode of transport for this journey. Secondly, the TPB also assumes that the intention is influenced by an individual's attitude towards a certain object. In this thesis, this 'object' is to travel with the RandstadRail. Finally, in addition to the former TRA, Perceived Behaviour Control was added to the TPB as another factor of influence. The PBC reflects an individual's perception of ease or difficulty to perform the behaviour.

In order to be able to study these presumed relations between attitude, PBC and the intention to use the RandstadRail, the second research question, ***Q2: How do the attitude of a traveller towards the RandstadRail and his or her Perceived Behaviour Control influence the intention to use the RandstadRail?***, was formulated.

Each of these three concepts is measured through a number of variables tested in the survey (see Chapter 4: Methodology). As there are many variables involved, once again, a Regression analysis will be used. But as the dependent variable (intention to use the RandstadRail) is a dummy variable, a Binary Logistic regression will be used.

In the regression model (see Table 5.4), only two of the independent variables included in the test show to have no significant relation with the dependent variable, the intention to use the RandstadRail. These are the ease to reach the nearest RandstadRail station by bike; and whether or not there is enough parking space for a bike at the RandstadRail station. The variables that show a significant relation with the dependent variable will be discussed in the next part.

Firstly, both variables indicating someone's attitude towards the RandstadRail appear to have a significant positive impact on the intention to use the RandstadRail. The opinion about the RandstadRail (Attitude A) is even more important than the importance given to different aspects of travelling (with respectively a B-value of 2,111 and 1,128). It means that the more positive the attitude of a respondent is about the RandstadRail and the more importance he or she gives to different aspects of travelling, the more likely it is that he or she will have an intention to use the RandstadRail.

The ease to reach to the nearest RandstadRail station on foot appears to also have a positive relation with the intention to use the RandstadRail (B-value of 2,015). This is not very surprising, since all the respondents studied in the sample answered the survey question 'How many minutes does it take you to get to the nearest RandstadRail station (by preferred mod e of transport)' with a number of minutes on foot. This means that most people prefer to walk to the RandstadRail station, and this also explains that positive relation with the intention to use the RandstadRail. If a respondent thinks it is easy to reach the station on foot, he or she will be more likely to have a higher intention to use it.

This finding is also underlined by the fact that the ease to reach the nearest RandstadRail station by car has a negative relation with the intention to use the RandstadRail (B-value of -3,875). Apparently, when someone thinks it is easy to reach the station by car, they show no intention actually use the RandstadRail as well. A possible explanation could be found in the fact that whether or not a respondent thinks there is

enough parking space for his or her car at the RandstadRail station shows to have a positive relation with the intention to use the RandstadRail (B-value of 1,592). From publications about the RandstadRail, it became clear that the lack of parking spaces was a major concern and irritation of many of the RandstadRail users. Therefore, it is interesting to see that this fact shows in the regression model: a respondent only shows intention to actually use the RandstadRail if he or she thinks there is enough parking space for a car. If they just think that the station can be easily reached, this will not automatically imply that they will have intention to use it.

Finally, whether or not a respondent thinks it is easy to buy a ticket for the RandstadRail has a positive impact on the intention to use the RandstadRail (B-value of 0,801). This means that people who know where to buy a ticket will have more intention to actually use the RandstadRail than people who do not have a clue where to obtain a ticket. This relation is not surprising, since someone who has no idea where to buy a ticket will have to make more effort to actually travel with the RandstadRail than someone who knows where to buy a ticket, which reflects on the intention to use this mode of transport.

> "I think I just find it easy that I can leave whenever I want to. I am not restricted by a fixed departure time. (…) My neighbour told me that there are very few parking spaces at the station, so therefore I do not even think about parking my car there and taking the RandstadRail. And even more, I am already in my car by then, so I can continue this as well. "
>
> ***T.H. Vink (38 years, married, fulltime job in Rotterdam, living in Pijnacker, 2 cars)***

Table 5.4: Regression model

	Intention to use the RandstadRail
Nagelkerke R Square	0,716 ***
Constant (B)	-28,971 ***
	B
Attitude A: Opinion about the RR (1=low – 5=high)	2,111 ***
Attitude B: Importance of aspects of travelling (1=low – 5=high)	1,128 **
It is easy to reach the nearest RR station on foot (1=yes)	2,015 **
It is easy to reach the nearest RR station by bike (1=yes)	1,312
It is easy to reach the nearest RR station by car (1=yes)	-3,875 ***
There is enough parking space for my bike at the RR station (1=low – 5=high)	0,204
There is enough parking space for my car at the RR station (1=low – 5=high)	1,592 *
It is easy to buy a ticket for the RR (1=yes)	0,801 *

***: Significant at the 0,010 level
**: Significant at the 0,050 level
*: Significant at the 0,100 level

5.4 Desire to use a certain mode of transport

With having taken a closer look at both attitude and intention, the next step is to look into the concept of desire. Bagozzi indicates that there is a "missing link" in the relation between attitude and intention assumed in the Theory of Planned Behaviour: the subjective experience of desire (Bagozzi, 1992, p. 184). According to him, an attitude alone is not enough: there has to be desire to perform certain behaviour.

In order to see this influence of desire, the third research question was formulated:
Q3: To what extent does the attitude towards the RandstadRail influence desire to use the RandstadRail, and what is the relation of this desire with the intention to use the RandstadRail?

As the requirements for another Chi-Square test were not met by the variables in the first part of this research question, an ANOVA test is done. As these requirements are met by the variables from the second part of the question, a Chi-Square test can be done here.

Regarding the relation between attitude towards the RandstadRail and desire to use the RandstadRail, the ANOVA test shows that there is a significant relation between opinion about the RandstadRail (Attitude A) and desire to use the RandstadRail (significance of 0,006, see Table 9 in Appendix I - Statistical appendix). This means that there is a significant influence of the opinion a respondent has of the RandstadRail on his or her desire to use the RandstadRail. This is in line with the expectations.

The second level of attitude, the importance given to different aspects of travelling (Attitude B), does not show a significant relation with the dependent variable (see Table 9 in Appendix I - Statistical appendix). Thus, if someone gives greater importance to different aspects of travelling, he or she will not have a significantly larger desire to use the RandstadRail.

As the relation between desire and intention to use the RandstadRail is explored, the Chi-Square test shows a significant relation with a relatively high positive score on Cramer's V (see Table 10 in Appendix I - Statistical appendix). This means that when a respondent has desire to use the RandstadRail, he or she also will have a strong intention to use it.

5.5 Actual use of the RandstadRail

As Bagozzi (1992) already suggested that desire to perform certain behaviour is necessary in order to actually show this behaviour, Tertoolen (2009) also indicates that creating desire is the final step in the motivation of the target group. This means that, especially at the start, the alternative *"… must be extremely attractive, with a clear and easy to comprehend advantages for the individual"* (Tertoolen, 2009, p. 5). When all these requirements are met, travel behaviour can be altered ('change').

In order to study this relation between desire and actual use of the RandstadRail, the fourth research question, ***Q4: How does desire influence the actual use of the RandstadRail?***, was formulated.

The actual use of the RandstadRail is a categorical; desire is a nominal (dummy) variable. Therefore, a Chi-Square Test will be used.

The relation between desire to use the RandstadRail and whether or not a person actually uses it, shows to be significant (see Table 11 in Appendix I - Statistical appendix). Cramer's V shows that this relation is positive, and moderately strong. Thus, if a respondent shows a high desire, he or she will also be more likely to actually use the RandstadRail. The expected frequencies show two remarkable things. Firstly, it appears that people who have no desire to use the RandstadRail actually show an even lower frequency of use than expected. And when someone has desire to use it, the number of respondents indicating to never use the RandstadRail is lower than expected. This means that the influence of desire is stronger than expected.

5.6 The use of the RandstadRail further explored

As the available research on the use of the RandstadRail is not extensive, the little available data shows that there was a presumed difference in success between respectively RandstadRail line E to Rotterdam; and line 3 and 4 to Zoetermeer (see for instance ZoetermeerOV, 2007). The latter appeared to be more successful in attracting travellers. However, line E to Rotterdam took a long time to finish, as the tunnel at Rotterdam Central

Station was put into use in August 2010. Since then, the claim is that the number of travellers on this line finally increased with great number of travellers (RET, 2008).

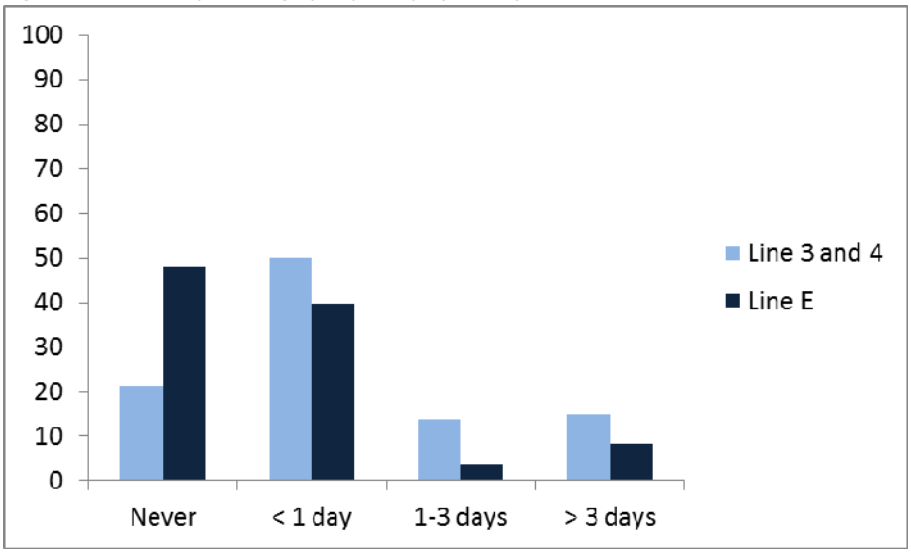
As the actual use is still vague as there is no extensive data available indicating the real use, it is interesting to have a closer look at the frequency and purpose of use of the RandstadRail by the study population. Therefore, the fifth research question is the following:
5: Is there a difference in frequency of use and use for different purposes between the different RandstadRail lines (respectively line E and line 3 and 4)?

