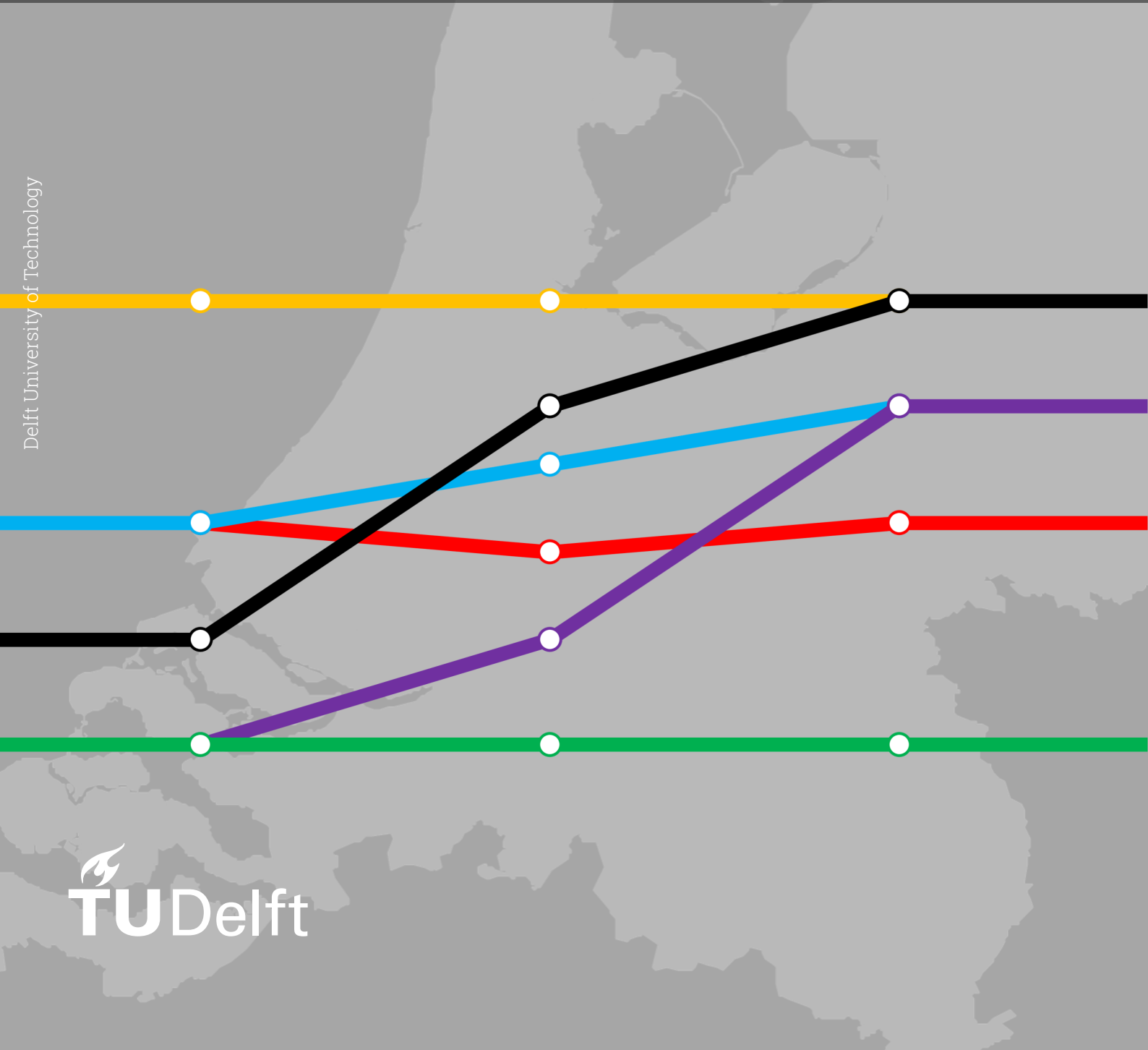# For Whose Benefit?

Mixed Methods Research on the Presence of
Self-interested and Other-regarding Preferences in
a Participatory Value Evaluation on Public
Transport Investments in the Netherlands

M.J. Tilstra

Delft University of Technology

TUDelft

For Whose Benefit?

Mixed Methods Research on the Presence of Self-interested and Other-regarding Preferences in a Participatory Value Evaluation on Public Transport Investments in the Netherlands

by

M.J. Tilstra

to obtain the degree of Master of Science

in Complex Systems Engineering and Management

at the Delft University of Technology,

to be defended publicly on Thursday, July 18, 2024 at 15:00.

An electronic version of this thesis is available at http://repository.tudelft.nl/.

ƒ TU Delft

Preface

This thesis presents the research that lies at the end of the masters programme Complex Systems Engineering and Management and concludes my time here at the Delft University of Technology. The faculty of Technology, Policy, and Management has brought me new skills, insights, and knowledge in the past six years. I enjoyed studying here.

Writing this thesis would not have been possible without the support of a number of people. First, my graduation committee. Thank you both for your guidance and feedback. Thank you Niek for your enthusiasm for the PVE method and for opening the doors at Populytics. Thank you, Lisa, for providing a new perspective and introducing me to behavioural economics and psychology. I enjoyed bringing together multiple fields of study.

Second, I would like to thank Populytics. Thank you all for being quick in helping me get access to the relevant data and all the tools I needed. Thank you for inviting me to the opening of another PVE for the Dutch Mobility Vision 2050. Sitting at a round table with a minister was a memorable experience.

Finally, my family and friends. I would like to thank my parents for always supporting me. Thank you Ellemijn for always being supportive and for being the best sparring partner. Thanks to my roommates, Maarten and Timon, for declaring the necessary coffee breaks. Thanks to my life group, family and friends for reminding me to put everything into perspective;

> *"Whatever is has already been,*
> *and what will be has been before;*
> *and God will call the past to account."*
> — Ecclesiastes 3:15 NIV

Michiel Tilstra
Delft, July 2024

Summary

Citizen participation is increasingly formalised and institutionalised in the Netherlands. Taking the diversity of citizens as a starting point is important for successful participation. A traditionally representative sample of the population in age, sex and education, is not the most important, the diversity of views is (Bobbio, 2019; Bouma et al., 2023). Including a full representation of views is a condition for effective participation (Bleijenberg, 2021; Rowe & Frewer, 2005).

The Participatory Value Evaluation (PVE) is a new survey method that can be used to uncover citizens' different views and preferences over the allocation of public budgets. Recent PVE studies found that respondents favour projects close to where they live. It is unclear what the motivator is behind this location effect in those PVEs. The motivations could be self-interested or other-regarding. The location effect is not a problem in itself. However, if the location effect is big enough and people are solely selecting projects based on self-interest, then participation methods like a PVE become unnecessary. Simpler options are available like a Cost-Benefit Analysis (CBA). The type of preferences respondents have, need to be uncovered to see if the location effect poses such problems for the PVE method.

Besides the respondents' answers, the method measuring the preferences also needs to be taken into account to uncover the type of preferences, as a person's preferences are sensitive to context. The preference elicitation method is part of this context and influences the preferences. For the PVE method, it is not yet examined if there is a potential impact of a PVE on people's preferences. This research investigates if this might be the case. The following research question is addressed: *To which extent do people state self-interested preferences and other-regarding preferences in a participatory value evaluation concerning public transport investments?*

This research uses a countrywide PVE conducted by Populytics in the Netherlands on improving the 'Oude Lijn' railroad connecting Leiden and Dordrecht in South Holland. The PVE data contains the choices people made on what investments they would like to see, and their written motivations for those choices. Three statements were added on what people mainly considered when making choices in the PVE: the effects for themselves, the effects for the people around them, or the collective interest.

To see how the PVE method might influence the preferences of respondents, the literature on preferences and preference measurement is consulted first. The PVE measures preferences through self-reporting by respondents. The fields of economics and behavioural science both agree that people have preferences, but they think differently about what a preference is. The difference lies in the stability and construction of preferences. Economists generally assume stable preferences that only need to be uncovered. Most behavioural scientists consider preferences to consist of a memory and a judgement component, and most likely, preferences are partly based on memory and partly constructed on the spot. In cases where no preferences are present in memory, they are fully constructed using the (context) information provided.

The classical economists also assume people are only driven by self-interest, but people are driven by other factors as well. The concern for the welfare of others, other-regarding preferences, plays a role. The degree of other-regardingness differs per person and is influenced by the context, as all preferences are sensitive to context. The PVE for the Oude Lijn asks people "*to indicate what choices [they] think the government should make...*". This focus on providing advice to the government leads to the conclusion that the overall context of this specific PVE points towards other-regardingness.

The Oude Lijn PVE presented new policy options to respondents, so most respondents did not have a preference yet. Respondents most likely formed their preference on the spot based on the information provided by the PVE itself. Thus, the context sensitivity of preferences in this PVE is likely to be very high. The precise impact of this PVE on the respondents' preference construction is unknown as all

data is from respondents participating in the same PVE. The problem of context sensitivity for the PVE method lies in the generalisation of its results: the (aggregated) preferences of respondents. Generalising the preferences of respondents, that were influenced by the PVE context, might be problematic, since the population as a whole is not exposed to the PVE's context in forming their preferences. The preferences of the general population might differ, which can result in resistance to the outcomes of the PVE when they are implemented. Thus, extra attention needs to be paid to ensure there is societal support for the changes proposed in a PVE, besides that the respondents agree with the changes.

Secondly, using an embedded mixed methods approach, a latent class cluster analysis (LCCA) is performed, followed by a content analysis (CA). A PVE produces both quantitative and qualitative data. The LCCA analyses the quantitative choices, and the CA analyses the qualitative written motivation. Both results are combined to get an insight into the type of preferences respondents state.

People participating in the PVE for the Oude Lijn mainly show other-regarding preferences. On average respondents state to take into account all three types of effects: the effects for themselves, the people around them, and the collective interest. However, the collective interest is taken into account most. Respondents also mainly motivate their choices from an other-regarding perspective focusing on the collective interest. Self-interested preferences are present, but less. More so among younger respondents (<35), among respondents who reside in the province of South Holland and among respondents who use the Oude Lijn more frequently. Nevertheless, respondents considering different effects did not make different choices. This is likely due to self-interest and other-regardingness not being mutually exclusive for this PVE's choices.

The location effect is present in this PVE too; respondents living in a municipality where a new station might be built, choose the option to realise this station more frequently. These choices were motivated from an other-regarding perspective. Respondents select the new stations nearby because they know the context; they see the current need and potential impact these new stations can have. Thus, the PVE adds value compared to simpler options as a CBA because it allows people to show other-regarding preferences.

These results impact the roles a PVE can play in the participatory process. A PVE can be used to uncover the different views present in society. These views can then be included in more intensive participation forms like citizen participation meetings. In the case of the Oude Lijn, the main differences between the clusters, on considering different effects, lies in a respondent's ties to the project and their age. Do people use it frequently, or are people impacted by the changes? These factors could also play a role in views on other projects.

Multiple avenues exist for future research. First, research a PVE where there is a clear distinction between self-interested or other-regarding choices. Second, warranted by a lot of respondents leaving the motivation fields empty, research why most respondents provide no motivations. Finally, measure and include affect and emotions as potential influences on preferences in a PVE.

Table of Contents

List of Figures

List of Tables

List of Abbreviations

AIC	Akaike Information Criterion
BIC	Bayesian Information Criterion
BVR	Bivariate Residual Value
CA	Content Analysis
CBA	Cost-Benefit Analysis
EUH	Expected Utility Hypothesis
LCCA	Latent Class Cluster Analysis
ORP	Other-regarding preferences
PVE	Participatory Value Evaluation
RCT	Rational Choice Theory
SDR	Social Desirability Responding
SIP	Self-interested preferences
SP	Stated preference
WTAPB	Willingness to allocate public budget
WTP	Willingness to pay

<div align="right">

1

</div>

<div align="right">

Introduction

</div>

The Netherlands is a densely populated country. Different complex problems and challenges will impact the living environment of large parts of the population, like the current housing crisis or the transition to sustainable transportation. To actively involve their citizens in the development of policy, the Dutch Government has increasingly formalised and institutionalised the participation of citizens. The new Environment and Planning Act (Dutch: Omgevingswet) is one example. Since January 1st, 2024, Art. 5 & 10 Omgevingsbesluit 2024 prescribe the relevant authority to describe how citizens, firms, and non-governmental organisations were involved and to present the results of this involvement for various policy instruments.

1.1. Background

But, who to involve? The average citizen does not exist, thus taking the diversity of citizens as a starting point is important for successful participation (Bouma et al., 2023). However, having a traditionally representative delegation of the population (e.g., in age, sex, and education) is not necessarily relevant. The most important is a full representation of views (Bobbio, 2019; Bouma et al., 2023). This is a condition for effective participation (Bleijenberg, 2021; Rowe & Frewer, 2005). Bouma and de Vries (2020) summarise the factors influencing participation for the living environment in three streams: 'want', 'know', and 'can' (Dutch: willen, weten, kunnen). Whereby wanting consists of motivations, preferences, and values.

Different methods exist to uncover what citizens want and prefer. One such preference-elicitation method is the Participatory Value Evaluation (PVE). PVE is a newly designed online economic valuation method (Mouter, Koster, & Dekker, 2021a), but it is proven to also serve as a tool for broad participation as a PVE consults large numbers of citizens (Juschten & Omann, 2023; Mouter, Shortall, et al., 2021). In a PVE experiment citizens are asked to advise policymakers which combination of projects they would prefer considering a restricted public budget. When this advice is aggregated by use of a choice model, it results in an optimal portfolio of projects. Besides these quantitative results, the respondents are given the option to motivate their choice as well, collecting qualitative data too. Thus, the participating citizens contribute to how to weigh public values and how they think these values should be translated into concrete policy.

1.1.1. Participatory Value Evaluation for Economic Valuation

The PVE was first developed as an economic valuation method to serve as an alternative to the well-established cost-benefit analysis (CBA) (Mouter, Koster, & Dekker, 2021a). A CBA calculates the impact of a project by weighing the monetary costs and benefits. This monetisation relies on the willingness to pay (WTP) metrics. WTP represents the amount an individual is willing to pay for certain improvements from their own private income. The critique on the use of this metric to valuate public policy was the main reason for the development of PVE. Critics argue that people spend their own private income differently than public money. This difference was found in the WTP metrics (for safety and travel time) when putting individuals in a consumer and a citizen role (Mouter et al., 2017). PVE

solves this critique by having people allocate a prespecified amount of public budget, similar to the willingness to allocate public budget (WTAPB) metric, but PVE extends this WTAPB by offering the option to not allocate any money to new projects at all. In short, PVE is, as mentioned by Mouter, Koster, and Dekker (2021b), "*a new survey method which elicits citizens' preferences over the allocation of public budgets as well as their private income.*" (p.1).