The last research question deals with the difference in use between the different RandstadRail lines. This is both is frequency of use and in purpose for using it. First, there will be discussed whether or not a difference in frequency of use was found between RandstadRail line E and line 3 and 4. Next, the difference in use for different purposes will be discussed.

As the available material on the RandstadRail showed a very limited amount of research on actual use of the RandstadRail lines (see Chapter 2: Development of the RandstadRail network) and much of the figures were estimations or figures from long ago, it was interesting to see what the actual figures for the case study would be. Most figures found elaborated that the number of travellers on RandstadRail line E to Rotterdam were disappointing, while the number of travellers on line 3 and 4 to Zoetermeer was slightly higher and almost as expected when the RandstadRail was developed.

Figure 5.7 shows a somewhat similar picture. More than 50 respondents indicated that they never make use of RandstadRail line E between The Hague and Rotterdam. This is more than double the amount of users that indicates that they never use RandstadRail line 3 or 4 between The Hague and Zoetermeer. The difference is almost the same between all categories of frequency: the number of respondent that indicate to use RandstadRail line 3 and 4 is higher in all categories than the number of people that indicates to use RandstadRail line E.

Figure 5.7: Weakly average frequency of use of RandstadRail line E and 3 and 4



When there is looked at the purpose for travel and the mode of transport that is used (car or RandstadRail), the largest share of respondents indicate never to use the RandstadRail or the car to go to work or school (see Figure 5.8).

The largest share of respondents never uses the car or the RandstadRail to bring their children (see Figure 5.9). Therefore, it seems logic that they either do not have children or take their children somewhere where they can walk or bike to. This implies that they do not have to use the car or the RandstadRail for this type of movement.

Regarding sports, all respondents indicate they never use the RandstadRail for this kind of movement (see Figure 5.10). Only a small number of respondents use the car for this transport. This means that people in the population go to a place nearby for sports where they can walk or bike to.

For shopping (see Figure 5.11), the car is by far the most favourite mode of transportation. However, the number of respondents that indicate to use the RandstadRail not more than once a week is remarkably high. This could be explained by people going shopping during the weekend.

Finally, the car is the most favoured mode of transport for other leisure activities, but only for people who indicate to use this mode of transport a lot for this purpose on an average weekly basis (see Figure 5.12). Interestingly, the number of people indicating to use a mode of transport for other leisure activities on less than one day a week more frequently uses the RandstadRail for this.

"I have no idea how often the RandstadRail runs. It is just not practical for me to use it, since there is no connection to my job location. I can get everywhere I want on my bike and by bus if the weather is bad (…) But I might try to use it in the future to go to The Hague centre."

C.S.A. Vogels (59 years, married, part-time job in Leidschendam, living in Leidschendam, 1 car)

Figure 5.8: Work/school

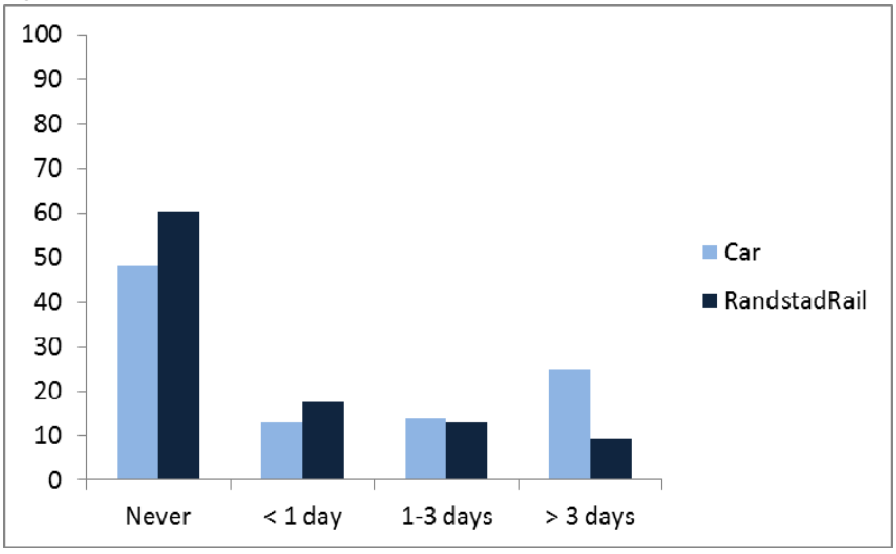


Figure 5.9: Bringing children

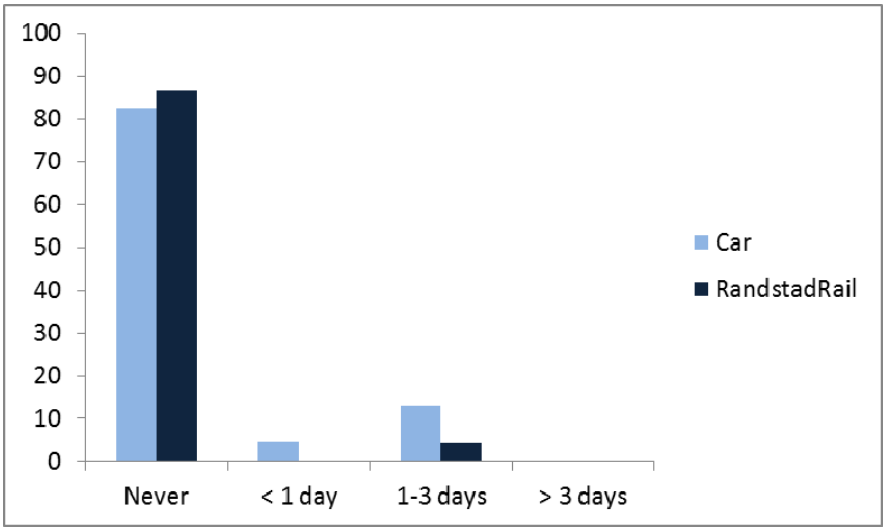


Figure 5.10: Sport

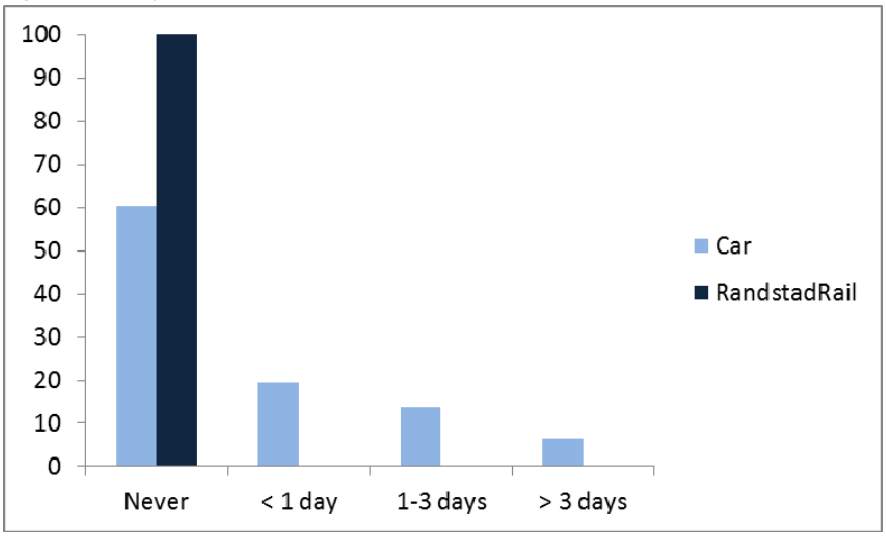


Figure 5.11: Shopping

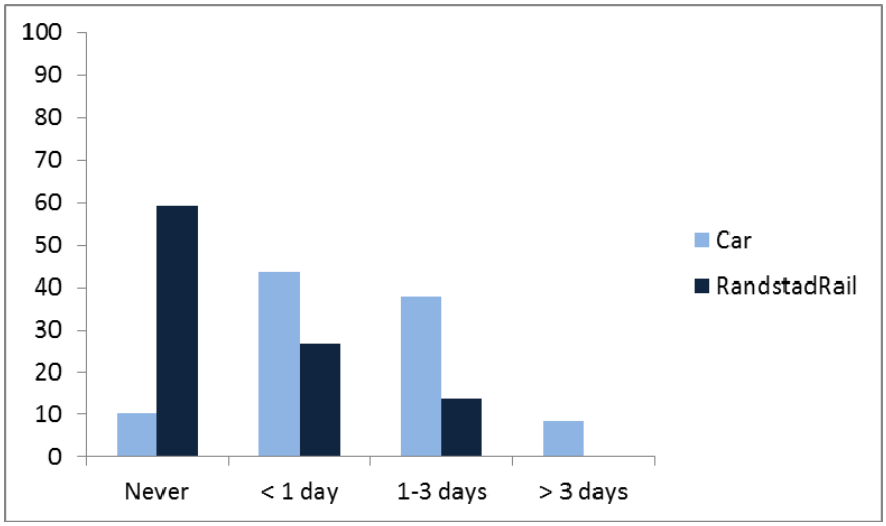
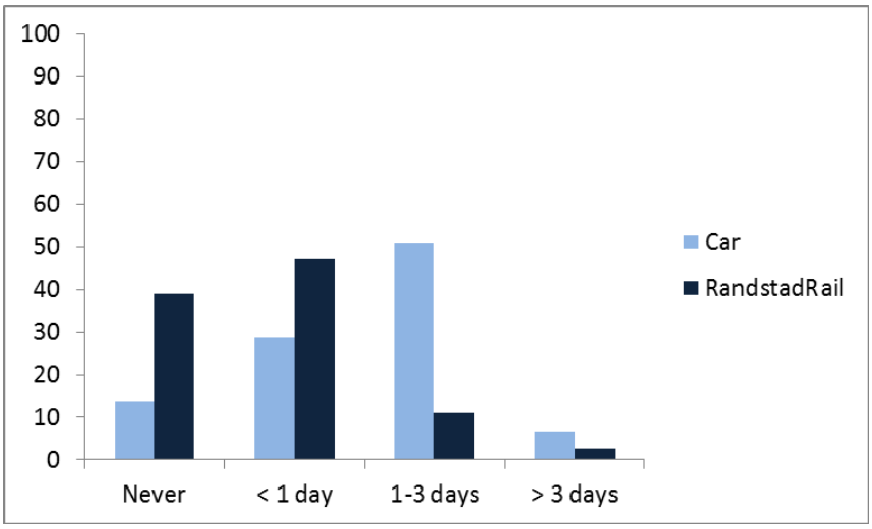