The PVE method is applied in the context of transport policy (Mouter, Koster, & Dekker, 2021a). One application showed that a PVE and a CBA can lead to different valuations. Where projects focusing on safety and cycling ranked high in PVE, car-focused projects ranked high in a CBA (Mouter, Koster, & Dekker, 2021a). Participants were free to behave purely from self-interest but could also incorporate their ideas regarding their preferred mobility system. People provided motivations pointed to the latter but did disproportionally select projects close to where they live (Mouter, Koster, & Dekker, 2021a; Volberda, 2020). Which could indicate the former. About 15 to 28% selected all projects in their living area (Volberda, 2020). Most participants also selected projects farther away. But altogether, participants were more likely to select projects in their living area.

1.1.2. Participatory Value Evaluation for Citizen Participation
Besides being used for economic valuations, PVE is also a tool which is used for citizen participation (Mouter, Shortall, et al., 2021). An advantage of PVE is its relatively low burden to participate compared to physical participation meetings for example (Mouter et al., n.d.). Mouter, Shortall, et al. (2021) conducted a PVE in the municipality of Utrecht in the Netherlands to test for effective participation. As measured by stakeholder-defined goals, the PVE was a success. It enabled a diverse range of participants, especially young people to participate (who normally did not participate), it was cost-effective, and its outcome is useful for decision-making. The authors' goals of meaningful participation, which raise awareness, were partly reached. Juschten and Omann (2023) conducted a PVE in Austria to evaluate the credibility, relevance, and legitimacy of PVE as a participation tool (through the CRELE framework). They concluded that PVE is such a tool. However, participants worried that other respondents would make self-centred decisions when selecting transport policies with the aim of fulfilling Austria's climate target for 2030. Their results did seem to indicate this.

1.1.3. Self-interested and Other-regarding Preferences in Policy
Two recent PVE studies found that respondents favour projects close to where they live (Mouter, Koster, & Dekker, 2021a; Volberda, 2020). Both studies stress the importance of controlling for this effect if desirable. A hasty reading might conclude that people are self-interested and thus prefer projects close by, but it is unclear what the motivator is behind this location effect in those PVEs. The location effect is not a problem in itself. However, if the location effect is big enough and people are solely selecting projects based on self-interest, then a PVE is unnecessary. Simpler options are available like a CBA, and no participation is necessary.

People do not merely evaluate projects or policies based on their individual gain out of pure self-interest. Fields such as social protection research concerned with distributive policies or environmental policy research take into account other-regarding preferences (ORP) besides self-interested preferences (SIP). These other-regarding (or limited self-interest) preferences include fairness as inequality aversion, altruism, reciprocity, and other moral intrinsic motivations (Garcia-Sierra et al., 2015; Gsottbauer & Van Den Bergh, 2011). Both preference types shape a person's preferences regarding redistributive measures (Bender, 2021). Incorporating ORP can help increase policies' effectiveness (Gsottbauer & Van Den Bergh, 2011).

A 2021 PVE on climate action in the Netherlands asked respondents which effects they mainly considered when deciding on policy options (Mouter, van Beek, et al., 2021). The PVE was designed to see which measures the government should take to meet the national 2030 climate targets. Respondents were asked if they mainly considered effects for themselves, for all Dutch people, for future generations, for the environment and nature, or an even distribution across different groups. 79% said they mainly looked at the effects on nature and 77% said they mainly looked at the effects for future generations when giving advice. Only 16% said to mainly consider effect for themselves (Mouter, van Beek, et al., 2021).

However, the way individuals view a certain project is not the only factor determining their preferences. It is well-established that the results of preference elicitation through self-reports (like surveys) are highly context-dependent (Schwarz, 2008). The results depend on the type of tool used. Changes in format, wording and ordering of the questions can all greatly impact the outcome. Although the PVE is such a self-report method, no research has been done to see how prone a PVE might be to such context dependency due to the PVE being a relatively new method.

1.2. Main Research Question

Considering both the location effect and the novelty of the PVE, led to the formulation of the following research question:

To which extent do people state self-interested preferences and other-regarding preferences in a participatory value evaluation concerning public transport investments?

The type of preferences people have influences the way the location effect is interpreted. The potential impact of the PVE on the elicitation of the preferences needs to be explored as well. It can steer people towards a certain type of preference. Most PVEs have been conducted in the transport sector. This thesis makes use of the data of an ongoing PVE which concerns investments in the public transport sector in the Netherlands.

1.3. Research Approach and Sub-questions

This research uses a mixed methods approach to answer the main research question. By applying this method, we can make use of both the quantitative and qualitative data produced by a PVE. Which is a strength of the mixed methods approach (Creswell, 2012). Using an embedded mixed research design, we can combine both types of data which enables a better understanding of the problem. Quantitative data can be analysed through statistical testing and qualitative data can aid in the depth of the interpretation of these results. Using the notation system adapted by Creswell (2012), the approach used in this study can be noted as follows: *QUAN + qual*. Whereby the data collection happens simultaneously (+) and the focus is put on the quantitative analysis (uppercase) supported by the qualitative analysis (lowercase) to increase the depth of the interpretation. The quantitative part consists of an explanatory correlational design. In this approach, the degree of association is explained or clarified among multiple variables at one point in time (Creswell, 2012).

The first step for this research is the identification of a conceptual framework. This framework will aid in explaining relationships among key variables (Crawford, 2019) and linking the study to the literature, theory and relevant policy discussions (Rallis, 2018). This framework will be used to position the PVE as a methodology in the scientific literature on preferences, self-reporting and preference elicitation. To get insight into what a PVE measures and, when and under which conditions people have certain preferences. The framework will thus also be used to formulate hypotheses on how a tendency for SIP and ORP may differ among people in a PVE regarding public transport investments. For example, altruism (i.e. a kind of other-regarding preference) seems to increase with age (Fehr et al., 2011), so a potential hypothesis could be that the older cohort in the PVE exhibits more other-regardingness in their choices and motivations. This step results in the first two sub-questions:

1. What is measured in a PVE?

2. To which extent do people express self-interested and other-regarding preferences?

The first sub-question will provide insight into the PVE as a preference elicitation method. The format and the sort of questions a PVE presents to its respondents are of importance in analysing the final answers, as discussed in section 1.1.3. The second sub-question will provide insight into the type of preference that people have. In general, it will provide insight into what preferences are, when people have certain preferences, and what information people use to inform their preferences. Combined, the two questions provide the theoretical basis for interpreting the outcomes that result from analysing the PVE data.
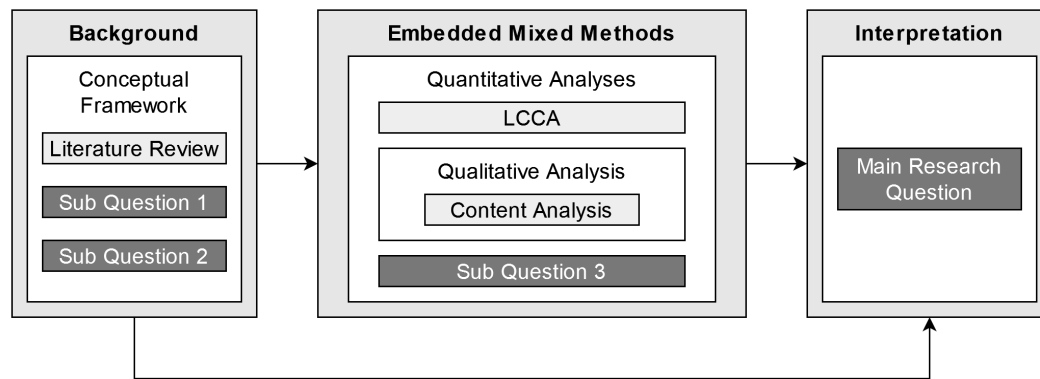
Figure 1.1: Research Flow Diagram

The second step is data collection and analysis. The case for which this PVE is conducted is described in the section 1.4. Regarding the data analysis, the quantitative analyses is first. Specifically, a latent class cluster analysis (LCCA). This analysis aims to see if there are homogeneous groups of participants who showed self-interested or other-regarding preferences in the PVE. This analysis also allows the exploration of associations between a respondent's assigned class and background characteristics. Thus, the LCCA is useful for identifying societal groups who tend to exhibit similar preference. LCCAs using PVE data have been performed previously (Boxebeld et al., 2024; Volberda, 2020). To aid the interpretation, a selective qualitative analysis is done in the form of a content analysis. The qualitative analysis focuses on the written motivations the PVE contains. For identification of how characteristics and SIP and ORP are associated, the third and final sub-question is set up:

3. Which characteristics correlate with differences in self-interested and other-regarding preferences?

In quantitative research, it is important to reach an adequate and representative sample size. Not accounting for these factors limits the generalisability of the results. One thing to note about correlational studies is that they do not prove a relationship (Creswell, 2012). The results of this research indicate associations only. No research is done into the causality of relationships.

Figure 1.1 provides a visualisation of the different steps in this research. First, the conceptual framework is built through a literature review to answer sub-questions 1 and 2. Next, the embedded mixed research is performed to answer sub-question 3. The quantitative analyses are performed first, and based on these results a smaller qualitative analysis is performed. Lastly, the answers to all sub-questions are combined and interpreted to answer the main research question.

1.4. PVE Case: Oude Lijn

For this research, we make use of a countrywide PVE conducted by Populytics in the Netherlands on the improvement of the railway system in part of South Holland. Due to continued growth in the southern part of the Randstad, it is important to keep transportation on par. The growth of residential homes and office space is concentrated in cities. This is why the government is exploring improving the railway system that connects Leiden, The Hague, Delft, Schiedam, Rotterdam and Dordrecht, see figure 1.2 (Ministry of Infrastructure and Water Management, 2023). Also called the 'Oude Lijn' (Dutch for Old Line, as it is the oldest railway line in the Netherlands). By conducting the PVE the government aims to collect ideas and opinions of citizens on where to improve what. This PVE consists of three parts:

Figure 1.2: Part of the Oude Lijn between Leiden and Dordrecht highlighted (Ministry of Infrastructure and Water Management, 2023)

- Part 1: Choices for improvements of four existing railway stations (e.g., more room for pedestrians);

- Part 2: Choices on improving the Oude Lijn railway itself (e.g., more trains per hour);

- Part 3: Choices on four potential new railway stations and their design.

In general a PVE results in four types of information:

1. Descriptive information on the respondent and the number of times they choose a policy option;

2. Information on how respondents rate the characteristics of projects;

3. Information on the optimal project portfolio maximising social value;

4. Information in the written motivations by respondents, motivating their choices.

1.5. Relevance of the Research

First, the societal relevance. From a societal point of view, this proposed research contributes to a more effective and inclusive participatory process by uncovering which perspectives exist and thus need to be included in the process to form a comprehensive picture.

Second, the scientific relevance. From a scientific point of view, this proposed research builds on Volberda's (2020) research by expanding the analysis to include the written motivations provided by people when doing a PVE. Thus, being able to explain individuals' choices better by incorporating qualitative motivations in the interpretation. It aims to provide insight into whether the location effect is unwanted or not and thus, whether it needs to be controlled for in data analysis. In general, it contributes to insights into the diversity of preferences present in a PVE while taking into account how context dependency and other notions from behavioural science play a role.

Lastly, the relevance to the educational program in which this research is embedded. This research is carried out within the CoSEM master program (Complex Systems Engineering and Management) at the Delft University of Technology which aims at designing solutions for large and complex socio-technical systems. Citizen participation is an integral part of designing socio-technical interventions. This research aims to further increase the usefulness and effectiveness of participation by analysing different perspectives present in a PVE, using both quantitative and qualitative methods. Making this research typical for the CoSEM program.

1.6. Report Structure

First up, chapter 2 describes all methods used within this research: the literature review, the PVE, the latent class cluster analysis, and the content analysis. Next, chapter 3 presents the results from all previously mentioned methods. Afterwards, chapter 4 discusses the implications and limitations of this research. Finally, chapter 5 answers the main research question and presents avenues for future research.

2

Methodology

This chapter describes all the methods that are used for this research. First, the literature review that lies at the basis of the conceptual framework. Second, the PVE. Multiple additional statements were added to the PVE in support of this research. Third, the LCCA, which forms the main quantitative analysis of the PVE data. Lastly, a CA, which forms the qualitative part of this research.

2.1. Literature Review

A conceptual framework is *"an organizing structure or scaffold that integrates related ideas, mental images, other research, and theories to provide focus and direction to the inquiry"* (Rallis, 2018, p.2). A conceptual framework is based on the experience (of the researcher) and is grounded in literature and theory (Crawford, 2019). Thus, a literature review is needed for the conceptual framework. This review consists of two parts. The first part is a review of the broad literature concerning the PVE, preferences and self-reporting. The second part is a review of the use and conceptualisation of SIP and ORP in the literature. A different approach is taken for both parts of the review.

The first part of the review has as its goal to broadly look into the literature and find relevant theories and concepts relevant to the PVE and SIP and ORP. In collaboration with one of the supervisors with knowledge in the field of decision-making and behavioural science, this review was focused on self-reporting, the economic and psychological views on preferences (i.e. attitudes), different influences on preferences, and preference measurement. Google Scholar and Scopus were used to look for annual reviews, handbooks, and influential (high-citation) articles. This review is not exhaustive, it is not a systemic review. The aim of this review is a broad explorative overview. For example, in Crano & Prislin's 2008 book 'Attitude and Attitude Change' we found chapters on the structure of attitudes by Albarracín et al. (2008) and attitude measurement by Schwarz (2008). Combined with two annual review articles on attitudes and attitude change in the Annual Review of Psychology that cover literature from 2005 to 2017 (Albarracin & Shavitt, 2018; Bohner & Dickel, 2011), a broad overview is obtained of the view on preference[1] and preferences measurement within psychology.

The second part of the review specifically looks into SIP and ORP. Appendix A visualises the approach taken and contains all specific search queries used. Scopus was used as a database for this part. To limit the number of articles to review, the choice was made to only look for review-type documents in the database. These review articles provide overviews or summaries of the existing literature. This way an overview of the usage of SIP and ORP is possible with limited time and resources. Lastly, based on the concepts and theories discussed, multiple hypotheses are constructed that will be discussed in light of the PVE data from the Oude Lijn.

---

[1]Preferences and attitudes are very similar and are taken to discuss the same concept, see section 3.1.4

2.2. Participatory Value Evaluation

PVE is, like other stated preferences methods as a contingent valuation of discrete choice experiments (Johnston et al., 2017), a method which elicits preferences from its respondents. This research makes use of a PVE performed by Populytics. As discussed in section 1.4, this PVE concerns potential improvements to a Dutch railway and accompanying train stations.

The PVE is set up as follows. It consists of multiple choice tasks and general questions. First respondents can answer up to four choice tasks for different train stations along the Oude Lijn. These stations are Leiden Centraal, Den Haag Laan van NOI, Schiedam Centrum and Dordrecht. Second, a choice task regarding the Oude Lijn railway is presented. All the options within a choice tasks are presented in random order to a respondent. Third, multiple-choice questions are presented for four possible new stations that might be built. Respondents can select for which (new) station they want to provide advice. Afterwards, respondents are asked to fill in details about themselves and how they viewed the PVE. Appendix B provides a full walk-through of the whole PVE including the introduction and instruction texts.

In the final part of the PVE where respondents evaluate the PVE, three extra statements were added (Figure 2.1). These statements aim to see to what extent people considered outcomes for different groups. To see to what extent people were other-regarding. Respondents are asked to what degree they agree with these statements. The added statements are the following[2]:

- In giving the advice, I mainly considered the effects for myself;
- In giving the advice, I mainly considered the effects on people around me;
- In giving the advice, I have mainly considered the collective interest.

The scale on which the respondents answer all statement questions is a 5-point Likert scale. With the options: strongly agree, agree, neutral, disagree, strongly disagree, I don't know/I'd rather not say. 5- to 7-point Likert scales are most common (Willits et al., 2016). More than seven options decrease retest reliability (Schwarz, 2008). The data generated by a Likert scale is most commonly seen as ordinal (Norman, 2010).

The PVE was conducted on a paid panel and was also accessible to all citizens of the Netherlands over 18 years old[3]. The added statements were present in the PVE conducted on the panel. In total 3046 Dutch citizens participated on the panel. Descriptive results of the panel data are presented in section 3.2.1. Not all data of the PVE are analysed. The PVE is relatively long due to the inclusion of different stations with different options for each choice task. Participants could choose for which stations they wanted to provide advice. Only the general choice task for the Oude Lijn as a whole was mandatory to perform for panel members. This choice task will be analysed.

---

[2]All text extracts from the PVE are translated from Dutch to English
[3]Available at https://oudelijn.raadpleging.net/

Figure 2.1: Added statements in the PVE

2.3. Latent Class Cluster Analysis

A latent class cluster analysis (LCCA) is performed to get an overview of the different perspectives present in the PVE. LCCA is a clustering method which assigns individuals not deterministically but probabilistically. This prevents assigning individuals to the wrong cluster. LCCA has several advantages over deterministic methods (Molin et al., 2016). Firstly, the optimal number of clusters can be determined using statistical criteria. Secondly, it is possible to assess the significance of model variables. Lastly, variables of all measurement scales can be incorporated. They do not need to be standardised.

In a LCCA individuals are clustered based on their choice similarity (Molin et al., 2016). The LCCA method assumes there exists a discrete latent variable that is able to account for the observed association between indicators. The indicator variables are the choices of the individuals. The observed association becomes insignificant conditional on the latent class variable, which is called the assumption of local independence (Molin et al., 2016). The goal of this method is to find the most parsimonious model, the model with the least number of clusters that most adequately describes the associations between choices (indicators). The software tool Latent Gold (5.0) is used to perform the cluster analyses.

A LCCA model consists of two parts: the structural model and the measurement model (figure 2.2). Both models correspond to a probability. The structural model entails the probability of an individual belonging to a certain class based on specific covariate values (like personal characteristics). The measurement model entails the probability of particular responses on the indicator variables, given the membership of a specific latent class.

Measurement Model. The measurement model is built first. Clusters are set up so that they minimise the heterogeneity within the cluster and maximise the heterogeneity between clusters, while also keeping the model parsimonious (smallest number of clusters possible). Multiple global measurements exist to evaluate and choose the number of clusters. The first global measure is the chi-squared goodness-of-fit test. This test, however, is less suitable when there exist a lot of possible response patterns. Besides this test, it is possible to use information criteria which take into account the parsimony and model fit. Both the loglikelihood Bayesian Information Criterion (BIC) and loglikelihood Akaike Information Criterion (AIC) can be used. The BIC (LL) has been shown to perform well in selecting the optimal amount of clusters for LCCA models (Molin et al., 2016). The amount of clusters with the lowest AIC (LL) or BIC (LL) is the most optimal. Finally, as local fit measurement, the Bivariate Residual Values (BVR) is an option. The measures the indicators' residual association. Due to the assumption of local independence, the association should be insignificant. If the BVR is smaller than 3.84 there is no significant relation (van 't Veer et al., 2023).

Structural Model. Second, after the number of clusters is determined, the structural model is built. This model adds covariates to the model. Covariates can be social and personal characteristics like age and sex. Covariates do not influence the indicators, but the clusters. The Wald statistic is used to assess which variables to include. If the Wald statistic is higher than 3.84, it is assumed significant and is likely
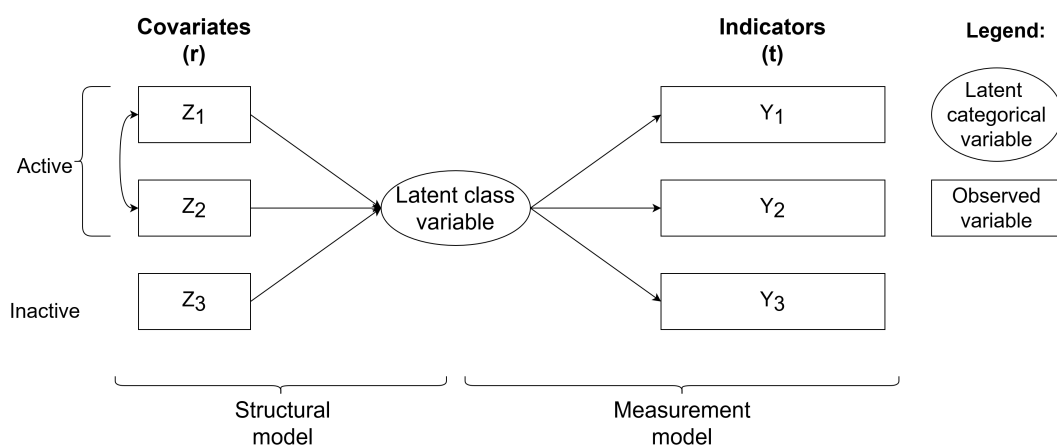
Figure 2.2: Visualisation of the latent class cluster model (Molin et al., 2016)

to have a significant relationship with a cluster (Molin et al., 2016). Both active and inactive covariates exist. Active covariates help predict class membership, while inactive do not. Inactive covariates can help understand class composition. Insignificant variables (testes by the Wald statistic) are often added as inactive covariates (Molin et al., 2016; van 't Veer et al., 2023). The entropy R-squared is used to assess if the covariates are good predictors of cluster membership. A value greater than 0.8 indicates good prediction (van 't Veer et al., 2023). Appendix C contains detailed methodological information on the variables selected and the construction of the latent class cluster models.

2.4. Content Analysis

After performing the cluster analysis on the quantitative PVE data, the written motivations of the PVE need to be systematically analysed too. A CA is used to achieve this. CAs can be used to make "*replicable and valid inferences from texts (or other meaningful matter) to the contexts of their use*" (Krippendorff, 2004, p.18). Generally, a CA consists of three phases: preparation, organising and reporting (Elo & Kyngäs, 2008). The steps in these phases depend on the research goal. This research applies a qualitative CA for which Williamson et al. (2018) describe a more detailed 6 steps. Qualitative CA is "*mainly an interpretive approach that allows a researcher to describe the topics and themes that are most meaningful to the research objectives of the study*" (Williamson et al., 2018, p.461).

Two benefits of CA are that it is context-sensitive (Elo & Kyngäs, 2008) and flexible in terms of research design (White & Marsh, 2006). This flexibility allows tailoring the method to best suit the research needs. To keep the research reliable, it is important to document the process in great detail. It is necessary to clearly show the link between the data and the results. Due to the method's flexibility, there are no simple guidelines (Elo & Kyngäs, 2008). One disadvantage of a CA for this research is the difficulty in assessing the internal validity. This can be done through face validity or an expert panel. The proposed research will be carried out by one researcher, so the face validity measured through the eyes of the researcher is the only option. By describing the process in detail and being as transparent as possible in the CA process, we aim for the face validity to be ample in ensuring internal validity. The CA can be performed within Excel. Six steps needed for the qualitative CA are:

1. **Focusing research objectives on communications**: the analysis of any form of communication must be needed in answering the main research question. Otherwise, the CA is not necessary. The preferences in the PVE will be inferred from both choices and written motivations;

2. **Establishing the frame for the research**: the conceptual framework laid out in chapter 3.1 will provide the frame needed for the CA. It aids in the identification of different types of preferences;

3. **Selecting the unit of analysis, sampling and coding**: the unit of analysis, sampling and coding for this research are the written motivations. These motivations can be considered individually. For each choice in a choice task, there is the option to provide a motivation. A respondent's motivations for one choice task can also be considered as a unit because the choices relate to each other as well;

4. **Developing content categories**: the development of categories for coding will be done in collaboration with a researcher from Populytics. An initial codebook is set up by Populytics. Next, this codebook is tested by two researchers outside of Populytics by coding a random sample of 200 motivations per choice. Afterwards, this is checked by Populytics to finalise the codebook;

5. **Protocols for analysis**: protocols are important to support the reliability of the analysis. The development of the categories is done in collaboration with a third party (Populytics). This protocol ensures the categories are suitable and applied reliably;

6. **Performing data analysis and preparing the findings**: no single technique exists for CA. This final step requires a lot of work (Elo & Kyngäs, 2008). Due to the time restriction on this research, a selection will be made on which motivations to categorise [4]. This selection will be made after the LCCA is performed to see how the CA can aid in the interpretation of the quantitative results.

---

[4]To illustrate the workload, consider categorising all motivations for one choice task for the whole panel. The choice task for the Oude Lijn consists of 8 choices which can be motivated by more than 3000 panel members. When labelling 150 motivations an hour (very fast), categorising this whole choice task consisting of more than 24.000 motivations would take one person four 40-hour work weeks. This does not include making the codebook and reporting the results.

3

Results

Following the order in which all methods are presented previously, we will now discuss the results.

3.1. Literature Review

The conceptual framework laid out in this section is used to answer the first two sub-questions: **What is measured in a PVE? To which extent do people express self-interested and other-regarding preferences?** To answer the main research question it is important to get insight into what preferences are, if people have different types of preferences and under what conditions, if a PVE is suited to measure those kinds of preferences and if a PVE influences the preferences that people say they have. Thus, the results of the literature review also function as a lens through which the third sub-question and main research question will be answered.

3.1.1. Classifying the PVE

A participatory value evaluation (PVE) is a tool primarily developed for the economic evaluation of public policies (Mouter, Koster, & Dekker, 2021b). Afterwards, the PVE has also proven its use as a tool for increased citizen participation (Mouter, Shortall, et al., 2021). But, first and foremost, PVE is a preference elicitation method. Figure 3.1 provides a visualisation of how these classifications intertwine.

In economics, preference-elicitation methods like the PVE method, are used to see how individuals value and trade-off certain goods; to see what their preferences are. Using these methods, different metrics can be calculated. Most notably being the willingness to pay (WTP). WTP represents the amount of money an individual is willing to pay for a certain good, or in the PVE case, for government projects. This WTP is useful for doing welfare analysis for potential projects. Most of the time, the data from a PVE can be used to calculate WTP (Mouter, Koster, & Dekker, 2021b). However, the WTP metric is not calculated for most PVE

Figure 3.1: Position of PVE within different domains

projects, as a PVE allows for a welfare analysis without having to monetise the utility metric. The PVE's welfare function is directly based on the individual utility of the respondents.

When citizens are asked to value different government projects, they are asked to participate in the policy-making process. Arnstein (1969) provides a typology to classify different levels of citizen participation. A PVE falls on step 4 out of 8 of Arnstein's ladder of participation: Consultation, within the subgroup tokenism. Citizens' opinions are invited but there is no guarantee for consideration of

opinions, and there is no decision-making power associated with this level (Arnstein, 1969).

The last overlap of economics and participation in figure 3.1 (a sort of participatory economics) falls outside the scope of this thesis and is irrelevant to the PVE method. This overlap is a shortcoming of the visualisation and can be ignored.

3.1.2. Choices, Preferences, and Welfare

Before looking into preferences, we take a look at two important relationship that are 'behind' the concept of preferences in economics. It consists of three connected parts: choice, preference, and welfare (the latter most commonly represented as utility). Choices reveal preferences, and preferences indicate welfare (Sen, 1973). The latter relationship assumes that if an individual prefers option x to y, then they will regard themselves to be better off with x than with y. Thus, increasing their welfare, i.e. utility.

The former relation is more relevant to this research: the preference-based interpretation of choice. From the point of view of a person deciding on two options, they will first consult their preferences and make a choice afterwards based on those preferences. Preference precedes choice. However, from the point of view of an observer, only a choice is observed and the preference is assumed afterwards based on their observations (Sen, 1973). Their preference is 'revealed'[1].

Besides this interpretation, there is a second assumption: connectedness. When an somebody has two options to choose from, x and y, there are three possible preference options: they prefer x to y, they prefer y to x, or they are indifferent and prefer neither x nor y. This connectedness assumption thus concludes that if an somebody chooses x over y, that they prefer x. And disregards the option that the individual may be indifferent but had to make a choice. It thus assumes connectedness instead of indifference (Sen, 1973).

3.1.3. Economics and Preferences

Now we take a look at the use of preferences in the classic economic theory, and specifically within the theory that underlies the econometric framework of the PVE method. Secondly, we discus preferences in relation to behavioural economics, which is concerned with bounded rationality and how actual human behaviour deviates from the classic economic models.

Welfare Economics

The PVE method is grounded in welfare economics (Mouter, Koster, & Dekker, 2021b), which concerns the evaluation of welfare in a society. Microeconomic theories are used within welfare economics to measure and aggregate the welfare within a society. The main microeconomic theory concerns how individuals make decisions to increase their welfare: rational choice theory (RCT). RCT concerns the decision-making that underlies human behaviour. It proposes rational choice, which underlies most classical economic theories. It is defined as "*the process of determining what options are available and then choosing the most preferred one according to some consistent criterion*" (Levin & Milgrom, 2004, p.1). RCT assumes individuals have preferences and make choices based on those preferences. These preferences are assumed to be stable (Becker, 1976). Two other fundamental assumptions for RCT specifically are those of completeness [2] and transitivity [3].