Figure 5.12: Other leisure activities



5.7 Qualitative research: in-depth interviews with travellers

In order to add some more depth to the quantitative research part of this thesis, some interviews were held with respondents from the survey (see Appendix III – Interviews). The interviewees were selected from all the respondents indicating to be willing to participate in an additional interview about their travel behaviour related to the RandstadRail. This selection was random, besides the fact that both users and non-users of the RandstadRail were selected. From the five people interviewed, three used the RandstadRail and two did not.

While every interview provided a different picture of a user or non-user of the RandstadRail and his or her reasons for this travel behaviour, some general features can be noted as well. First of all, both respondents indicating to possess a car did not use the RandstadRail; the other three did not have a car. However, looking at the results from the quantitative research, this could be a coincidence, since most of the respondents in the survey indicated to possess a car.

Regarding the introduction of the RandstadRail, all of the interviewees mention that they heard, read or experienced firsthand that this introduction was not smooth. Two interviewees mention that the bus services substituting the old mode of transport until the RandstadRail was finished were not sufficient, both in capacity and frequency. Also, a few interviewees are dissatisfied with the information available, for instance about the planned opening.

It becomes clear that the respondents who use the RandstadRail use it because it is convenient for them, as their destination is easy to reach with the RandstadRail. For one interviewee, this is the reason why she does not use the RandstadRail: her daily activities do not make it necessary or useful to use the RandstadRail. The other non-user does not use the RandstadRail because he wants to be flexible in his departure time, and he prefers the car to travel with.

Another remarkable finding is that the two non-users also indicate that the main part of their social context (family, friends and colleagues) also does not use the RandstadRail, with a few exceptions. And the three users indicate that their social context mainly uses the RandstadRail. Apparently, this has some influence.

6. Conclusions and discussion

The main research question of this thesis was the following: ***Which factors determine whether travellers use the RandstadRail or not?*** In order to be able to answer this central research question, five research questions were formulated:

Q1: To what extent is the attitude of a traveller towards the RandstadRail influenced by his or her personal characteristics, knowledge about the RandstadRail and the subjective norm?

Q2: How do the attitude of a traveller towards the RandstadRail and his or her Perceived Behaviour Control influence the intention to use the RandstadRail?

Q3: To what extent does the attitude towards the RandstadRail influence desire to use the RandstadRail, and what is the relation of this desire with the intention to use the RandstadRail?

Q4: How does desire influence the actual use of the RandstadRail?

Q5: Is there a difference in frequency of use and use for different purposes between the different RandstadRail lines (respectively line E and line 3 and 4)?

The main findings and results from the research conducted along these five questions will be outlined in this final chapter, along with a critical discussion of the value of these findings. In addition, some recommendations will be made for future transport projects similar to the RandstadRail, or a possible future extension of the network (see Chapter 2: Development of the RandstadRail network).

6.1 Main results from the quantitative and qualitative research

The first striking result is the relative low share of respondents from the study population that indicated to find it easy to buy a ticket for the RandstadRail when compared to the share of this population that knows where to buy a ticket for the RandstadRail. The difference is nearly 10 percent. This finding means that people know where to buy a ticket for the RandstadRail, but do not think it is easy to do so.

This finding could have to do with the introduction of the OV chip card in many forms of public transport in the Netherlands, and which is therefore also obligatory for travelling with the RandstadRail. Especially for elderly people, it proved to be difficult to get familiar with using the chip card. Possibly, it will form a constraint for this group to travel by public transport, and therefore also by RandstadRail.

Also, at many stations of the RandstadRail, there is no personnel available nor is there any sale of tickets: it is only possible to check in with your chip card or stamp the ticket you bought in advance somewhere else. It is possible to buy a ticket in the RandstadRail vehicle, but this is more expensive than a regular ticket.

These factors could all contribute to the presence of the idea among travellers that it is not easy to buy a ticket for the RandstadRail. As a ticket is necessary for travelling with the RandstadRail (or travelling with it can result in a fine), the fact that so many respondents think it is hard to obtain it could lead to a lower use of the RandstadRail.

The second somewhat remarkable finding is that the population studied agrees the most with purely functional features of the RandstadRail, like for instance fast and easy. The secondary features relaxing and luxurious both score the lowest of all indicators asked in the survey among many respondents. This indicates that people see travelling with the

RandstadRail as something purely functional: they do so when they have to, but only because they think it is functional.

A similar idea is reflected in the interviews held with both users and non-users of the RandstadRail. From the interviewees using the RandstadRail, all of them did so because it is convenient for them, for instance because of their (daily) travel destination. The interviewees indicating that they do not use the RandstadRail give mainly functional reasons for not doing so: the RandstadRail is not convenient to use to their destination, or they want to have the most flexible departure time possible. Only one of the interviewees hints that she uses the RandstadRail because she likes it. But she immediately gives a reason for this: she has no alternative, given that she is not comfortable anymore with driving a car (because of her age).

In line with these findings is the great importance given to the fact that one or no transfers have to be made on a journey when asked to give importance to different aspects of travelling by the study population. Almost 90 percent of the study sample agrees that this feature is important. This could either indicate that respondents prefer to use a car (as this usually implies no transfers) or a wish for a direct connection (or in the worst case, with one transfer) to their destination by public transport.

This emphasis of the functional aspects of travelling indicates that people from the study sample are only willing to use the RandstadRail if this is the fastest and most direct way for them to travel to their destination. Otherwise, they will use other transport, preferably a mode which is fast and does not imply transfers or a strict departure time. In other words: the car seems to be the alternative for many respondents in the study sample. This means that without being able to benefit from the functional advantages of the RandstadRail for a trip (for instance: a direct connection to the destination), it appears that the people studied will take the car instead. This functional choice behaviour follows the assumptions made in the international literature (see for instance Ouelette & Wood, 1998; Tertoolen, 2009; and Gärling & Axhausen, 2003), where there is assumed that an individual will choose the option that has the most advantages and involves the least constraints, like a fixed departure time or making transfers along the journey. Also, an individual will only change his or her travel behaviour if the advantages of this choice are obvious to him or her. This is also in line with the Theory of Reasoned Action (TRA) (Ajzen & Fishbein, 2005) and the Theory of Planned Behaviour (TPB) (Ajzen, 1991).

The next finding from the empirical research is that the preferred way to get to the RandstadRail station is on foot. This is both reflected in the fact that all respondents in the survey answers the question how many minutes it takes them to get to the nearest RandstadRail station in minutes on foot; and in the overwhelming majority of respondents indicating that it is easy to reach the nearest RandstadRail station on foot (nearly 100 percent). The latter becomes even more clear when this share is compared with the share of respondents indicating that it is easy to reach the station by bike (80 percent), but especially when compared to the ease to reach the station by car (only 40 percent). And when the agreement with the statements that it is easy to park a bike or a car at the nearest RandstadRail station, it is interesting to see that these numbers are also fairly low (respectively 20 and 10 percent).

Also interesting is the fact that whether or not a person from the study sample thinks it is easy to reach the nearest RandstadRail station by car has a negative influence on his or her intention to use the RandstadRail. However, if a respondent is positive about the possibilities for parking their car at the station, the intention to use the RandstadRail is more positive. The first finding is in line with the found preference of the respondents to make one or no transfers on their journey: if they are already travelling by car, they will not make a transfer at the RandstadRail station, but will continue to their destination in their car. But

when they think there is enough parking space, they will have more intention to actually use the RandstadRail instead. Thus, there is not much satisfaction with the parking possibilities for a car at the RandstadRail station. This fact was also pointed out by some of the interviewees.

The importance of knowledge about the RandstadRail appears to be very influential. The opinion about the RandstadRail is largely influenced by the opinion about the access to and level of information about the RandstadRail. This relation is strongly positive. The same strong positive relation exists between the knowledge where a ticket for the RandstadRail can be bought and the opinion about the RandstadRail.

Remarkably, respondents give less importance to the travel feature of a flexible departure time when they are more positive about the access to and level of information about the RandstadRail. As a flexible departure time is a typical feature of travelling by car, this finding means that people are less likely to travel by car if they are more satisfied with the information available to them about the RandstadRail.

These findings regarding the importance of information are in line with the international literature on the subject (see for instance Peter & Olsen, 2005; and Moeller, 2002. The general idea is that a choice starts with the availability of information about this choice. The more informed an individual is about an option, the more likely it is that he or she will choose this option, and will therefore perform this behaviour. Options without much information present uncertainties, and this is often not desired when making a choice.

Interestingly, the influence of the mean monthly household income and the level of education on the use of the RandstadRail is negative. However, the general idea in the international literature on the subject of travel behaviour is that the type of traveller that is the most likely to be tempted to use public transport usually earns an income that is above average and is likely to have a high level of education (Ministerie van Verkeer en Waterstaat, 2006). Thus, the findings in the quantitative research of this thesis are in contrast with these assumptions. People from the study population who earn a higher income and have a higher level of education are apparently more likely to use the car for their movements than assumed in various publications. An important explanation could be found in the value given to the travel aspect of being able to relax. From the empirical research, it becomes clear that the people in the study population do not link that feature to public transport, but to using a car. In contrast to assumptions made in the international literature, the general opinion in the study population is that travelling by car is relaxing, while this feature is attributed to public transport and not to travelling by car in many publications.

When the relation between household situation and attitude is researched, it becomes clear that single households and couples care less about the costs of their travels and more about the speed of the transport mode they use than households with children. Also, respondents from the latter group give more importance to travel aspects belonging to car use than singles and couples. Single and couple households give more importance to the fact that they are able to work while they are travelling. All these findings mean that households with children are the least likely group to travel by public transport, and thus by RandstadRail, when compared to singles and couples.

Concerning the subjective norm, colleagues turn out to be of the most relevant influence on the attitude towards the RandstadRail and preferences of travelling, and the intention to use the RandstadRail. The least relevant is the travel behaviour of friends, while the subjective norm of family is relevant for some indicators.

In general, there can be said that more information and knowledge of the RandstadRail leads to a more positive attitude towards it. Subsequently, a more positive attitude leads to a higher intention to use the RandstadRail. Following this relation, a higher intention leads to more desire to use the RandstadRail, which leads to a higher probability of actual use. This is in line with the factors assumed to be influential on behaviour by Ajzen and Fishbein (2005); and Ajzen (1991) in respectively the TRA and TPB, as these theories also assume that behaviour is the result of a process of weighing the options available for the best choice. Also, Tertoolen's behavioural model (2009) assumes the same sequence in factors that can result in travel behaviour changes as were found in the empirical research for this thesis.

6.2 Value of the results

While some interesting conclusions can be drawn from the quantitative research for this thesis, there are some shortcomings that have to be mentioned.
First of all, the research for this thesis was conducted after the RandstadRail was finished and already in use. Ideally, a survey would have been held before the start of use, and one sometime after the start of these services. This would have implied a longitudinal research. When that would have been the case, a real comparison between the old and the new situation could be made. This was however not possible for this thesis, as the RandstadRail is already in use for some years now.

Secondly, it is impossible to link the conclusions for this study sample to all possible users of the RandstadRail. The skewed division of gender, age and especially income among the respondents makes that the population present in the study sample for this thesis will not be representative for the whole population. Also, as the potential users of the RandstadRail are not limited to the geographical location chosen for this research, there could be other factors influencing the use of the RandstadRail for people living further from a RandstadRail station. In this thesis however, the focus was not on them, but on people living nearby the stations. This makes that the conclusions only will apply for people from the study sample. However, some general conclusions could be drawn which are likely to apply to other groups of users as well.

Furthermore, regarding the quantitative research, there has to be noted that this is not extensive. However, the main purpose of the interviews was to add some depth in the behaviour of travellers, especially regarding their attitude about and opinion of the RandstadRail. Therefore, the number of interviews held is only small and not significant enough to base extensive conclusions on. However, the results of the interviews turned out to underline the earlier findings from the quantitative research quite well. But in order to be able to draw some real conclusions from them, more interviews would have to be held.

6.3 Recommendations

While there can be concluded that the results from both the quantitative and qualitative research for this thesis have their weaknesses, the results can still provide leads for future developments of transport projects. And as there are already plans for adding tracks to the RandstadRail network (see Chapter 2: Development of the RandstadRail network), it is likely that these can become relevant in the (near) future.

1. There is a very strong relation between the sense of being informed among the respondents, the level of knowledge present and the attitude towards the RandstadRail. This attitude subsequently influences intention and desire to use the RandstadRail, which leads to actual use. Thus, it is crucial to invest in extensive and widely available information about the transport project and its development. Even though the information is not always positive (for instance, when the project is delayed or malfunctioning), people value information about what is going on. In

process of the development of the RandstadRail, there seem to have been some serious shortcomings regarding the availability and level of information. This could be a lesson for further development of the network, and maybe for planned construction works on the network, which will be inevitable as the network will be older and thus will require maintenance.

2. Somewhat related is the function of marketing. As the international literature showed that there could be a significant role for marketing in promoting a certain transport mode, it could be wise to invest in a promotional action at the start of use with a discount or even free travelling. The key is to let people experience the alternative and get familiar with it. With a new mode of transport, it therefore has to be attractive for people to change their old travel habits into new ones, implying the use of the new mode of transport. Making this alternative more attractive could lead to a higher number of users. No promotional actions were held at the start of services of the RandstadRail.

3. Both users and non-users of the RandstadRail indicate that there is not enough parking space for cars at their nearest RandstadRail station. This point is also made by some of the interviewees. As it turns out that a higher estimation of the parking possibilities for a car at the RandstadRail station leads to a higher intention to use it, the developers could benefit from upgrading the car parking facilities at the stations.

4. Travellers from the study sample value the functional features of travelling the most, especially the fact that no or one transfer has to be made while travelling. In relation to the availability of information, it would be wise to adequately inform travellers about their transfer possibilities, and to make sure that these transfers will imply the least waste of time as possible. Also, an upgrade of the network with more lines would result in a greater geographical reach with the RandstadRail. This will no doubt attract more travellers to use the RandstadRail, since it is proven that they are more likely to use it if they have a direct benefit from using it. An example of this is the more extensive use of RandstadRail line E after the network was fully operational when it was connected to Rotterdam Central station.

5. Since obtaining a ticket for the RandstadRail is perceived in general as not very easy by the population studied, it could pay off to invest in some ticket selling points at the stations. Since an OV chip card has to be used and there are no options to buy these at most stations (with the exceptions of the large stations like The Hague Central station and Rotterdam Central station), it could be wise to place some chip card selling machines at stations. These can be automatic, as long as people are able to obtain a valid ticket for travelling in a more easy way than having to buy it in advance, somewhere else or at a higher price from the driver.

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Appendix I - Statistical appendix

Chapter 4: Methodology

Table 1: Cronbach's Alpha attitude variables (A and B)

Cronbach's Alpha	Number of items
0,730	8

Table 2: Cronbach's Alpha opinion about the RandstadRail

Cronbach's Alpha	Number of items
0,912	10

Table 3: Cronbach's Alpha travel preferences

Cronbach's Alpha	Number of items
0,780	7

Table 4: Chi-Square test attitude and desire

	Value	df	Significance
Pearson Chi-Square	51,674 [a]	14	0,000

a. 24 cells (80,0%) have expected count less than 5. The minimum expected count is 0,34.

	Value	df	Significance
Pearson Chi-Square	45,932[a]	18	0,000

a. 33 cells (86,8%) have expected count less than 5. The minimum expected count is 0,35.

Opinion about the RandstadRail (Q1 – A)

Table 5: Model summary regression

Adjusted R Square	Standard error
0,545	0,489

	F	Significance
Regression	6.819	0,000

	Standardized coefficients (Beta)	Significance
Constant (B)	2,149	0,002
Gender	-0,009	0,908
Age	0,000	0,997
Single household	-0,217	0,122
Couple household	-0,054	0,730
High level of education	-0,265	0,002
Work or study	0,098	0,716
Work/study location with RR access	-0,233	0,037
Fulltime job	0,031	0,915
Part-time job	0,317	0,216
High household income (two times modal or more)	-0,258	0,003
Number of cars in household	-0,248	0,005
Availability of OV card	0,186	0,026
Availability of OV discount card	-0,020	0,825
Minutes to RR station	0,084	0,327
Information score A (opinion about information availability)	0,626	0,000
Information score B (knowledge about services of the RR)	0,155	0,120
I know where to buy a ticket for the RR	0,494	0,001
Most of my family travels by…	-0,020	0,001
Most of my friends travel by…	-0,071	0,492
Most of my colleagues travel by…	-0,081	0,425

Table 6: Relation between level of education and actual use of the RandstadRail

ANOVA	F	Significance
Between groups	5,245	0,002

		Mean difference	Significance
Primary/middle school	**LBO/MBO**	0,559	0,075
	HBO	0,656 **	0,005
	WO	0,294	0,818
LBO/MBO	**Primary/middle school**	-0,559	0,075
	HBO	0,097	1,000
	WO	-0,265	0,779
HBO	**Primary/middle school**	-0,656 **	0,005
	LBO/MBO	-0,097	1,000
	WO	-0,361 **	0,045
WO	**Primary/middle school**	-0,294	0,818
	LBO/MBO	0,265	0,779
	HBO	0,361 **	0,045

**: The mean difference is significant at the 0,05 level

Intention to use the RandstadRail (Q2)

Table 7: Correlations

	1	2	3	4	5	6	7	8	9
1	1,00	-0,14	-0,01	-0,24	-0,16	0,02	-0,09	0,47	0,48
2	-0,14	1,00	0,40	0,30	0,31	-0,05	-0,04	0,28	0,11
3	-0,01	0,40	1,00	0,16	0,08	0,09	0,14	0,45	0,34
4	-0,24	0,30	0,16	1,00	0,49	0,30	-0,15	0,04	-0,22
5	-0,16	0,31	0,08	0,49	1,00	0,15	0,12	0,14	-0,41
6	0,02	-0,05	0,09	0,30	0,15	1,00	0,34	0,04	-0,02
7	-0,09	-0,04	0,14	-0,15	0,12	0,34	1,00	0,13	0,01
8	0,47	0,28	0,45	0,04	0,14	0,04	0,13	1,00	0,25
9	0,48	0,11	0,34	-0,22	-0,41	-0,02	0,01	0,25	1,00