As we saw in section 3.1.2, when an item is preferred over another, it is said to increase an individual's welfare (i.e. utility) when chosen. Preferences can thus be translated into utility and a utility function can be formed. This function will be maximised by the rational actor to obtain the most utility through its choices. The outcome that an individual can expect for a certain choice is not 100% certain. To account for this uncertainty, the Expected Utility Hypothesis (EUH) is added to RCT. Here choices are made under uncertainty. Instead of maximising utility, the rational agent maximises their expected utility; the utility they expect to gain on average from a certain choice. This results in the utility function shown

---

[1] This concept of revealed preferences concerns the revelation of preference through behaviour and differs from the dichotomy of stated and revealed preference. Where for stated preferences, individuals say what they prefer, and for revealed preferences, observers interpret preferences from individual's choices. These two concepts both fall under the umbrella of the preference-based interpretation of choice as the order of interpretation is backwards in both cases (spoken or acted-out choice comes first and the interpretation of preference comes second)

[2] For any pair of alternatives x and y in a choice set, either x is preferred to y, y is preferred to x, or the individual is indifferent. I.e. all pairs can be compared.

[3] If x is preferred to y and y is preferred to z, then x is preferred to z.

in equation 3.1 (Machina, 1987). p_k is the probability that outcome k is realised with payoff x_k and u is the utility for each payoff. Thus, the expected utility function aggregates the utility for each possible outcome by their possibility.

$$EU(p) = \sum u(x_k)p_k \qquad (3.1)$$

The expected utility function underlying the PVE method does not only contain selfish individual utility but also includes altruistic preferences (Mouter, Koster, & Dekker, 2021b; Mouter et al., n.d.). The altruistic preference is split up into paternalistic altruistic preferences (an individual derives utility from others using a project, without them having to derive utility from the project themselves) and non-paternalistic altruistic preferences (an individual values the utility others derive from a project). Mouter et al. (n.d.) argue *for* the use of non-individual preference within welfare theory. Thus, a PVE allows the incorporation of preferences from people not directly benefiting from a project.

Behavioural Economics
A method such as the PVE, elicits preferences from people by asking individuals which option they prefer. Such a method elicits 'stated preferences', as the individual 'states' what they prefer. These stated preferences fall under the umbrella term *revealed preferences* as discussed in section 3.1.2. The results of such stated preference (SP) methods played a role in the development of the field of behavioural economics. Results obtained in such SP studies and other economics experiments could not be explained by the standard economic model of rational selfish choice. In short, behavioural economics integrates insights from psychology into microeconomics to improve and explain the decisions deviating from classic economic theory (Carlsson, 2010). Four relevant insights regarding preferences from behavioural economics will be discussed.

First, the possible gap between revealed and normative preferences. SP methods report on revealed preferences by observing an individual's choices or decisions, while normative preferences concern an individual's actual preferences (Carlsson, 2010). Normally revealed preferences are interpreted as normative preferences. However, there are three factors which can create a gap between normative and revealed preferences in SP studies: passive choices, complexity, and limited personal experience (Carlsson, 2010). Passive or default choices are kept by people for different reasons which are not all clear. One example is that they believe the default option is chosen on purpose and is therefore the best option. This type of behaviour in this example is similar to the acquiescence bias discussed in section 3.1.5. The complexity of the choice task can influence people in several different ways. They make errors, adopt heuristics (a not fully optimised decision rule), or are more likely to accept the default. Finally, limited personal experience with the type of SP study also makes people more prone to anomalies.

Second, learning and constructed preferences. Standard economic theory assumes preferences to be stable (Becker, 1976). However, individuals do not always have stable preferences throughout an SP survey. Unstable choices seem inconsistent, but in unknown situations, people do not have stable and structured preferences. In unknown situations, preferences are learned and constructed using the information available (Carlsson, 2010). More consistent and coherent preferences are a result of experience. Thus, incoherent choices could be the results of an individual learning and constructing their preference during the SP survey.

Third is context dependency. The answers people provide depend on the context they are in. This is not specific to SP surveys but to most human behaviour. It is unclear if this problem is bigger for SP studies than other methods (Carlsson, 2010). It is relevant to consider regarding the validity of these studies. If the context of the study differs, from the context of the situation it is supposed to replicate, then generalising or inferring based on the SP results may be flawed.

Finally, hypothetical bias. This is "*the bias introduced by asking a hypothetical question and not confronting the respondent with a real situation*" (Carlsson, 2010, p.173). People behave differently in a hypothetical situation than they would in real life. Different factors influence the degree of hypothetical bias: the amount of surveillance on the individuals, the options they are presented with, and the context of the experiment. Context dependency and hypothetical bias overlap to a degree. This makes it very difficult to test for (Carlsson, 2010). However, reducing the contextual differences is a good practice in
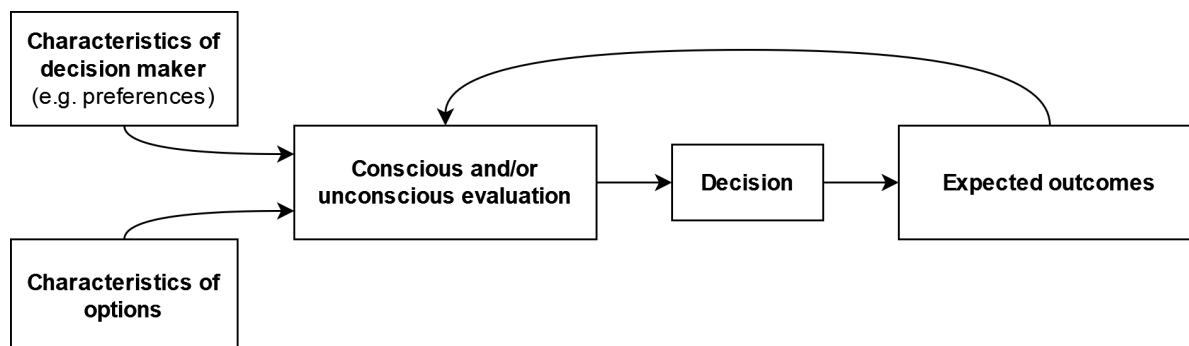
Figure 3.2: General rational decision-making model (a simplified form of the emotion-imbued choice model by Lerner et al. (2015)

limiting both the impact of context dependency and hypothetical bias. Another important context factor is the degree of consequentiality. Policy consequentiality in specific, which is about*"whether respondents believe that their answers potentially influence the implementation of a policy, including whether the institution being paid has the institutional power to carry out the policy"* (Mariel et al., 2021, p.18). Consequentiality limits the hypothetical bias (Mariel et al., 2021).

3.1.4. Psychology and Preferences

The basic decision-making logic behind the classic rational economic theories (EUH specifically) is visualised in figure 3.2. A person takes into account their own preferences, the attributes of the choice options, the outcomes they expect, and makes a choice according to a decision rule (i.e. utility maximisation). Between 1950 and 1960, critique emerged in psychology on the utility maximisation paradigm (Slovic, 1995). Actual human decision-making is argued to be more complicated than straightforward utility maximisation. In the 1980s different research showed that people's preferences are sensitive to the description of the options they are shown and the method these preferences are elicited by (Slovic, 1995). The preferences showed no description invariance and procedural invariance, both assumed by rational choice theory and needed for the stability of preferences. The field of psychology has done a lot of research into human decision-making and preferences. Recent research focuses on the impact of emotion on decision-making and judgements (Lerner et al., 2015).

Preferences and Attitudes

Economists interpret preferences as a choice for option x over y, in psychology preferences are commonly defined as "a latent tendency to consider something desirable or undesirable" (Warren et al., 2011, p.194), making them the equivalent of attitudes. Because of the similarity, the literature on attitudes and attitude measurement will be treated as discussing preferences. The difference in preference definition between economists and psychologists is comparable to the distinction between revealed and normative preferences made in behavioural economics in section 3.1.3.

Preferences are said to consist of two components: a memory component, and a judgement component (Albarracín et al., 2008). The memory component consists of representations of the preference in permanent memory, and the judgement component is the on-the-spot evaluation of an object. There is a discussion on the weight placed on both components in the formation of preferences (Albarracín et al., 2008; Bohner & Dickel, 2011). The extremes on both ends are that preferences are either fully stable and stored in memory or preferences are always constructed on the spot. But "*most likely, attitudes are partly memory based and partly constructed on the fly*" (Albarracin & Shavitt, 2018, p.302).

Preferences are constructed (Slovic, 1995; Warren et al., 2011). Preference construction can be seen as caused by instability or incompleteness of preferences. Context sensitivity causes unstable preferences. The first type is preference construction as context sensitivity (Warren et al., 2011). In this view, preferences are always constructed, as all behaviour is context-sensitive. Incomplete preferences lead to construction as calculation. Information from both memory and the environment is taken together to form a preference during a decision task. The degree of calculation depends on different factors. Firstly, it depends on the goals of the decision-maker. If they are motivated to make a justifiable and accurate

decision, more calculation is involved (Warren et al., 2011). Cultural goals also impact the amount of calculation (Albarracin & Shavitt, 2018). Individuals from cultures valuing the acknowledgement of the preferences of others (e.g. Indians) take longer to calculate a decision compared to individuals from cultures focused on freedom of choice (e.g. Americans). Due to the integration of more information, the preferences are more calculated. Other goals can reduce calculation as well. Individuals wanting to reduce effort are more likely to use heuristics instead of incorporating all information into a decision. Secondly, preference calculation depends on the cognitive constraints placed on the decision-maker. Time pressure and depletion of self-regulatory resources negatively impact the calculation of preferences, while the impact of distraction remains unclear (Warren et al., 2011). Thirdly, experience impacts preference calculation. In unfamiliar situations, preferences most likely do not exist in memory, so the preference needs to be fully calculated (Warren et al., 2011). When experience with a situation increases, the decision-maker retrieves part from memory and is thus less sensitive to the context and will be less affected by framing effects for example.

Affect and Emotion

Although the influence of affect and emotion on decision-making falls outside the scope of this thesis, the growing body of research warrants a discussion of the main insights. With a general conclusion being that "*emotions powerfully, predictably, and pervasively influence decision making*" (Lerner et al., 2015, p.33.4). Affect is the overarching term including emotion, feeling, attachment, and mood. Emotion can impact decision-making in different ways. There is a distinction between integral and incidental emotions. Integral emotions are emotions that arise from the decision at hand and are thus 'part' of the decision. Incidental emotions are emotions that are present when a decision needs to be made but are irrelevant to it. Those emotions find their origin outside the scope of the decision.

Integral emotions are part of the decision-making and mostly serve as a guide. They serve, for example, as indicators for the correct assessment of risk in a choice (Lerner et al., 2015). People without such emotional indicators show riskier behaviour (than rationally would be expected). However, if the emotion is strong enough, it can hinder or even override the logical decision and introduce a bias.

The influence of incidental emotions on the decision-making process is called the 'carryover of incidental emotion' (Lerner et al., 2015). It usually happens without the decision-maker's knowledge. For example, individuals in a bad mood make pessimistic judgements, and the opposite holds for individuals in a good mood. The influence of emotion is not as simple as this dualistic view of negative and positive emotion. Two negative emotions can have different effects like anger lowers perceived risk, while fear increases perceived risk (Lerner et al., 2015).

The impact of emotions differs per individual and situation and can be moderated to some degree. The impact of emotions and affect is higher in complex and unanticipated situations. And individuals with high emotional intelligence are better capable of identifying the cause of their emotion and thus separate it from the decision they are faced with (Lerner et al., 2015). The emotions can be dealt with in two ways, by either minimising the emotional response or by insulating the emotion from the decision-making. Options that require a lot of effort from the decision-maker tend to work minimally, like suppression, increased awareness of the impact of emotion, or increasing cognitive effort for the choice task. Effective avenues for minimising the emotional response are delayed decisions. Emotions pass and change as time goes on. Reappraisal works as well, i.e. re-framing of the problem. Lastly, a bias caused by an emotion can be countered with another bias working in the opposite direction. Insulting the emotion from the decision-making is difficult. Taking emotion into account when building a choice architecture helps in reducing the impact of unwanted emotions (Lerner et al., 2015).

3.1.5. Preference-Elicitation: Self-Reports

We have seen that preferences are context-sensitive (Warren et al., 2011) and the method of elicitation influences the preferences (the violation of procedural invariance) (Slovic, 1995). This section discusses the use and impact of self-reporting for preference elicitation. Self-reporting asks individuals to report themselves on what their thoughts, feelings or preferences are. For measuring preferences, self-reporting is a stated preference method. First, the cognitive and communicative processes underlying self-reporting and the answering of such questions and their implications are discussed. Secondly, the advantages and disadvantages of the self-report method are discussed.

Cognitive and Communicative Processes
The answering of preferential questions by an individual consists of two broad steps. First is compre-
hending the question, and second is reporting on their preference (Schwarz, 1999).

Question Comprehension. The first thing a respondent has to do when answering a question is to
understand it. Questions should therefore not be difficult or ambiguous in the wording that is chosen.
However, this is only the literal meaning of the question. Most of the time, this is not enough to answer
the question (Schwarz, 1999). Respondents need to determine what information is needed to answer
the question to the researcher's desire. Respondents have to determine the pragmatic meaning of the
question (Schwarz, 1999). They do this by using the assumptions that underlay all daily conversations.
First, the respondent needs to make their answer relevant to the 'ongoing conversation', thus, they
make it relevant to the research by taking into account the context. Including the introduction, instruc-
tions and preceding questions (Schwarz, 2008). Second, the respondent makes sure their answer
is as informative as needed without providing too little information or being redundant. They assume
what the researchers are interested in and also take into account information provided earlier (Schwarz,
1999). Third is the assumption of interpretability. Respondents assume the researcher was careful in
choosing the wording for the questions to be as straightforward as possible. This also includes the
answer format. Lastly, respondents don't say anything they think is untrue or don't believe in (Schwarz,
1999). In short, respondents answer questions as a whole and in the context of the research it is con-
ducted for taking into account exact wording and answer formats. Not as standalone questions. The
reliance on these context factors is bigger when respondents cannot ask a researcher for clarification
(Schwarz, 2007).

Response Formats. As previously mentioned, the formatting of the response alternatives on a ques-
tion impacts the respondent's answers. Different formats elicit different responses. First, open versus
closed questions. Closed questions provide researchers with the ability to clearly show respondents
what kind of answers they expect for a question. However, when left open, respondents often report
very different answers (Schwarz, 1999). This discrepancy can lead to very different conclusions. The
order of alternatives for closed-format questions also impacts the answer. The first items on a list
are reported on more. These response order effects are discussed in section 3.1.5 as the primacy
and recency effects. Second, frequency scales and reference periods. The scale used for a question
influences how respondents recall and answer the question. For example, the range indicates how
frequently something might occur. If respondents are asked how often they are angry, ranging from
'multiple times a day' to 'once a week' or 'once a week' to 'once a month', the respondents will interpret
a different level of 'being angry'. Third, rating scales. The number of options and the names or num-
bers assigned to these options have an effect. More than seven options on a rating scale decrease the
retest reliability (Schwarz, 2008). A bipolar numbered scale ranges from minus to plus and indicates
two opposites (a negative and a positive attribute), while a unipolar only-positive scale indicates one
dimension (Schwarz, 1999). Lastly, an extra 'I don't know/I'd rather not say' option. People with no
knowledge or no opinion can select this option (Willits et al., 2016), instead of choosing the most neutral
option. There is mixed evidence on the usefulness of such a no-opinion category (Krosnick & Presser,
2010). Opponents suggest that the category is mainly used in situations of "*ambivalence, question
ambiguity, satisficing, intimidation, and self-protection*" (Krosnick & Presser, 2010, p.284).

Reporting Attitudes. Preferences reported through self-reporting are (still) context-sensitive. As dis-
cussed in section 3.1.4, preferences consist of a memory and judgement component. The judgement
component is solely based on the information present when making a decision. The information re-
called from the memory component can be split up into chronically and temporarily accessible (Schwarz,
1999). The former always comes to mind when a respondent thinks about the subject at hand and re-
sults in the stability of a preference. The latter comes to mind and is influenced by the context of the
question and adds to the variability of the preference. The influence of previous questions on the re-
trieval of information is the primary context effect for self-reports (Schwarz, 1999). Once the preference
is formed in a respondent's mind, they can choose to alter it if they deem it necessary due to social
desirability for example or due to the response format. The high context sensitivity of attitudes is a
problem for surveys such as the PVE method. The aim is to generalise to (some part of) the population.
However, the population was not exposed to the survey in forming their preferences. So, the population
might not share the found preferences. All influences of the context that is specific to the survey can
result in faulty generalisations (Schwarz, 2008).

Advantages and Disadvantages
The self-reporting method has several advantages and disadvantages (Paulhus & Vazire, 2007). First the advantages. Self-reports are easy to interpret. As they are (generally) conducted in the native tongue of both the respondent and the researcher. Self-reports have the advantage of consulting the individual with the most information. An individual has the most insight and information on themselves compared to anyone else. Self-reports also have the 'motivation to report' from respondents. For example, when reporting on their own personality, people tend to put in more time and effort (Paulhus & Vazire, 2007). Lastly, self-reporting has the advantage of practicality. They are an enormously efficient and inexpensive way of consulting masses of people, which is true for the PVE as well (Mouter, Shortall, et al., 2021). And sometimes self-reports are the only tool available, as all surveys are per definition self-reports.

Several disadvantages in the form of biases apply to the self-reporting method. The anchoring bias, serial position effect (primacy and recency bias), time pressure, social desirability bias, acquiescent bias, and extreme responding bias (Paulhus & Vazire, 2007).

The anchoring effect is a phenomenon where a decision or judgement is influenced by a (irrelevant) reference point, the anchor. It is "*the disproportionate influence on decision makers to make judgements that are biased toward an initially presented value*" (Furnham & Boo, 2011, p.35). This initial value can be numerical or non-numerical. Factors such as high ambiguity, low experience, low personal involvement with a problem or the more trustworthy the source (of the anchor) the stronger the anchoring effect is (Furnham & Boo, 2011).

The serial-position effect is an effect consisting of two biases. The primacy and recency bias. The tendency to remember to first (primacy) and last (recency) objects in a list better than the middle. In a free recall experiment, the recency effect was found to be strongest compared to the primacy effect (Murdock Jr, 1962). For surveys, visual formats (a written survey) present a primacy effect, while auditory formats (an interview) present a recency effect (Schwarz, 2008). Older and less educated respondents are more prone to these two biases due to the limited cognitive resources that cause them to focus on a single item (Schwarz, 2008).

The presence of time pressure in a choice task has a negative effect on the decision quality of an individual and it reduces the amount of risk an individual takes (Maule et al., 2000). Where the decision quality is seen as the process and outcome of the decision not adhering to some sort of maximisation rule.

The social desirability bias or social desirability responding (SDR) occurs when an individual not only takes into account the question at hand but factors in social or cultural norms that result in results that appear more socially desirable (Börger, 2012). It depends on the context of the research if it is desirable to control for this effect. Survey research with students or volunteers do not need to worry much (Paulhus & Vazire, 2007). Maximising anonymity and confidentiality are factors that reduce the change of SDR (Schwarz, 2008).

The acquiescent bias is a term for 'yea-saying', individuals who agree with a statement without relating to the content of the statement (Paulhus & Vazire, 2007). The reverse of acquiescence is reactant, where an individual disagrees beforehand.

Extreme responding bias is the propensity to answer in extremes (on a rating scale). This bias is hard to see as it is difficult to separate strong opinions and extreme responding. It can be controlled for by converting rating scales to dichotomous choices (Paulhus & Vazire, 2007).

The following conclusion from Schwarz (2008) is relevant to concluding this section on preferences (i.e. attitudes) as well, "*as this selective review indicates, asking people to report on their attitudes will almost always result in an answer—but it often remains unclear what exactly the answer means*" (p.49).

3.1.6. Self-interested and Other-regarding Preferences
The concept of preference discussed in section 3.1.3, present in standard economic theory, is about an individual's preferences in maximising their own utility. Another branch of economics, experimental economics, which is concerned with devising theory from carefully constructed experiments and seeing how people behave and choose in these experiments, found results which could not be explained by

this standard theory of personal utility maximisation (Cooper & Kagel, 2016). Using the concept of ORP (over income inequality), these results were better explainable. Table 3.1 presents an overview of the different types of preferences that were encountered in the review on SIP and ORP.

SIP is conceptualised in two ways. The first is narrow and focuses on solely material self-interest (Doherty et al., 2006; Fehr & Schmidt, 2006). The second is more broad and talks about rational self-interest or self-interested motivations (Bardsley & Sugden, 2006; Henrich et al., 2005). The second conceptualisation encompasses the first while also allowing for non-material motivators like status or power. The second conceptualisation is used when talking about SIP. Both concepts share a disregard for any impact on other persons, which is what separates SIP from ORP. The literature also has two views on ORP. The first sees ORP as an individual character trait, and the second sees ORP as being influenced by context (Bogaert et al., 2008; Dimick et al., 2018). This section discusses the different sorts of ORP and any factors that might be of influence.

The distinction between SIP and ORP is not only relevant for explaining the outcomes of economic experiments. Political science uses this preferential position on income inequality as a starting point in arguing how different types of people would view certain policies or political structures (Dimick et al., 2018). The view on the redistribution of income for SIP is as follows. The lower an individual's income, the higher their support for the distribution of income and vice versa. The more an individual has to gain (lose) from the redistributive policy, the higher (lower) their support (Dimick et al., 2018). The extent to which people have ORP influences the support. If high-income individuals, previously against redistribution, have ORP in the form of altruism or inequality aversion, then the overall support for redistribution will increase.

Individuals differ in their levels of other-regarding behaviour (Nash et al., 2015). There exists a difference between men and women. They differ in the ORP, but the extent and direction change per

Table 3.1: Types of self-interested and other-regarding preferences

Preference	Description	Authors
Self-interest	material self-interest; personal utility maximisation	Ahn et al., 2003; Bardsley and Sugden, 2006; Camerer and Fehr, 2006; Doherty et al., 2006; Fehr and Schmidt, 2006; Henrich et al., 2005
Other-regarding	anything deviating from pure self-interest; concern for the welfare of others	Bogaert et al., 2008; Camerer and Fehr, 2006; Chakravarty et al., 2011; Dimick et al., 2018; Parks and Gowdy, 2013; Tausch et al., 2013
• Altruism	individuals obtaining utility from others' well-being	Alemán and Woods, 2020; Andersen and Yaish, 2018; Bardsley and Sugden, 2006; Dietz et al., 2005; Doherty et al., 2006; Fehr and Schmidt, 2006; Kritikos and Bolle, 2004; Lévy-Garboua et al., 2006; Nash et al., 2015
• Empathy	capacity to share the sentiments or thoughts of other people	Kirman and Teschl, 2010
• Inequality aversion	individuals losing utility by being better (or worse) of than others	Ahn et al., 2003; Bardsley and Sugden, 2006; Brandts and Fatas, 2012; Dietz et al., 2005; Doherty et al., 2006; Fehr and Schmidt, 2006
• Reciprocity	individuals copying the behaviour of their opponent; 'doing as one is done by'	Bardsley and Sugden, 2006; Dietz et al., 2005; Doherty et al., 2006; Fehr and Schmidt, 2006; Kritikos and Bolle, 2004; Nash et al., 2015

situation. This is theorised to be due to the higher context sensitivity of women (Croson & Gneezy, 2009; Tausch et al., 2013). If a context hints towards ORP as being preferable then women will overall exhibit more other-regarding behaviour than men. The opposite can be true in contexts which point towards self-interestedness. Political ideology seems to play a role as well. More liberal or left-leaning individuals show more support for solidaristic policies and want higher tax rates compared to more conservative individuals (Alemán & Woods, 2020; Tausch et al., 2013).

In accordance with SIP, socioeconomic status, "*one's position in the social and economic hierarchy*" (Brown-Iannuzzi et al., 2017, p.11), is associated with less support for redistribution. Whether this is due to self-interestedness or ideology or a combination of both is unclear (Brown-Iannuzzi et al., 2017). Economic status can cause different beliefs and values, influencing support for these policies. Cultural background influences preferences in general, and ORP specifically too (Albarracin & Shavitt, 2018; Chakravarty et al., 2011; Parks & Gowdy, 2013). Individuals in collectivist cultures attend more to the preferences of others compared to individuals in individualistic cultures (Albarracin & Shavitt, 2018).

Altruism. Altruism is a form of other-regardingness whereby individuals gain utility from the well-being of others. This is the most prevalent form of ORP present in the literature. Different sub-types of altruism exist like the paternalistic and non-paternalistic forms of altruism accounted for in the PVE method (Mouter, Koster, & Dekker, 2021b), as discussed in section 1.1.1. Another form, for which support is found in data from Western Europe (Dimick et al., 2018), is income-dependent altruism. For this form, the support for redistribution of income rises among the rich as inequality increases. This is due to the decreasing marginal utility of money (the rich are less happy with an additional dollar than the poor). Redistribution is less costly in terms of utility for the rich. In analysing data from the International Social Survey Programme's module on social inequality, Alemán and Woods (2020) found that "*females, those with little education, the unemployed, those who lean left ideologically, and the less well-off tend to be more solidaristic*" (p.73).

Empathy. Empathy is the capacity to share the thoughts and feelings of another person (Kirman & Teschl, 2010). Empathy receives very little attention. Kirman and Teschl (2010) suggest that empathy is very dependent on the context of a situation and the social intention between people.

Inequality Aversion. Inequality aversion is, next to altruism, one of the two big concepts of ORP. Unlike the general conception of altruism, inequality aversion is more concerned with one's position in the inequality spectrum. It concerns individuals' aversion to being better (or worse) off than others. Whereas altruism is not necessarily based on this comparison. Higher support for equality seems to exist among older people in comparison to younger people (<35 years) (Tausch et al., 2013). As well as among those with working-class occupations (compared to managers, professionals, and technicians) (Andersen & Yaish, 2018).

Reciprocity. Reciprocity is relevant in direct exchanges. It concerns copying the behaviour of the other person. In a positive sense, this is reciprocal behaviour, but negatively this can turn into spitefulness (Fehr & Schmidt, 2006).

Preferences differ per person. A few studies report on distributions of SIP and ORP in society. When analysing the International Social Survey Programme data on social inequality, Alemán and Woods (2020) found the largest group being labelled moderate altruists, with moderate egoists being a close second and found small groups of extreme altruism and egoism. This data is from 1992 and consists of multiple countries in Europe and the USA. When testing for support for redistributive measures in 2017 in Switzerland, Epper et al. (2020) found around 50% of the individuals were inequality averse, 35% were altruistic, and 15% were mostly selfish.

Although most literature on SIP and ORP talks positively about ORP, negative ORP exist as well. The opposite of reciprocity is discussed by Fehr and Schmidt (2006) as spiteful behaviour. Fehr and Schmidt (2006) discuss envy as well, as the opposite of altruism. Envious individuals are willing to decrease another individual's utility at the cost of their own utility.

3.1.7. PVE in Light of the Literature

This section discusses the PVE conducted for the Oude Lijn, introduced in section 2.2, in light of the literature presented.

First, question comprehension. The PVE is a method which is conducted online. When respondents fill out the PVE they have no opportunity to ask questions about the questionnaire to any researcher. This means that the context that the PVE provides becomes more important for interpreting the questions (Schwarz, 2007). This also increases the chance of a faulty interpretation. At the end of the PVE, respondents are asked if the PVE was hard to understand. Respondents indicating that they found the PVE easy to understand, does not translate to them having the correct understanding of all questions. They might have formed a faulty interpretation, but they have formed an interpretation nonetheless, so they think they understood it.

Second, response formats. All questions are in closed format, except for the option to provide a written motivation for each choice within every choice task. This helps with question interpretation and ensures useful answers. However, it does restrict respondents in their answers. To solve this, if respondents find that they cannot fully express their thoughts, they have the opportunity to provide extra motivations or remarks after each choice task (separate from the choice motivations). Frequency questions on travel behaviour cover the whole spectrum of options (multiple times a week to never). All closed format questions also contain the option 'I don't know\I'd rather not say'. The choice tasks presented to respondents differ per station. Leiden has ten different options to choose between, while Den Haag Laan van NOI has eleven. The choice task has two constraint indicators for the amount of money and space in use for the combination of options selected. The indicator changes when a different option is selected. Each option is a slider with either 3 or 5 positions and has an indication of the amount of space and money needed for a change. The text showed per slide position differs between options sometimes. Most often the labels for 3 (or 5) positions are: much more space, more space, leave it as it is (less space, much less space). The status quo position is the 'leave it as it is'-label. A few options have different labels. The option regarding the bus station in Leiden has 3 options which are 'leave it as it is', 'Other location' and 'Overbuilt'. For Den Haag Laan van NOI regarding the station hall, the option for the least space allocated is 'No station hall'.