1: Attitude A: Opinion about the RR (1=low – 5=high)
2: Attitude B: Importance of aspects of travelling (1=low – 5=high)
3: It is easy to reach the nearest RR station on foot (1=yes)
4: It is easy to reach the nearest RR station by bike (1=yes)
5: It is easy to reach the nearest RR station by car (1=yes)
6: There is enough parking space for my bike at the RR station (1=low – 5=high)
7: There is enough parking space for my car at the RR station (1=low – 5=high)
8: It is easy to buy a ticket for the RR (1=yes)
9: Intention (1=yes)

Table 8: Model summary regression

	Chi-square	df	Significance
Model	73,865	8	0,000

-2 Log likelihood	Nagelkerke R Square
57,882	0,716

Desire to use the RandstadRail (Q3)

Table 9: Attitude and desire

ANOVA		F	Significance
Attitude A: Opinion about the RandstadRail	**Between groups**	7,947	0,006
Attitude B: Importance of aspects of travelling	**Between groups**	0,448	0,505

Table 10: Desire and intention

			Intention		
			No	**Yes**	**Total**
Desire	**No**	**Count**	38	0	38
		Expected count	22,5	15,5	38,0
	Yes	**Count**	26	44	70
		Expected count	41,5	28,5	70,0
	Total	**Count**	64	44	108
		Expected count	64,0	44,0	108,0

11 values are missing

	Value	**df**	**Significance**
Pearson Chi-Square	40,307[a]	1	0,000

a. 0 cells (0,0%) have expected count less than 5. The minimum expected count is 15,48.

	Value	**Significance**
Cramer's V	0,611	0,000

Actual use of the RandstadRail (Q4)

Table 11: Chi-Square test

			Total use of the RandstadRail			
			Never	**Sometimes**	**Often**	**Total**
Desire	**No**	**Count**	13	23	2	38
		Expected count	6,3	23,6	8,1	38,0
	Yes	**Count**	5	44	21	70
		Expected count	11,7	43,4	14,9	70,0
	Total	**Count**	18	67	23	108
		Expected count	18,0	67,0	23,0	108,0

	Value	**df**	**Significance**
Pearson Chi-Square	17,926[a]	2	0,000

a. 0 cells (0,0%) have expected count less than 5. The minimum expected count is 6,33.

	Value	**Significance**
Cramer's V	0,407	0,000

Actual use of the RandstadRail explored (Q5)

Table 12: Use of the RandstadRail – line E

Total use of the RandstadRail	**Frequency**	**Percentage**
Never	52	48,1
< 1 day	43	39,8
1-3 days	4	3,7
> 3 days	9	8,3

11 values are missing

Table 13: Use of the RandstadRail – line 3 and 4

Total use of the RandstadRail	**Frequency**	**Percentage**
Never	23	21,3
< 1 day	54	50,0
1-3 days	15	13,9
> 3 days	16	14,8

11 values are missing

Table 14: Work/school

Frequency of use	**Car**		**RandstadRail**	
	Frequency	**Percentage**	**Frequency**	**Percentage**
Never	52	48,1	65	60,2
< 1 day	14	13,0	19	17,6
1-3 days	15	13,9	14	13,0
> 3 days	27	25,0	10	9,3

11 values are missing

Table 15: Bringing children

Frequency of use	Car		RandstadRail	
	Frequency	Percentage	Frequency	Percentage
Never	89	82,4	103	95,4
< 1 day	5	4,6	0	0
1-3 days	14	13,0	5	4,6
> 3 days	0	0	0	0

11 values are missing

Table 16: Sport

Frequency of use	Car		RandstadRail	
	Frequency	Percentage	Frequency	Percentage
Never	65	60,2	108	100,0
< 1 day	21	19,4	0	0
1-3 days	15	13,9	0	0
> 3 days	7	6,5	0	0

11 values are missing

Table 17: Shopping

Frequency of use	Car		RandstadRail	
	Frequency	Percentage	Frequency	Percentage
Never	11	10.2	64	59,3
< 1 day	47	43.5	29	26,9
1-3 days	41	38.0	15	13,9
> 3 days	9	8.3	0	0

11 values are missing

Table 18: Other leisure activities

Frequency of use	Car		RandstadRail	
	Frequency	Percentage	Frequency	Percentage
Never	15	13,9	42	38,9
< 1 day	31	28,7	51	47,2
1-3 days	55	50,9	12	11,1
> 3 days	7	6,5	3	2,8

11 values are missing

Appendix II - Survey

Enquête RandstadRail

Geachte heer/mevrouw,

Voor mijn masterscriptie in het kader van de opleiding Stadsgeografie aan de Universiteit Utrecht doe ik onderzoek naar de RandstadRail. In mijn onderzoek probeer ik erachter te komen waarom iemand wel of geen gebruik maakt van dit vervoermiddel.

Aangezien u in de buurt van een RandstadRail station woont, ontvangt u deze enquête over uw reisgedrag. Deze is verspreid onder 200 huishoudens in de buurt van een aantal RandstadRail stations.

Wij willen vriendelijk verzoeken of **1 (of meerdere)** personen uit uw huishouden de enquête ten behoeve van het onderzoek in zouden willen vullen. Het invullen van de enquête duurt ongeveer 10 minuten.

De enquête zal weer bij u opgehaald worden op **woensdag 8 december tussen 14.00 en 16.00 uur**. Mocht u dan niet thuis zijn, dan wil ik u verzoeken of u de enquête uit uw brievenbus kunt laten steken. U kunt de enquête ook online invullen op: www.thesistools.com/web/?id=164229

Uw gegevens zullen discreet behandeld worden en niet aan derden doorgegeven worden.

Alvast heel hartelijk dank voor uw medewerking!

Martje Wedman,
Universiteit Utrecht

(Voor vragen kunt u contact opnemen via m.w.wedman@students.uu.nl)

Persoonlijke kenmerken

1. Wat is uw geslacht?
   - o Man
   - o Vrouw

2. Wat is uw leeftijd?
   ….. jaar

3. Wat is uw postcode?
   ……..

4. Hoe is uw huishoudenssituatie?
   - o Alleenwonend
   - o Samenwonend/getrouwd
   - o Samenwonend/getrouwd met kinderen
   - o Alleenwonend met kinderen
   - o Anders, namelijk …….

5. Wat is het niveau van uw hoogst afgeronde opleiding?
   - o Basisschool/middelbare school
   - o LBO/MBO
   - o HBO
   - o WO/universitair
   - o Anders, namelijk …….

6. Werkt en/of studeert u?
   - o Ik werk in (plaatsnaam) …….
   - o Ik studeer in (plaatsnaam) ……..
   - o Ik werk in (plaatsnaam) en studeer in (plaatsnaam) …….
   - o Ik ben met pensioen (ga verder naar vraag 8)
   - o Geen van beiden (ga verder naar vraag 8)

7. Indien u werkt, op welke basis doet u dit?
   - o Fulltime
   - o Parttime
   - o Parttime (als bijbaantje)

8. Wat is het gemiddelde maandelijkse inkomen van uw huishouden?
   - o Beneden modaal
   - o Modaal
   - o Twee keer modaal
   - o Meer dan twee keer modaal

9. Bent u in het bezit van een rijbewijs?
   - o Ja
   - o Nee (ga verder naar vraag 11)

10. Hoeveel auto’s zijn er in uw huishouden beschikbaar?
    ….. auto’s

11. Bent u in het bezit van een OV-chip kaart?
    - o Ja
    - o Nee

12. Bent u in het bezit van een OV-kortingskaart (bijvoorbeeld studenten-OV, jaarkaart, trajectkaart)?
    - o Ja
    - o Nee

13. Hoeveel minuten doet u erover om vanaf uw huis naar het dichtstbijzijnde RandstadRail station te komen? En met welk vervoermiddel is dit? (vul dit in voor het vervoermiddel wat u het vaakste hiervoor gebruikt of zou gebruiken, bijvoorbeeld: te voet, per fiets of met de auto)
    ……. minuten per ……

De volgende vragen gaan over de informatievoorziening rondom de RandstadRail en uw bekendheid ermee.

14. Geef aan in hoeverre u het eens bent met onderstaande stellingen:

	Helemaal mee eens	Mee eens	Neutraal	Niet mee eens	Helemaal niet mee eens
a. Ik voel me goed geïnformeerd over de diensten van de RandstadRail					
b. De start van de diensten van de RandstadRail was goed aangekondigd					
c. Ik hoef weinig moeite te doen om informatie over de RandstadRail te krijgen					
d. Het vervangende vervoer op de huidige RandstadRail trajecten tijdens de aanleg van het netwerk was goed geregeld					
e. De problemen rond de ingebruikname van					

de RandstadRail (ontsporingen, storingen, etc) hebben ervoor gezorgd dat ik minder gebruik maak van de RandstadRail dan ik vooraf van plan was					

15. Hoe frequent gaat **RandstadRail lijn E** op weekdagen (eens per hoeveel minuten)?
    …..

16. Hoe frequent gaan **RandstadRail lijn 3 en 4** op weekdagen (eens per hoeveel minuten)?
    ……

17. Ik moet overstappen als ik vanaf het dichtstbijzijnde RandstadRail station naar Rotterdam Centraal Station wil reizen
    - o Ja
    - o Nee
    - o Weet ik niet

18. Ik moet overstappen als ik vanaf het dichtstbijzijnde RandstadRail station naar Zoetermeer Centrum-West wil reizen
    - o Ja
    - o Nee
    - o Weet ik niet

19. Ik moet overstappen als ik vanaf het dichtstbijzijnde RandstadRail station naar De Uithof (Den Haag) wil reizen
    - o Ja
    - o Nee
    - o Weet ik niet

20. Het merendeel van mijn familie reist met…
    - o De auto
    - o Openbaar vervoer

21. Het merendeel van mijn vrienden reist met…
    - o De auto
    - o Openbaar vervoer

22. Het merendeel van mijn collega's reist met…
    - o De auto
    - o Openbaar vervoer

De volgende vragen gaan over uw beeld van de RandstadRail. Geef aan in hoeverre u het eens bent met de stellingen.

23. Geef aan in hoeverre u de volgende begrippen van toepassing vindt op reizen met de RandstadRail:

	Helemaal mee eens	Mee eens	Neutraal	Niet mee eens	Helemaal niet mee eens
a. Milieuvriendelijk					
b. Comfortabel					
c. Veilig					
d. Betrouwbaar					
e. Gemakkelijk					
f. Rustgevend					
g. Luxe					
h. Snel					
i. Plezierig					
j. Goedkoop					

De volgende vragen gaan over uw gebruik van de RandstadRail en andere vervoermiddelen

24. Op hoeveel dagen in een week maakt u gemiddeld gebruik van RandstadRail **lijn E**?
    - o Nooit
    - o Maximaal 1 dag per week
    - o Tussen de 1 en 3 dagen per week
    - o Meer dan 3 dagen per week

25. Op hoeveel dagen in een week maakt u gemiddeld gebruik van RandstadRail **lijn 3 en 4**?
    - o Nooit
    - o Maximaal 1 dag per week
    - o Tussen de 1 en 3 dagen per week
    - o Meer dan 3 dagen per week

26. Geef aan in hoeverre u het eens bent met onderstaande stellingen:

	Helemaal mee eens	Mee eens	Neutraal	Niet mee eens	Helemaal niet mee eens
a. Wanneer ik de mogelijkheid heb, probeer ik gebruik te maken van de RandstadRail					
b. Ik gebruik de RandstadRail niet zo vaak als ik zou willen					
c. Ik wil gedurende de komende week gebruik maken van de RandstadRail					
d. Ik ga de komende week gebruik maken van de RandstadRail					

27. Geef aan hoe vaak per week u gemiddeld gebruik maakt van **de auto** voor onderstaande activiteiten

	Frequentie			
	Nooit	Maximaal 1 dag per week	1-3 dagen per week	Meer dan 3 dagen per week
a. Naar werk/school gaan				
b. Kind(eren) wegbrengen				
c. Sporten				
d. Boodschappen doen				
e. Overige vrije tijd				

28. Geef aan hoe vaak per week u gemiddeld gebruik maakt van **RandstadRail** voor onderstaande activiteiten

	Frequentie			
	Nooit	Maximaal 1 dag per week	1-3 dagen per week	Meer dan 3 dagen per week
a. Naar werk/school gaan				
b. Kind(eren) wegbrengen				
c. Sporten				
d. Boodschappen doen				
e. Overige vrije tijd				

29. Geef van onderstaande stellingen aan in hoeverre deze belangrijk voor u zijn:

	Heel belangrijk	Belangrijk	Neutraal	Niet belangrijk	Helemaal niet belangrijk
a. Het vervoermiddel wat ik gebruik, is het goedkoopste					
b. Het vervoermiddel wat ik gebruik, is het snelste					
c. Ik hoef tijdens mijn reis niet of maximaal 1 keer over te stappen					
d. Ik kan werken tijdens mijn reis					
e. Ik hoef niet al te veel op te letten tijdens mijn reis					
f. Ik kan ontspannen tijdens mijn reis					
g. De vertrektijd is flexibel					

De volgende vragen gaan over het kopen van een vervoerbewijs en het bereiken van het RandstadRail station

30. Ik weet waar ik een vervoersbewijs voor de RandstadRail kan kopen
    - o Ja
    - o Nee

31. Het is gemakkelijk om een vervoersbewijs voor de RandstadRail te kopen
    - o Helemaal mee eens
    - o Mee eens
    - o Neutraal
    - o Niet mee eens
    - o Helemaal niet mee eens

32. Geef aan in u hoeverre u het gemakkelijk vindt om bij het dichtstbijzijnde RandstadRail station te komen met:

	Helemaal mee eens	Mee eens	Neutraal	Niet mee eens	Helemaal niet mee eens
a. Te voet					
b. Per fiets					
c. Met ander openbaar vervoer					
d. Met de auto					

33. Er is genoeg stallingruimte beschikbaar voor mijn fiets bij het dichtstbijzijnde RandstadRail station
   - o Helemaal mee eens
   - o Mee eens
   - o Neutraal
   - o Niet mee eens
   - o Helemaal niet mee eens
   - o Niet van toepassing

34. Er is genoeg parkeergelegenheid voor mijn auto bij het dichtstbijzijnde RandstadRail station
   - o Helemaal mee eens
   - o Mee eens
   - o Neutraal
   - o Niet mee eens
   - o Helemaal niet mee eens
   - o Niet van toepassing

35. Ik kan gemakkelijk op het perron van de RandstadRail komen
   - o Ja
   - o Nee, want ……

36. Sinds de RandstadRail er is (2007), maak ik minder gebruik van mijn auto voor het reizen naar mijn werk/studie
   - o Helemaal mee eens
   - o Mee eens
   - o Neutraal
   - o Niet mee eens
   - o Helemaal niet mee eens

37. Sinds de RandstadRail er is (2007), maak ik minder gebruik van mijn auto in mijn vrije tijd

- Helemaal mee eens
- Mee eens
- Neutraal
- Niet mee eens
- Helemaal niet mee eens

Indien u de resultaten van dit onderzoek wenst te ontvangen, kunt u hier uw e-mailadres invullen: ……

Zou u eventueel beschikbaar zijn voor een kort aanvullend interview over uw reisgedrag (half/eind december)?

- Ja, mijn e-mailadres is: ……
- Nee

Heel hartelijk dank voor uw medewerking!

Appendix III - Interviews

1. Mevrouw C. van Engelen
34 jaar, samenwonend, woonachtig in Voorburg
Fulltime baan in Utrecht, twee keer modaal inkomen, 1 auto

I: Maakt u gebruik van de RandstadRail, en zo ja, waarvoor?
R: Ik werk in Utrecht, en reis meestal met de trein naar mijn werk. Omdat Voorburg sinds enkele jaren geen stop meer is van de intercity tussen Den Haag en Utrecht – helaas… - reis ik vaak via Den Haag Centraal. Voor de komst van de RandstadRail maakte ik daarvoor gebruik van de bus, maar tegenwoordig neem ik vaak de RandstadRail. Het station zit op minder dan 5 minuten lopen van ons huis en er vertrekt er eentje om de paar minuten: ideaal! Mijn reistijd is wel langer dan vroeger, maar ja, daar is weinig aan te doen.

I: Ja het is zeker vervelend dat Voorburg geen intercityhalte meer is… Wat is uw mening over de ingebruikname van de RandstadRail?
R: (Lacht) Ik moet eerlijk zeggen dat ik daar niet zo positief over ben. De informatievoorziening was slecht, en het heeft te lang geduurd voordat de tram eindelijk zonder problemen reed. Er was veel onduidelijk, ook wanneer hij weer zou gaan rijden. Ik heb dus heel lang nog gewoon de bus genomen naar Den Haag Centraal. En die waren door alle problemen vaak nog voller dan voordat de RandstadRail het zou gaan doen, dus dat was geen fijne periode om te reizen. Met lekker weer ben ik daarom wel eens gaan fietsen, maar ik vond het niet fijn om dit te doen als het slecht weer was.

I: Hoe had de ingebruikname volgens u dan beter gekund?
R: Volgens mij zijn ze gewoon veel te vroeg begonnen met het gebruiken van de RandstadRail, terwijl hij nog niet genoeg getest was. Dat blijkt wel uit al die ongelukken in die bocht bij Den Haag Centraal. En de informatievoorziening (…) (zucht) die was dus niet best. Ze hadden best een flyertje of iets dergelijks in de bus kunnen gooien. Nu kwam je op het station en bleek dat hij niet reed.

I: Gebruikt u de RandstadRail ook wel eens in uw vrije tijd?
R: Eigenlijk zelden. Mijn man werkt ook fulltime, maar dan in Den Haag. Hij gaat wel met de auto naar zijn werk, want hij heeft een leaseauto en hij vindt het wel makkelijk. Boodschappen doe ik vaak op de fiets of met de auto als het slecht weer is. Veel van onze vrienden wonen dichtbij, dus daarvoor gebruiken we ook vaak de auto of de fiets, of we gaan lopen. Naar familie gaan we altijd met de auto, want die wonen hier anderhalf uur of meer vandaan. Als ik met een vriendin ga winkelen, ga ik een enkele keer wel eens met de RandstadRail naar de stad.

I: Maken uw vrienden, familie en collega's gebruik van de RandstadRail?
R: Mijn familie woont vrij ver weg, en als ze bij ons op visite komen, doen ze dat meestal met de auto. Mijn broer is een uitzondering: die heeft geen auto, dus hij komt wel met de RandstadRail als hij hierheen komt. Of met de bus, dat verschilt een beetje.
Mijn vriendinnen hebben eigenlijk allemaal een auto, en volgens mij gebruiken ze de RandstadRail niet zoveel. De meesten werken ook in Leidschendam of Voorburg, dus ze gaan vaak met de fiets. En er hebben er al een aantal kinderen, en dan pak je toch sneller de auto. Stuk minder gedoe zeggen ze. (lacht)

I: En uw collega's?
R: Oh ja. Ik werk in Utrecht, en al mijn collega's wonen daar of meer in de buurt. Ik reis meestal samen met mijn buurvrouw: zij werkt dichtbij Den Haag Centraal, dus als het even kan, reizen we 's morgens samen. Wel zo gezellig!