Third, the different biases. The social desirability bias has a low chance of occurring in this PVE. The PVE is fully anonymous and confidential, which reduces the chance of SDR occurring (Schwarz, 2008). It is a voluntary survey. Respondents who were part of the panel received a monetary reward after completion of the PVE. The serial position effect, and primarily the primacy effect, has a chance of occurring in the choice tasks. Respondents are presented with 8+ options in a random order. The options at the top are the first options respondents encounter. The randomisation ensures that the serial position effect does not concentrate on one or two options. Unfortunately, Populytics does not save the order in which the choice task options are presented. So, no analysis or correction for the serial-position bias is possible. The acquiescent bias can occur in this PVE when respondents leave the status quo option selected in a choice task without considering the options or select the 'I don't know\I'd rather not say'-option for the other questions of the survey. Sliding all options in a choice task to one side does not work as the constraints prevent respondents from moving on when the constraints are overrun. The respondents can move on when the constraints are underutilised, but they get a warning telling them they have space or money left. So, a respondent having all status quo options selected can be the acquiescent bias.

Fourth is the general context of the PVE. As discussed, context dependency overlaps with the hypo-thetical bias. Due to the difficulty of testing for the hypothetical bias, we mainly focus on the sort of context the PVE is set in. However, there is no reason to assume a large degree of hypothetical bias as this PVE indicates that the results will be taken into account when the actual policy decisions are made. The results are not binding, so the respondent does not know to which extent the advice is considered. Nonetheless, the policy consequentiality is clearly stated (in the next paragraph), so the hypotheticality of this PVE is assumed limited.

In short, this PVE is made for collecting preferences and opinions on investments in the Oude Lijn. Respondents are supposed to advise the Dutch government on what to do. The fact that respondents need to advise the government on what to do is stressed a lot in the PVE. When opening the PVE, the introductory video tells respondents the following: *"Because the government's choices have a major*

impact on what the railway system and station areas will look like in the future, the government wants to include ideas and opinions from residents. In this consultation, we therefore ask you to indicate what choices you think the government should make about improving the Oude Lijn and station areas". Afterwards in each different section, it is mentioned again. *"What choices should the government make at stations?", "The government is going to make choices about what the stations and their surroundings will look like in the future. You can advise the government on this.", "What choices should we make in and around Leiden station?", "What should the government consider when allocating space?", "Advise on choices for the Oude Lijn".*

The project for the Oude Lijn is positioned as being important for a large group of people. As the introductory video mentions *"When more people live and work in a region, it is important that they can move around easily"*. The PVE does not explicitly ask respondents to answer out of self-interest, for example, by framing questions in the form of 'what would be the best options for you'. This in combination with the focus on providing advice to the government leads to the conclusion that the overall context of this specific PVE points towards other-regardingness.

3.1.8. Hypotheses

To conclude this section on the conceptual framework, the following hypotheses are derived from the framework. Five hypotheses in total. All hypotheses are regarding the current PVE on transport investments for the Oude Lijn. These hypotheses will not be tested explicitly. Section 3.5 discusses the hypotheses in light of the outcomes of the upcoming analyses.

- **H₁** Women are more other-regarding than men[4].

Women are more context-sensitive compared to men (Croson & Gneezy, 2009). The PVE is more oriented towards other-regardingness. Women exhibiting more ORP compared to men could be due to the social desirability responding. If a context elicits a socially desirable answer, then women would be more sensitive to this as well. However, the chance for SDR occurring is reduced by maximising anonymity and confidentiality (Schwarz, 2008). This PVE is both. Survey research filled out by volunteers is less prone to SDR as well (Paulhus & Vazire, 2007). Although panel members are paid to participate in this PVE, they are not obliged to participate. Their motive is still partly voluntary.

- **H₂** Non-frequent users of the Oude Lijn are more other-regarding than high-frequent users.

Users of the Oude Lijn who frequently use the railway have a lot of experience with it. As discussed in section 3.1.4, preferences consist of a memory and judgement component. Experienced users are more likely to have a preference ready in memory compared to non-(frequent) users. The bigger the memory component, the less sensitive a respondent is to the context in forming its preferences. Inexperienced users will be influenced more by the other-regarding context of the PVE.

- **H₃** Older age categories (>35) are more other-regarding than younger age categories.

Older people are more inequality averse than younger people (Tausch et al., 2013). They care more for their relative position and take the position of others into account. When considering and motivating the PVE options they will probably be more other-regarding.

- **H₄** Politically left-oriented respondents are more other-regarding than politically right-oriented respondents.

Political ideology influences support for redistributive policies (Alemán & Woods, 2020; Tausch et al., 2013). People on the left care more for solidaristic policies. Extending this to the PVE, the political left would be more other-regarding.

---

[4]The consulted scientific literature regarding different (other-regarding) preferences between men and women did not distinguish between sex and gender or incorporated other genders. Therefore, only a prediction is made on the difference between men and women

3.2. PVE

Now, we look what data the PVE generated to see how it compares to the general Dutch population and how respondents answered to the three added statements. We also look into a potential location effect.

3.2.1. Demographic Representativeness

Table 3.2 presents the demographic composition of all 3046 respondents from the panel. The distribution of these variables in the Dutch population is presented as a comparison. The education categories are defined as follows. The low category consists of primary school, VMBO, undergraduate- HAVO and VWO, and MBO level 1. The medium category consists of upper secondary- HAVO and VWO, as well as MBO levels 2-4. The high category consists of HBO and university. All different age categories are present in the data. However, the oldest age category is underrepresented, while the lowest three categories are overrepresented. We see an overrepresentation of women compared to the population. Regarding education we see a misrepresentation in the low and high categories, being under- and overrepresented respectively. A chi-square goodness-of-fit test was performed for all variables. All three variables varied significantly from the population (p-value <0.001 for all variables). Thus, rejecting the hypothesis that the variables follow the same distribution as would be expected from the population. Concluding that the panel is not fully representative of the Dutch population on these three classic demographic variables. However, all categories are represented, so we do not see the lack of representation as a problem for uncovering the different views and preferences.

Table 3.2: Descriptive statistics (N=3046)

Demographic variable	Category	Sample size	Sample (%)	Population (%) (CBS, 2022, 2023)
Age	18-25	421	13.3	11.1
	25-34	659	21.5	16.1
	35-44	606	20.0	15.0
	45-54	539	17.7	16.1
	55-64	364	12.2	16.9
	65	456	15.4	24.8
Gender	Men	1288	42.3	49.7
	Woman	1739	57.1	50.3
Education	Low	693	22.9	26.3
	Medium	1221	40.3	41.7
	High	1117	36.9	32.0

3.2.2. Added Statements

The results of the added statements regarding effect consideration are visualised in figure 3.3. Table 3.3 contains descriptive statistics of all three statements. The largest share of respondents is neutral or positive towards all statements. The share of respondents disagreeing is the largest for the consideration of effects for themselves. People agree most with mainly taking into account the collective interest.

The three statements relate to each other, but the way they do can be interpreted in two ways. Either, they are mutually exclusive. A person can mainly take into account only one of the effects mentioned and the other effects played a lesser role. Or they are the degree to which a person took the mentioned effect into account. The more a person agreed, the more they took the effects into account. The first interpretation does not seem to hold for most respondents, as almost all respondents agreed to mainly taking into account multiple effects. When the results are interpreted in the second way, then most respondents considered all effects with an emphasis on the collective interest. They lean towards other-regardingness.

Statement: I mainly looked at the ...
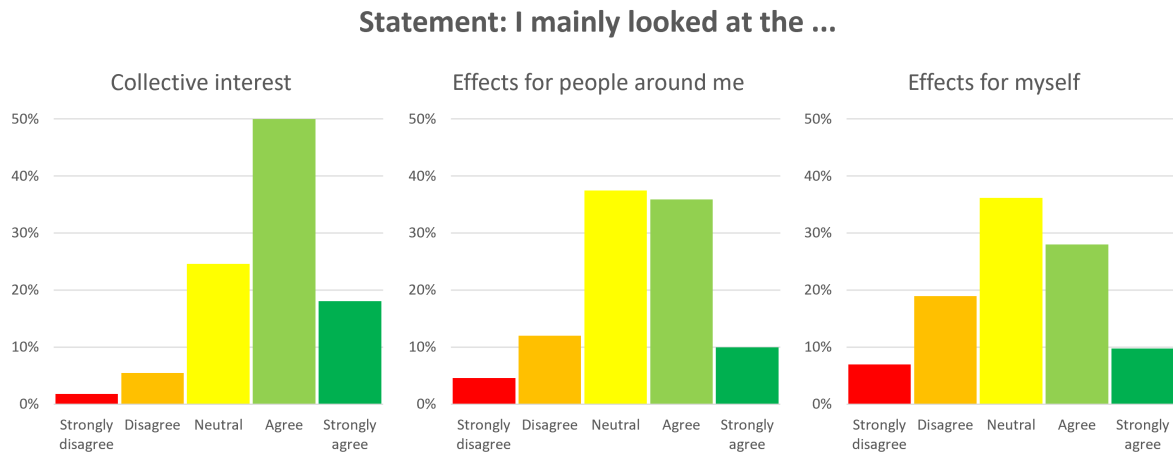
Figure 3.3: Results of the statements regarding effect consideration

SDR does not seem to be an issue for these statements. As discussed in section 3.1.7, the PVE is fully anonymous and confidential. It is a voluntary survey as well. Thus, the chance of SDR occurring is unlikely. In this case, the socially undesirable answer would be respondents mainly considering the effect on themselves and not the other effects. As it can be regarded as egoistic. SDR would then be to disagree with the statement on considering the effects for themselves. Most respondents agree or are neutral towards this statement, indicating that there is no SDR.

Table 3.3: Descriptive statistics of the statements regarding effect consideration

		Collective interest	Effects for people around me	Effects for myself
N	Valid	3004	3002	3004
	Missing	42	44	42
Median		Agree	Neutral	Neutral
Minimum		Strongly disagree	Strongly disagree	Strongly disagree
Maximum		Strongly agree	Strongly agree	Strongly agree
Percentiles	25	Neutral	Neutral	Disagree
	50	Agree	Neutral	Neutral
	75	Agree	Agree	Agree

3.2.3. Location Effect

To check for the location effect specifically, a new variable was created (see appendix C) that indicates if a person lives in a municipality where a new station could be built. Table 3.4 provides an overview of all three new station choices. Respondents had two choices for each station. 'Do' equals building a new station, 'Don't' equals not building a new station. Respondents who fall under the location effect would for example be the 95 respondents living in Rotterdam or Schiedam who selected the option for two new stations, Rotterdam Van Nelle and Schiedam Kethel. 33% of all respondents in Rotterdam and Schiedam chose this option, compared to the 19% average. A chi-square goodness-of-fit test was performed for three options. All tests were significant (p-value < 0.05). This means that the people choose differently when they live in a municipality where a potential new station is located. The difference within Rijswijk is the biggest, where half of the respondents are for a new station there compared to the average of 17 per cent. While they do not choose one of the other stations. Dordrecht, Rotterdam and Schiedam are about equal, with an increase of 12 and 14 percentage points, respectively.

Table 3.4: Choices for all potential new stations per relevant municipality

Lives in:	Rijswijk Buiten			Rotterdam Van Nelle & Schiedam Kethel			Dordrecht Leerpark		
	Don't	Do	% 'Do' of total	Don't	Do	% 'Do' of total	Don't	Do	% 'Do' of total
Rotterdam or Schiedam	239	47	16%	191	95	33%	236	50	17%
Dordrecht	51	1	2%	44	8	15%	37	15	29%
Rijswijk	7	8	53%	14	1	7%	15	0	0%
Other	2219	474	18%	2231	462	17%	2245	448	17%
Sum	2516	530	17%	2480	566	19%	2533	513	17%

3.3. LCCA

Together, the LCCA and the CA are performed to answer the third sub-question: **Which characteristics correlate with differences in self-interested and other-regarding preferences?** Most data are available on the general choice task for the Oude Lijn, which is why the answers to this choice task are used in the LCCA and CA. The PVE is very long, so most part were not mandatory. Respondents could indicate which stations they would like to provide advice for, but all panel members needed to complete the choice task for the Oude Lijn.

The first LCCA model looks at the respondents and their answers to the added statements to see which socio-demographic variables correlate with this self-interest or other-regardingness. The characteristics associated with each cluster provide a profile, showing who the average cluster respondent is and how they differ among the clusters. The second model incorporates the general choice task on the Oude Lijn. By comparing these two models we can see if and how the answers to the statements translate to different choices in the choice task. Thus, whether SIP or ORP influences the choices made. Appendix C contains detailed results from both latent class cluster models.

3.3.1. Model 1: Different Views

The first LCCA model is a basic model exploring the data from all respondents. For the measurement model, the three statements regarding the consideration of effects on self or others are added as indicators. A measurement model was built starting with 1 up to 10 clusters to find the most parsimonious number of clusters. The local measure, BVR, was used to determine the amount of clusters. A 6-cluster model was the model with the fewest clusters where there were no significant residual associations left between the indicators.

In total 11 other variables are included as covariates. In the end, 4 variables were deemed not significant in predicting cluster membership and were turned into inactive variables to additionally profile the clusters.

The R-squared statistic indicates how well one can predict class memberships based on the observed variables (indicators and covariates). The closer these values are to 1 the better the predictions. The classification power of the covariates alone is very poor (0.0615). The classification power of all variables, indicators and co-variates, is good (0.7585).

All clusters are introduced below. Each cluster has been given a name which fits their general answers to the statements. A visualisation of their average for each statement is presented in figure 3.4. Table 3.5 contains all the conditional probabilities for each category in a variable for each cluster[5]. The conditional probability is the probability for a particular response or variable level given cluster membership. The columns for a category sum up to 100 per cent. The highest category within a variable is marked in bold for each cluster.

Cluster 1.1: Neutral selfless (54%)
The first cluster is labelled neutral selfless. Regarding the statements, this cluster says to be neutral towards the effects for themselves and gets increasingly more interested in the effects for the people around them and the collective interest. The variable averages of this cluster corresponds to the averages of the whole panel. No specific characteristics differentiate them from the panel as a whole.

Cluster 1.2: Neutral selfish (25%)
The second cluster is labelled neutral selfish. With regards to the statements, this cluster is neutral on both the effects for the people around them and the collective interest. They do indicate to care more for the effects impacting themselves. This group is a bit younger on average with the group younger than 35 being larger (7 percentage points) and the group above 55 being smaller. They also reside more in the province of South Holland (6 percentage points).

The difference between first two clusters is that cluster 1.2 says to mainly take into account the effects for themselves, while cluster 1.1 says to mainly take into account the effects on others. This difference could be explained by the fact that cluster 1.2 resides more in South Holland, and are a bit younger

---

[5]For the indicator variables, the options 'strongly agree' and 'agree' are merged for better interpretability, as well as the options 'strongly disagree' and 'disagree'. The age variable is also grouped for this reason.