I: Wat vindt u van reizen met de RandstadRail?
R: Ik vind het erg comfortabel. Zoals ik al zei: de RandstadRail rijdt erg frequent. Ik kan ook bijna altijd wel zitten. Ook vind ik het erg handig dat straks iedereen met een OV chipkaart moet reizen. Ik heb een jaarkaart van mijn werkgevers en gebruik de OV chipkaart dus al enige tijd.
Oh, ik moet wel zeggen dat ik denk dat het voor ouderen minder makkelijk is om met de RandstadRail te reizen. Vooral de snelheid waarmee hij wegrijdt bij een station is soms echt gevaarlijk. Ik zie zo vaak mensen bijna omvallen die nog geen zitplaats hebben.

I: Denkt u dat hier wat aan gedaan zou kunnen worden?
R: (Stilte) Nee… Ik weet het niet zo goed. Want hij moet natuurlijk wel gewoon op tijd rijden, dus het schema zal wel strak zijn. (lacht)

I: Denkt u in de toekomst gebruik te zullen blijven maken van de RandstadRail?
R: Voorlopig in ieder geval wel. We willen wel kinderen binnen een paar jaar, en dan weet ik niet hoe het gaat lopen. Ik zie wel eens moeders met een kinderwagen in de RandstadRail en dat gaat best goed. De perrons zijn gelijkvloers met de opstap van de RandstadRail, dus je hoeft niet veel te tillen. Ik zal de RandstadRail wel blijven gebruiken om naar mijn werk te gaan, want ik zie het niet zo zitten om elke dag in de file te moeten staan. Bovendien kan ik in de trein bellen of lezen, en dat vind ik erg fijn. Als er kinderen komen, zal ik denk ik niet meer fulltime gaan werken, dus dan hoef ik niet meer iedere dag weg. Mijn man en ik hebben het er al over dat we misschien toch een tweede autootje nemen mocht het zo ver zijn, want dat zou dan toch wel handig zijn voor mij. Zeker als ik die verhalen van vriendinnen hoor over schreeuwende kinderen als ze in de tram zitten… daar heb ik toch weinig zin in.

I: Maar naar uw werk blijft u wel met de RandstadRail reizen?
R: Ja dat denk ik wel, want ik vind het wel erg makkelijk.

I: Nou dat was wel alles wat ik wilde weten. Heel erg bedankt voor uw tijd en moeite!
R: Graag gedaan, en veel succes met je onderzoek!

2. Meneer S.J. van het Schip
31 jaar, alleenwonend (vriendin), woonachtig in Voorburg
Fulltime baan in Zoetermeer, bovenmodaal inkomen, geen auto

I: Maakt u gebruik van de RandstadRail, en zo ja, waarvoor?
R: Ja ik gebruik de RandstadRail zeker, zelfs dagelijks. Ik woon in Voorburg vlakbij station Leidschendam-Voorburg, en werk in Zoetermeer. Mijn vriendin woont ook in Zoetermeer, alleen dan precies aan de andere kant dan waar ik werk. Dus zowel als ik vanuit mijn eigen huis als haar huis naar mijn werk ga, neem ik de RandstadRail.

I: Gebruikt u de RandstadRail ook wel eens in uw vrije tijd?
R: Nou ja, het heen en weer reizen tussen mijn eigen huis en dat van mijn vriendin noem ik misschien wel vrije tijd (lacht). Ik heb geen auto, dus ik gebruik de fiets of het OV als vervoermiddel, waar ik ook heenga. Ik ga op de fiets naar tennis, en als ik naar de kroeg ga of bij vrienden ga eten, verschilt het een beetje. Mijn vriendin heeft wel een auto, dus daar gaan we wel eens mee naar familie. Haar familie dan, want die woont wel wat verder weg: in het oosten van het land.

I: Heeft u een OV-kaart of OV-kortingskaart vanuit uw werk?
R: Ja, er is een vrij gunstige OV-regeling. Ik heb een jaarkaart, en betaald daar een maandelijkse bijdrage voor. Ik zou niet eens weten hoeveel die is… het wordt gewoon automatisch van je salaris afgehaald. Maar ik vind het heel makkelijk: ik hoef me nooit zorgen te maken om het kopen van een kaartje. Bovendien is het met de OV-chipkaart van tegenwoordig al helemaal makkelijk: alleen even inchecken als je instapt, en voilá!

I: Wat is uw mening over de ingebruikname van de RandstadRail?
R: Dat was dan weer stukken minder. Toen ik begon met werken in Zoetermeer was het oude spoorlijntje er nog. Die werd dus buiten gebruik gesteld toen ze de RandstadRail gingen bouwen – maar dat weet je vast als je je scriptie erover schrijft (lacht). Maar toen was ik dus, net als al die andere mensen, aangewezen op het busvervoer. Nou… wat een drama. Er waren veel te weinig bussen voor al die mensen. Ik heb zelfs in het begin wel eens in een bus gezeten die verkeerd reed, want toen kenden de chauffeurs de routes nog niet. Kan gebeuren, maar wel heel slecht hoor. Het is dat ik toen nog niet met mijn vriendin was, anders was ik daar wel wat meer geweest (lacht). Nee… zonder grappen: ik deed er wel een kwartier of half uur langer over om op mijn werk te komen dan ik nu deed.

I: Hoe had de ingebruikname volgens u dan beter gekund?
R: Nou ja, ze konden er volgens mij weinig aan doen dat al die dingen eerst ontspoorden bij Centraal. Gewoon een foutje. En ik snap dat ze daarna ook alles eerst goed wilden testen voor dat weer kon gebeuren, want stel je voor dat zo'n ding ontspoort middenin de spits… Maar ik vond het wel heel slecht dat het vervangende busvervoer zo belabberd geregeld was. Het heeft toch wel meer dan een jaar geduurd, en tegen het einde waren er nog steeds niet meer bussen. Ik snap dat ze eerst even willen afwachten of de busdienst wel gebruikt zou worden, maar volgens mij hadden ze al na een paar dagen de conclusie kunnen trekken dat er te weinig capaciteit was.

I: Wat vindt u – ondanks deze slechte start - van reizen met de RandstadRail?
R: Voor mij is het heel praktisch. Ik loop een paar minuten naar het station, wacht misschien een paar minuten en heb dan een rechtstreekse verbinding met Zoetermeer Centrum (Driemanspolder). Een zitplaats is nooit een probleem, en als ik mijn laptop meeneem, kan ik nog werken ook onderweg. Ik kan me alleen ontzettend irriteren aan van die luid bellende

pubers, want die zijn er af en toe wel veel. Maar ja, dat heb je ook in de trein en bus geloof ik.

I: Maken uw vrienden, familie en collega's gebruik van de RandstadRail?
R: Ik weet dat een groot deel van mijn collega's ook met de RandstadRail komt. Eén collega van me komt uit Den Haag, dus we spreken meestal af hoe laat we weggaan en reizen dan samen. Ik ga ook meestal met de RandstadRail naar mijn familie – mijn zus en ouders wonen namelijk in Den Haag. Van mijn vrienden weet ik eigenlijk niet of ze vaak de RandstadRail gebruiken. Ik weet er een aantal die altijd met de auto naar hun werk gaan, maar vooral de vriendinnen en vrouwen gaan vaak met de fiets of met het OV. Dus daar moeten er wel een aantal tussen zitten denk ik (lacht).

I: Denkt u in de toekomst gebruik te zullen blijven maken van de RandstadRail?
R: Ik neem aan van wel, want ik vind het wel erg handig. Als het allemaal zo doorgaat, denk ik dat ik over een half jaartje bij mijn vriendin intrek, want zij heeft een koophuis. Misschien dat we wel iets nieuws gaan zoeken, maar ik denk dat we het eerst maar even zo proberen. Maar dan kan ik nog steeds met de RandstadRail naar mijn werk, dus dat blijf ik zeker doen. Of misschien eens fietsen in de zomer, wel gezond (lacht).

I: Dat waren mijn vragen! Heel erg bedankt voor de tijd en moeite!
R: Het was geen moeite hoor, maar veel succes nog!

3. Mevrouw J.H. Veldhuijzen-de Bakker
74 jaar, getrouwd, 3 volwassen kinderen, 5 kleinkinderen, woonachtig in Leidschenveen
Gepensioneerd, modaal inkomen, geen auto

I: Maakt u gebruik van de RandstadRail, en zo ja, waarvoor?
R: Och jazeker! Mijn oudste zoon woont met zijn gezin in Zoetermeer, en ik pas op dinsdag en donderdag altijd op mijn twee kleinkinderen. Ze zijn nu twee en bijna vijf. Ik neem altijd de RandstadRail naar Zoetermeer, en dan is het maar een paar minuten lopen. Ik ben nog goed ter been, dus het is erg makkelijk.

I: En kunt u makkelijk op het perron komen?
R: (Lacht) Nou met de jaren… ik neem ondertussen maar de lift. Die trappen worden ondertussen een beetje teveel, dat kunt u vast begrijpen (lacht).

I: Wat is uw mening over de ingebruikname van de RandstadRail?
R: Tsja, ik kan daar eigenlijk niet zoveel over zeggen. (Denkt na) Ik heb wel in de krant gelezen en op het nieuws gehoord dat er veel problemen waren.