Average model-1 cluster answer to the effect statements*
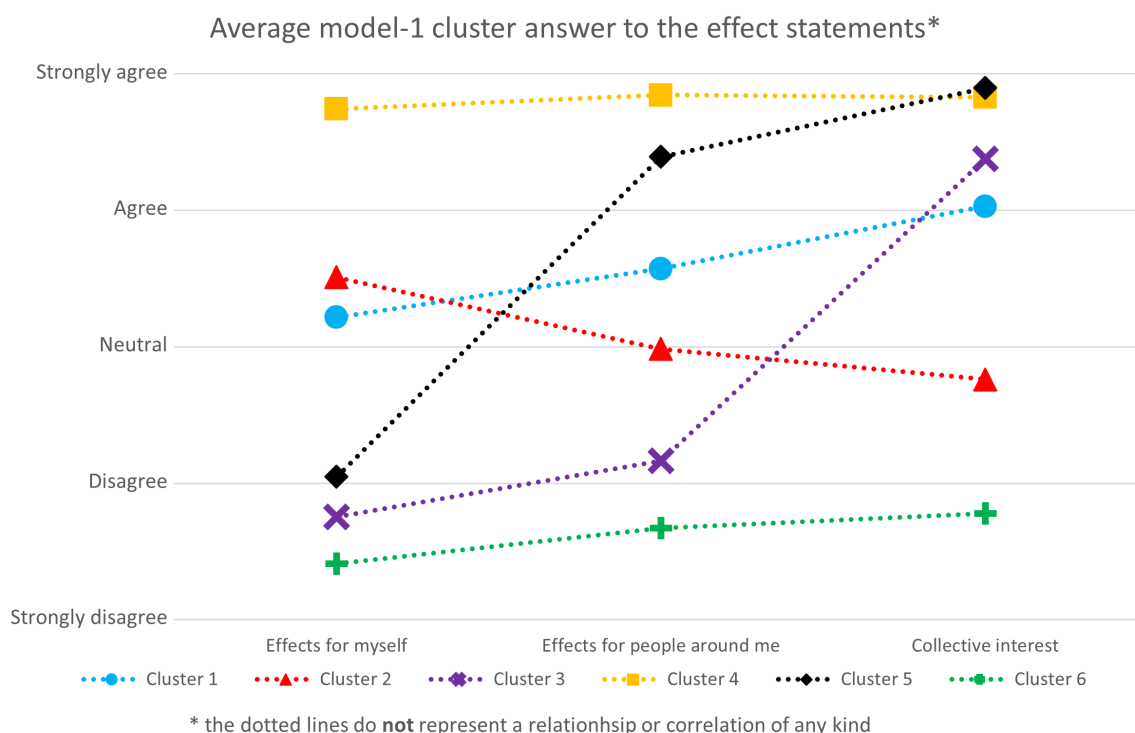
Figure 3.4: Model 1 cluster averages for the three effect statements

on average. Respondents living in South Holland have a higher chance of coming into contact with the Oude Lijn and thus, there is more incentive to be self-interested. The younger age groups are also expected to be more self-interested, as posed by the hypothesis H_3 from section 3.1.8 which says older people are expected to be more other-regarding.

Cluster 1.3: Collectivist (10%)
The third cluster is labelled collectivist due to its focus on the collective interest. They say to mainly consider the collective interest while disagreeing with mainly considering the other two effects. This cluster has a very large share of people older than 65 (29% compared to 15% on average) and a very little of sub-25 (2% compared to 13% on average). In line with this, we also see fewer students (only 2%, the average is 15%) and more 'others'. The 'other' category consists mainly of retirees, volunteers, housemen and housewives The train is used very little, and the Oude Lijn rarely. Their usage is once a month or less for 82% for the train in general and 95% for the Oude Lijn compared to 59% and 73% on average respectively. Also, around 80% do not live in South Holland (on average 55%).

The focus on the collective interest in cluster 1.3 can be explained by two factors. First is age, this cluster consists of twice as many respondents over 65 and almost no sub-25-year-olds. We expect the older people to have more ORP (H_3). Secondly, they don't live in South Holland so they don't use the Oude Lijn. This cluster has no incentive to be self-interested as they have nothing to gain for themselves from improving the Oude Lijn. This is in line with hypotheses H_2 and H_3.

Cluster 1.4: Agreeable (6%)
The fourth cluster is labelled agreeable as they said to strongly agree with all three statements. This cluster is younger. The group of 25 to 34-year-olds is 10 percentage points larger. The education level is spread more evenly, which means this cluster contains more people in the low education group and fewer in the medium and high education groups (29, 35 and 36 per cent compared to 21, 41, and 38 respectively). This cluster uses the train more often. A difference of around 25 percentage points for both the use of the train in general and the Oude Lijn. More than half use the train at least several times a month. The cluster consists of a bit more students (5 percentage points).

The agreeableness of cluster 1.4 can be interpreted in different ways. One possibility is that they weighed all different effects equally and found this the best way to express this. A second possibility is that it falls under the acquiescent bias. Respondents agree without considering the question asked. The first option seems more likely, as cluster 1.4 uses the train and Oude Lijn more frequently than average. They are both self-interested and other-regarding. The choices they make for the Oude Lijn affect themselves, but they also consider the impact on others.

Cluster 1.5: Selfless (4%)
The fifth cluster is labelled selfless. This cluster reports to not mainly take the effects for themselves into account, but they report taking into account the effects for others. Both for the people around them, as well as the collective interest. This cluster is more located in urban areas (15 percentage points). Education is also higher in this cluster (high education is 5 percentage points larger).

This cluster does not stand out besides being more urban. One interpretation is to see it as a more extreme version of cluster 1. They respond to the statements in the same order as cluster 1 but are more extreme in their answers. Cluster 5 is less neutral and more expressive compared to cluster 1. People view response scales differently and weigh the extremes of the scale differently. So, either cluster 1.5 is less reserved than cluster 1.1 or they place less weight on the extreme option.

Cluster 1.6: Disagreeable (2%)
The sixth and last cluster is labelled disagreeable. This cluster says to not mainly take any of the three effects into account. They disagree with all three statements. This cluster is very young. 55% is younger than 35 compared to the average of 34%. They are lower educated (8 percentage points) and consist of more students (41% compared to the 15% average). This group tends to live in rural areas (56%), in social housing (53%) and outside of South Holland (88%).

This cluster is odd. They indicate to not mainly take into account any effects. This can be explained in multiple ways. First, as a kind of reactant bias, the opposite of the acquiescent bias. They disagree immediately without considering the question. Second, they considered all effects equally and thus disagree with *mainly* taking one of the effects into account. Third, they found it difficult to weigh all the options. Fourth, they did not agree with the options presented or did not understand the statements and they did not have any other way to express this. The following LCCA model and the content analysis shed more light on this cluster (see section 3.4.3).

Finally, the overall makeup of the model-1 clusters seems to be in line with the groups that Alemán and Woods (2020) found. They found two large groups and two small groups. With the largest group being labelled moderate altruists, the second largest moderate egoists and the small groups being labelled extreme altruism and extreme egoism. We encountered a large group with moderate favour towards other-regardingness (1.1), and the second largest towards selfishness (1.2). A small group with extreme other regardingness (1.3 & 1.5). Only a cluster of extreme egoists is not encountered.

Table 3.5: The probability for a particular response or variable level given model-1 cluster membership

	Cluster						Sample total
	1	**2**	**3**	**4**	**5**	**6**	
Sample size (N=...)	1531	701	282	162	223	47	2836
Indicators							
Effects for myself							
• Disagree	18%	11%	**87%**	0%	**75%**	**96%**	26%
• Neutral	**45%**	39%	12%	2%	23%	4%	36%
• Agree	36%	**51%**	1%	**98%**	3%	0%	**38%**
Effects for people around me							
• Disagree	5%	23%	**64%**	0%	0%	**85%**	16%
• Neutral	38%	**53%**	32%	0%	5%	14%	37%
• Agree	**57%**	24%	4%	**100%**	**95%**	1%	**47%**
Collective interest							
• Disagree	0%	22%	0%	0%	0%	**78%**	7%
• Neutral	8%	**76%**	1%	0%	0%	21%	24%
• Agree	**92%**	2%	**99%**	**100%**	**100%**	0%	**69%**
Covariates							
Age							
• < 35	35%	41%	16%	43%	31%	**55%**	34%
• 35 - 64	**51%**	**47%**	**55%**	47%	**51%**	38%	**50%**
• > 64	15%	12%	29%	10%	18%	8%	15%
Education							
• Low	21%	22%	17%	29%	19%	29%	21%
• Medium	**42%**	**40%**	**44%**	35%	38%	**45%**	**41%**
• High	38%	38%	39%	**36%**	43%	26%	38%
Work status							
• Job (paid)	**61%**	**59%**	**55%**	**60%**	**64%**	32%	**60%**
• Student	13%	21%	2%	20%	12%	**41%**	15%
• Other	25%	20%	42%	20%	24%	28%	25%
Train usage							
• Al least several times a month	42%	45%	18%	**65%**	40%	42%	41%
• Less frequent or never	**58%**	**55%**	**82%**	35%	**61%**	**58%**	**59%**
Oude Lijn usage							
• Al least several times a month	27%	30%	5%	**50%**	24%	29%	27%
• Less frequent or never	**73%**	**70%**	**95%**	50%	**76%**	**71%**	**73%**
Area type							
• Urban area	**65%**	**62%**	**59%**	**73%**	**81%**	44%	**64%**
• Rural area	35%	38%	41%	27%	19%	**56%**	36%
Province							
• South Holland	48%	**51%**	18%	43%	44%	13%	45%
• Other	**52%**	49%	**82%**	**57%**	**56%**	**88%**	**55%**

3.3.2. Model 2: Different Choices

The second model is a model exploring the data from all respondents and the choice task on the Oude Lijn. For the measurement model, the eight choices regarding improvements for the Oude Lijn are added as indicators. A measurement model was built starting with 1 up to 10 clusters to find the most parsimonious number of clusters. The BIC was lowest for a model with 4 clusters. So, 4-cluster model was selected[6].

In total 15 variables are included as covariates. In the end, 7 variables were deemed insignificant in predicting cluster membership and were turned into inactive variables to additionally profile the clusters.

The R-squared statistic indicates how well class memberships can be predicted based on the observed variables (indicators and covariates). The closer these values are to 1 the better the predictions. The classification power of the covariates alone is very poor (0.0571). The classification power of all variables, indicators and co-variates, is okay (0.6390).

Table 3.6 contains all the conditional probabilities for each category in a variable for each model 2 cluster[7]. The conditional probability is the probability for a particular response or variable level given cluster membership. The columns for a category sum up to 100 per cent. The highest category within a variable is marked in bold for each cluster. The average choice for each cluster is visualised in figure 3.5.

Cluster 2.1: Invest in cycling infrastructure and other modalities (43%).
The first cluster for model two mainly allocates money towards cycling infrastructure and other transport modalities like busses, metros, trams, and shared mobility. They show some support for extra sprinters per hour and for building with a tunnel box. They are neutral towards the statements on the consideration of effects for themselves and the people around them but agree with the statement of mainly considering the collective interest. This cluster shows no noteworthy deviation from the panel average, besides consisting of more females (5 percentage points).

Cluster 2.2: Invest in other modalities (23%).
The second cluster allocates money towards other transport modalities like busses, metros, trams, and shared mobility. Cluster 2 makes almost identical choices to cluster 1 but spends almost no money on cycling infrastructure. This cluster is mostly neutral towards all three statements. It consists of more

---

[6]Populytics also chose for a 4-cluster model in analysis of the general choice task for the Oude Lijn
[7]For the covariate variables on the effect consideration, the options 'strongly agree' and 'agree' are merged for better interpretability, as well as the options 'strongly disagree' and 'disagree'.
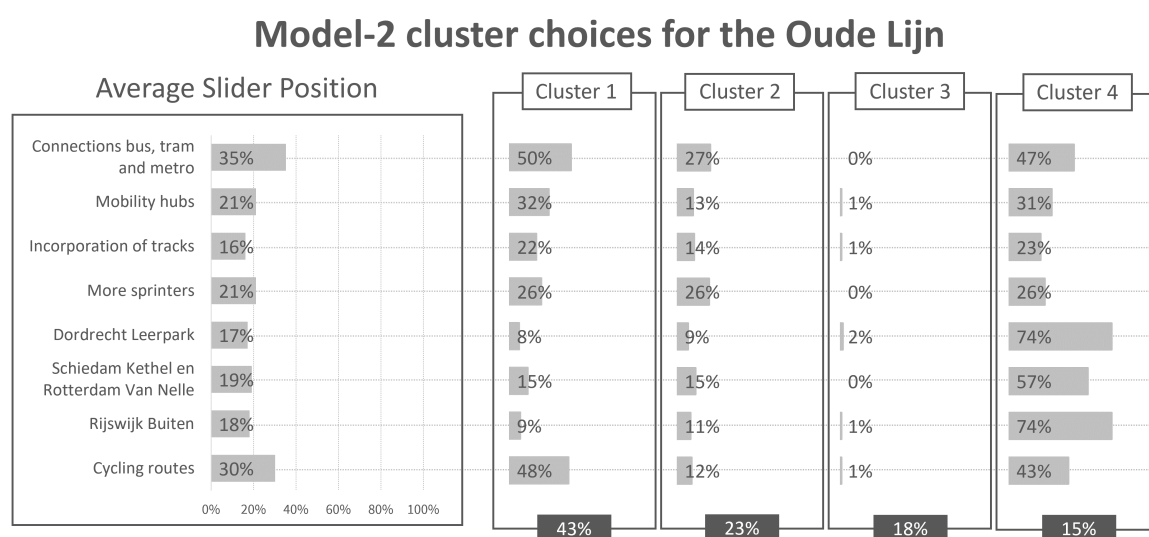
Figure 3.5: Model 2 cluster averages for the eight choices

working people (5 percentage points). They use the train and Oude Lijn more (a 10 percentage points increase for both). They are more located in South Holland as well (7 percentage points).

Cluster 2.3: Status quo (18%).
The third cluster allocates almost no money at all. They choose to keep the status quo for the Oude Lijn. This cluster is mostly neutral towards all three statements. The level of education is spread out more. Around a third for each group. The group with low education is 11 percentage points higher. There are a bit more students (6 percentage points). There is less train usage (5 percentage points), but the Oude Lijn usage is average. This cluster is located more outside of South Holland (7 percentage points difference).

Cluster 2.4: Invest in new stations (15%).
The fourth and last cluster allocates money to build the new stations and invest in cycling infrastructure. This is the only cluster that focuses on constructing new stations. This cluster is neutral towards the statement on mainly considering the effects for themselves and agrees with mainly considering the collective interest, with the consideration of effects for the people around them being in the middle. There is an even split of males and females compared to 40/60, and the cluster consists less of working people (6 percentage points).