I: En wat vonden mensen in uw omgeving ervan?
R: De buurman, die in Nootdorp werkt, hoorde ik wel eens over volle bussen en vertraging. Het irrititeerde hem heel erg, dat weet ik nog wel. Hij zei wel eens dat hij zich als een haring in een tonnetje voelde als het weer eens slecht weer was en er veel mensen in de bus waren. Kan ik me zo voorstellen, want dan heb ik ook wel eens moeite om een zitplaats te vinden.

I: Maken uw vrienden en familieleden gebruik van de RandstadRail?
R: Veel van mijn vriendinnen zijn al slecht ter been, dus die komen niet zo heel ver meer. Mijn beste vriendin – ik ken haar al sinds we 25 zijn – heeft vorige maand haar heup gebroken, dus dat gaat ook niet zo goed meer. Nee… wat dat betreft dus niet zoveel meer.

I: En uw kinderen, en andere familieleden?
R: Mijn dochter woont hier niet in de buurt, en als die deze kant op komt, neemt ze altijd de auto. Dat kan ik me ook wel voorstellen met haar twee kleintjes – het is toch wel stukken makkelijker voor haar. Mijn zoon waarbij ik op de kleinkinderen pas neemt wel regelmatig de RandstadRail. Zijn vrouw neemt hem in ieder geval om naar haar werk te gaan – ze werkt hier in Leidschenveen. Voor haar is het heel makkelijk, want haar werk is vlakbij het station! Mijn jongste zoon gaat volgens mij meer met de auto.

I: Wat vindt u van reizen met de RandstadRail?
R: Ja ik vind het dus heel makkelijk. Anders zou ik toch een stuk lastiger in Zoetermeer komen, want dan moet ik met de bus en dat is niet zo handig. Ik wil liever niet overstappen, dat begrijpt u vast wel, dus de RandstadRail is ideaal!

I: Denkt u nog lang gebruik te maken van de RandstadRail?
R: (Lacht) Tsja kind, dat kan ik lastig voorspellen. Wie weet breek ik volgende week ook een heup, dan wordt het toch een stuk lastiger! Nee, ik hoop het wel, maar mocht ik slechter ter been worden, dan wordt het wel moeilijk. Dan moet Gijs (red.: haar zoon) de kinderen maar hierheen brengen als hij nog wil dat ik op ze pas! (lacht)

I: Nou dit waren mijn vragen wel, hartelijk dank!
R: Geen probleem, ik had toch tijd genoeg! (lacht)

4. De heer T.H. Vink
38 jaar, 2 kinderen van 7 en 5, woonachtig in Pijnacker
Fulltime baan in Rotterdam, twee keer modaal inkomen, 2 auto's

I: Maakt u gebruik van de RandstadRail, en zo ja, waarvoor?
R: Zelden. Ik werk meer dan 40 uur per week en heb een leaseauto, dus ik rijd dagelijks naar mijn werk toe.

I: Maar geen last van files?
R: Nee eigenlijk zelden. Ik ben manager van een IT-afdeling, dus ik kan mijn werktijden redelijk zelf bepalen. Ik kan dus vertrekken na de spits, wat ervoor zorgt dat ik eigenlijk altijd in één keer door kan rijden. Alleen als er een ongeluk gebeurd is, staat het wel eens vast. Dat ik na de spits kan vertrekken, is ook handig met het naar school brengen van de kinderen, want mijn vrouw werkt in een tandartspraktijk en moet wel vroeg beginnen. Op dagen dat zij moet werken, breng ik ze dus altijd weg. Zij werkt 3 dagen per week, de andere 2 dagen vertrek ik meestal wel iets eerder naar de zaak.

I: U geeft aan dat u zelden gebruik maakt van de RandstadRail. Waar gebruikt u hem dan wel eens voor?
R: Een hele enkele keer gebruiken we hem wel eens als we naar de stad gaan met de kinderen. Mijn vrouw pleit ervoor dat we niet altijd met de auto gaan, en bovendien is het ook lastig parkeren in het centrum van Den Haag. Mijn vrouw doet trouwens alles op de fiets, dus die is een beetje het tegenovergestelde. (lacht)

I: Maken uw vrienden, familie en collega's gebruik van de RandstadRail?
R: Mijn vrouw dus wel eens, maar ook niet heel vaak geloof ik. Ik heb wel collega's die hem gebruiken, want die wonen dichtbij Rotterdam en nemen de RandstadRail naar (Rotterdam) Centraal. Zij vinden het wel praktisch geloof ik. Vanuit mijn bedrijf kun je een OV-kaart krijgen, dus het is wel voordelig ermee te reizen als je de mogelijkheid hebt. Maar ik vind het gewoon teveel gedoe, ik ga liever met de auto.

I: Wat vindt u dan het voordeel van reizen met de auto in vergelijking met reizen met het openbaar vervoer, en dus ook de RandstadRail?
R: (Denkt na) Hm… Ik denk dat ik het gewoon makkelijk vind dat ik kan vertrekken wanneer ik wil. Ik ben niet aan de vertrektijd van een tram of bus gebonden. Ze gaan vaak, ook de RandstadRail, dat weet ik (lacht), maar toch. Als ik de auto neem, kan ik gewoon instappen en wegrijden, zonder dat ik eerst naar een station hoef te lopen.

I: U kunt ook met de auto naar het RandstadRail station en die daar parkeren?
(Lacht) Nee daar begin ik niet aan… De buurman heeft dat een tijdje gedaan toen zijn dochter haar enkel gebroken had. Ze liep op krukken, en zat op school in Zoetermeer, en ging altijd met de RandstadRail. Hij zette haar eerst dagelijks af bij het station. Vooral in het begin had ze nog veel pijn en ging het niet zo goed met die krukken, dus toen wilde hij haar zo dicht mogelijk bij het perron afzetten. Nou… drama. Hij vertelde dat er veel te weinig parkeerplekken zijn, dus het is echt druk. Met die verhalen heeft hij ervoor gezorgd dat ik dat ook niet ga doen denk ik (lacht). Bovendien zit ik dan al in de auto, dus kan ik net zo goed doorijden.

Wat is uw mening over de ingebruikname van de RandstadRail?
R: Ik heb wel op het nieuws gehoord en in de krant gelezen dat het niet best was, om het zo maar even te zeggen. Ik vind het wel erg slordig dat er zoveel problemen konden zijn in het

begin, die volgens mij gewoon voorkomen hadden kunnen worden als ze iets langer gewacht hadden met het gebruiken. Maar ja… volgens mij liepen ze al achter op schema, en moesten ze dus wel…

I: Hoe had de ingebruikname dus volgens u dan beter gekund?
R: Niet zo overhaast dat ding gaan gebruiken, dat lijkt me logisch.

I: Nou, dit waren al mijn vragen. Heel erg bedankt voor uw tijd en moeite!
R: Ja geen probleem, en veel succes verder.

5. Mevrouw C.S.A. Vogels
59 jaar, 1 volwassen kind, 1 kleinkind, woonachtig in Leidschendam
Parttime baan in Leidschendam, bovenmodaal inkomen, 1 auto

I: Maakt u gebruik van de RandstadRail, en zo ja, waarvoor?
R: Nee eigenlijk nooit. Ik ga op de fiets naar mijn werk in Leidschendam, want dat is maar 10 minuutjes. Bovendien kan ik daar niet eens komen met de RandstadRail (lacht). En verder ook eigenlijk nooit!

I: Maakt u wel gebruik van ander openbaar vervoer?
R: Ook zelden… Een enkele keer ga ik wel eens met de bus, maar als ik niet met de fiets ga, dan ga ik lopen of met de auto. Op zaterdag doen mijn man en ik altijd de weekboodschappen met de auto – wel zo makkelijk.

I: Waarom maakt u geen gebruik van de RandstadRail?
R: Nou ja, het is gewoon niet zo praktisch voor me. Als ik dan een keer niet wil fietsen, dan ga ik wel met de bus. De RandstadRail gaat volgens mij niet zo vaak, en ik kom ook niet echt middenin de stad uit. Dan is de bus praktischer.

I: Maken uw vrienden, familie en collega's gebruik van de RandstadRail?
R: Nee ook niet echt geloof ik. Volgens mij gaat de buurvrouw er wel dagelijks mee naar haar werk, maar die werkt ergens in de buurt van Rotterdam. Dan doe je er dus veel langer over om er met de trein heen te gaan dan als je de RandstadRail neemt. Maar verder… nee niet echt denk ik. Al mijn familie – en die van mijn man ook – woont hier niet in de buurt, en als ze langskomen, nemen ze de auto. Mijn collega's gaan geloof ik ook bijna allemaal op de fiets, misschien een paar met de auto, en dan af en toe. En vrienden… tsja, ik weet het eigenlijk niet.

I: Wat is uw mening over de ingebruikname van de RandstadRail?
R: Dat was vrij chaotisch. Ik weet nog dat er om de haverklap weer zo'n bord stond dat het nog buiten gebruik was. Dat schoot dus niet op.

I: Hoe had de ingebruikname dus volgens u dan beter gekund?
R: Ik moet eerlijk zeggen dat ik er gewoon niet zoveel van weet, dus misschien hadden we als omwonenden wat meer informatie moeten krijgen? (lacht)

I: Denkt u dat u in dat geval misschien vaker de RandstadRail zou gebruiken?
R: Geen idee… Ik moet ook eerlijk bekennen dat ik geen idee heb hoe vaak hij gaat… Maar het is voor mij over het algemeen gewoon niet praktisch. Misschien dat ik het maar eens moet proberen als ik naar de stad ga, wie weet is het wat!

I: Nou, dit waren al mijn vragen. Heel erg bedankt voor uw tijd en moeite!
R: Ja geen probleem, en veel succes verder.