Respondents who fall under the location-effect, found in section 3.2.3, are most likely part of this cluster, as these respondents chose at least one new station. The answers of cluster 2.4 for the three statements on effect consideration do not point towards self-interestedness. The answers follow the average with the collective interest being taken into account mainly. The location effect in this PVE seems to be other-regarding, section 3.4.5 investigates the written motivations of these respondents to get more insight into their self-interest or other-regardingness for the location effect.

Finally, when comparing both LCCA models, the makeup of the model-2 clusters does not resemble the different clusters from model 1. A possible explanation is that all choices can be argued from both a SIP and ORP perspective. The perspectives are not mutually exclusive. A certain orientation on self-interestedness or other-regardingness does not lead to distinctly different choices. The content analysis in section 3.4 looks into the written motivations of the model-2 clusters.

Table 3.6: The probability for a particular response or variable level given model-2 cluster membership

	Cluster				Sample total
	1	**2**	**3**	**4**	
Sample size (N=...)	1232	656	522	425	2836
Indicators					
1. Cycling routes					
• No extra money	17%	**77%**	**97%**	24%	**46%**
• A little extra money	**70%**	23%	3%	**68%**	**46%**
• A lot of extra money	13%	0%	0%	9%	7%
2. Rijswijk Buiten					
• Don't	**91%**	**89%**	**99%**	26%	**82%**
• Do	9%	11%	1%	**74%**	18%
3. Schiedam Kethel Rotterdam Van Nelle					
• Don't	**85%**	**85%**	**100%**	43%	**81%**
• Do	15%	15%	0%	**57%**	19%
4. Dordrecht Leerpark					
• Don't	**92%**	**91%**	**98%**	26%	**83%**
• Do	8%	9%	2%	**74%**	17%
5. More sprinters					
• 6x per hour (status quo)	**51%**	**50%**	**100%**	**51%**	**60%**
• 8x per hour	46%	47%	0%	46%	38%
• 12x per hour	3%	3%	0%	3%	2%
6. Incorporation of tracks					
• Standard construction	**61%**	**74%**	**97%**	**58%**	**70%**
• Building with tunnel box	35%	24%	3%	37%	27%
• Building with a tunnel	4%	2%	0%	5%	3%
7. Mobility hubs					
• No extra money	43%	**75%**	**99%**	43%	**61%**
• A little extra money	**52%**	24%	1%	**51%**	36%
• A lot of extra money	6%	1%	0%	5%	3%
8. Connections bus, tram, metro					
• No extra money	16%	**49%**	**100%**	19%	39%
• A little extra money	**68%**	**49%**	0%	**67%**	**51%**
• A lot of extra money	16%	3%	0%	14%	10%
Covariates					
Effects for myself					
• Disagree	31%	17%	16%	**34%**	26%
• Neutral	**36%**	34%	**42%**	**34%**	37%
• Agree	32%	**49%**	41%	32%	**38%**
Effects for people around me					

Table 3.6: The probability for a particular response or variable level given model-2 cluster membership (Continued)

• Disagree	19%	14%	14%	15%	16%
• Neutral	36%	38%	**44%**	34%	38%
• Agree	**45%**	**48%**	42%	**51%**	**46%**
Collective interest					
• Disagree	4%	10%	12%	6%	7%
• Neutral	20%	28%	35%	19%	24%
• Agree	**77%**	**62%**	**53%**	**76%**	**68%**
Sex					
• Man	38%	42%	47%	**51%**	43%
• Woman	**62%**	**58%**	**53%**	49%	**57%**
Education					
• Low	17%	19%	33%	25%	22%
• Medium	**43%**	39%	**37%**	**41%**	**41%**
• High	40%	**42%**	30%	34%	38%
Work status					
• Work	**62%**	**65%**	**52%**	**54%**	**60%**
• Study	11%	16%	21%	18%	15%
• Other	27%	19%	27%	28%	25%
Train usage					
• Al least several times a month	39%	**51%**	35%	41%	41%
• Less frequent or never	**61%**	49%	**65%**	**60%**	**59%**
Oude Lijn usage					
• Al least several times a month	22%	39%	27%	24%	27%
• Less frequent or never	**78%**	**61%**	**73%**	**76%**	**73%**
Province					
• Other	**58%**	48%	**62%**	52%	**55%**
• South Holland	43%	**52%**	38%	48%	45%

3.3.3. Comparison of Model Classifications

The results of the two LCCA models showed that the cluster division from model 1 consisting of 6 clusters is not recognisable in model 2 with 4 clusters. In the upcoming content analysis, we analyse the written motivations to see if people are self-interested or other-regarding in their motivations. Only the model-2 clusters have motivations associated with them. To see how these motivations relate to the model-1 clusters, we now check how respondents are distributed among the two models.

By classifying all respondents on both models, each respondent is assigned to two clusters in the end, one for model 1 and one for model 2. Using the *ClassPred* tab in Latent Gold, via *Classification - Posterior*, we classified all individuals based on both the indicator and active covariate variables. Table 3.7 presents the cross table of the classifications of both models. Due to classification and rounding errors, the overall percentage and numbers deviate from the percentages found in the previous two sections. Using a Chi-square test, we checked whether the hypothesis that the clusters of both models are unrelated holds. With a value of 230.903 and 15 degrees of freedom, the resulting p-value was 0.000. The hypothesis of unrelatedness can be discarded.

Table 3.7 is structured as follows. Besides each model cluster is its name and percentage of the total respondents within each model. The absolute count for each cluster is presented next to the percentage. For example, cluster 2.1 covers 46% of the panel, and is assigned to 1316 individuals. The intersecting cells between the clusters of both models present the percentage of individuals of a model-1 cluster who are assigned the corresponding cluster in model 2. For the overlap of model 2.3 and 1.6 we see that, of all individuals in cluster 6 of model 1, 47% is assigned to cluster 3 in model 2 (instead of the expected average of 19%). The rows sum up to 100 per cent.

Cluster 1.1 is large enough so that it contains all model-2 clusters to the same extent as the average. Cluster 1.3 finds more than two-thirds also being assigned to cluster 2.1. This choice pattern seems to reflect how one would optimise for the collective interest. Together with cluster 2.4, it is one of the clusters that seems to spend most of their budget. The choices for new stations are relatively expensive. Spreading the budget over multiple options enables this group to influence the well-being of different groups. The same pattern emerges for cluster 1.5. They also spent most of their budget, are other-regarding too and are being assigned to cluster 2.1 or 2.4 mostly (combined 81%, compared to 60% on average). The last cluster, 1.6, consists mainly of respondents who are in cluster 2.3 as well, with a very small part of respondents who are in cluster 2.1 too. Section 3.4.3 looks into the motivations of respondents from cluster 2.3

Table 3.7: Cross table of classifications of model 1 and 2

					Model 2						
					1		**2**		**3**		**4**
					Cycling & other modalities		Other modalities		Status Quo		New stations
	Total sample size		*100%*	*2836*	46%	1316	21%	583	19%	552	14%	385
Model 1	**1**	Neutral selfless	52%	1481	50%	739	21%	304	16%	232	14%	206
	2	Neutral selfish	28%	794	35%	275	27%	211	28%	225	10%	83
	3	Collective	9%	251	69%	172	6%	14	8%	19	18%	46
	4	Agreeable	5%	149	37%	55	20%	30	32%	47	11%	17
	5	Selfless	4%	114	58%	66	13%	15	6%	7	23%	26
	6	Disagreeable	2%	47	19%	9	19%	9	47%	22	15%	7

3.4. Content Analysis

The content analysis is performed on the written motivations of the PVE, the qualitative data, in addition to the quantitative LCCA. The combination of a respondent's choice and motivation provides a more complete picture to determine their preferences compared to a choice alone. The goal is to see how respondents motivate their choices. Do they do this from a perspective that can be regarded as other-regarding or self-interested?

3.4.1. Selection and Process

The content analysis process in this chapter consists of steps 3 through 6 as discussed in section 2.4. First, we need to determine on what selection of motivations the CA will be performed. In chapter 3.3, we constructed two models. The second model concerns the choices people made for the Oude Lijn. These choices are accompanied by a motivation, so we looked at this model to see what benefits from a content analysis. We identified three groups for which a content analysis will be performed. Clusters 2.1 and 2.2 are very similar in their choices except for their willingness to invest in better cycling routes. The motivations for this choice are analysed first for both clusters. Cluster 2.3 does not choose any of the investments in the Oude Lijn. They maintain the status quo, but why? All motivations from cluster 2.3 are analysed second. Cluster 2.4 is the cluster that overwhelmingly chooses the new stations compared to all other clusters. Lastly, the motivations for each of the three choices for new stations are analysed for cluster 2.4. There is a separate analysis looking into the types of motivations of respondents who fall under the location effect, as seen in section 3.2.1. The process for developing the coding categories is described in appendix D, together with all results from the different content analyses.

In the following sections, the results of the content analyses are presented. The overarching motivation categories are mostly other-regarding or in benefit of the public interest. A lot of respondents did not leave a motivation for the choices they made.

3.4.2. Clusters 2.1 and 2.2: Cycling Routes

Cluster 2.1 contains 1334 motivations and 2.2 contains 594 motivations, in line with the sizes of the clusters. Table 3.8 presents an overview of the results of this CA. Different examples of motivations are provided when discussing the results to get a feel of the way people motivate their choices.

The main reason why people appoint more money towards cycling routes is that they are generally in favour of cycling. This holds for both clusters, although the share in cluster 2.2 is small.

- *2.1 "Anything that could be better about cycling routes. Do it"*

In cluster 2.1, the safety of cyclists and traffic in general played a large role too. People are very short in motivating their choices, but some respondents elaborate more.

- *2.1 "Safer"*

- *2.1 "Think it is dangerous for pedestrians and cyclists sometimes"*

The main reason for cluster 2.2 to not invest any money is that respondents are content with the current situation. The cycling routes are fine and there is no need to appoint more money towards them.

- *2.2 "The routes are fine, never had any problems with them before"*

- *2.2 "No need"*

The second reason is that respondents are not familiar with the situation.

- *2.2 "Don't know"*

- *2.2 "This I do not know, I am not very familiar with this area"*

Table 3.8: Results for labelling cluster 2.1 and 2.2 cycling routes motivations

Choice	Category	Cluster 2.1	Cluster 2.2
1	I am generally in favour of cycling	43	0
1	Cycling is good for the environment	14	0
1	Then more people go by public transit, it becomes more accessible	10	0
1	It is safer	10	0
1	Other	10	0
1	Fewer people will use cars	8	0
1	Accessibility	6	0
1	Current cycling routes are insufficient	2	0
0.5	I am generally in favour of cycling	188	20
0.5	It is safer	105	5
0.5	Then the station is easier to reach	70	3
0.5	Then fewer people go by car	61	0
0.5	Then more people go to the station by bike	55	1
0.5	Other	40	6
0.5	Then more people go by public transit	24	1
0.5	Cycling is good for the environment	23	3
0.5	Then fewer people have to walk to the station	1	0
0.5	Ideas/conditions	1	0
0	Cycling routes are fine now	50	140
0	Unaware of the situation	6	43
0	Other	7	41
0	No priority/too expensive	6	8
0	I do not use the cycle routes	0	6

When looking at the tone and viewpoint of the motivations, only a small number of the respondents explicitly motivate their choices through self-interest. For the status quo choice, there is a category for answers like this: 'I do not use the cycle routes'. However, it happens in both clusters.

- 2.1 "Then I'd get there more easily"

- 2.2 "of no importance to me personally"

- 2.2 "I never cycle there"

These type of self-interested motivations fall under the broad conceptualisation of SIP as posed in section 3.1.6. The motivations are not about the material self-interest, but one is about ease of use and the other two talk about the disregard of others. They do not personally use it so they are not spending money on it. They won't reap benefits of any potential improvements.

Some motivations seem to explicitly consider the effects of what the respondent thinks is most desirable for others. Thus, taking an other-regarding perspective. Most respondents talk about general effects, which can apply to themselves but others as well. In this regard, the self-interest or other-regardingness in the motivation overlaps in the collective interest.

In short, cluster 2.1 is pro-cycling in general or values safety and cluster 2.2 thinks the current situation suffices. There is one category which is explicitly self-interested. They are against investments in cycling routes because *'[They] do not use the cycle routes'*.

3.4.3. Cluster 2.3: All Choices

The second analysis focuses on cluster 2.3 where the consensus seems to be that no extra money should be spent (see table 3.9). 576 respondents are appointed to this cluster. Besides the empty motivations, the largest group of respondents says that the current situation suffices. For example, for one respondent within this category, their response to all choices is:

Table 3.9: Results for labelling cluster 2.3 generalising all motivations

Category	Cluster 2.3
Fine; The current situation suffices	102
Don't know; I do not know the situation there	53
Other sensible motivation	40
Empty; Nonsense	381

- On better cycling routes: *"there are plenty"*
- On Rijswijk Buiten: *"unnecessary"*
- On Rotterdam van Nelle and Schiedam Kethel: *"superfluous"*
- On Dorecht Leerpark: *"is not really necessary"*
- On more sprinters: *"is sufficient"*
- On the incorporation of tracks: *"is unnecessary"*
- On mobility hubs: *"is sufficient"*
- On connections with other modalities: *"those are excellent"*

A handful of respondents had problems with the sliders. The sliders are used to indicate the choice of the respondent. Its initial position is to appoint no extra money, i.e. the status quo. These respondents did want to alter the status quo and would probably have fallen into another cluster if their sliders cooperated. The following respondent seemingly wanted to invest in cycling routes, mobility hubs, and connections to other modalities (resembling cluster 2.1). The motivations for each choice respectively:

- On better cycling routes: *"I can't get the slider moved, so please do better cycle routes"*
- On Rijswijk Buiten: *"I don't know the situation well enough to advise on this"*
- On Rotterdam van Nelle and Schiedam Kethel: *"maybe"*
- On Dorecht Leerpark: *"I don't know the situation well enough to advise on this"*
- On more sprinters: *"this is enough"*
- On the incorporation of tracks: *"it's fine"*
- On mobility hubs: *"please do, I can't move the slider"*
- On connections with other modalities: *"always fine, I can't move the slider"*

Similarly, respondents motivated a choice as if they were choosing differently. The made choices are for the status quo, but their motivations say otherwise. It is unclear if this is a misunderstanding on the side of the respondent or a bug in the PVE software. These are sensible motivations but do not fit the choices made. For example:

- On better cycling routes: *"The cycle routes are fine, money may be put into other things"*
- On Rijswijk Buiten: *"Don't do it; costs a lot of money and detours for travel"*
- On Rotterdam van Nelle and Schiedam Kethel: *"Don't do as now is sufficient"*
- On Dorecht Leerpark: *"Don't do stations are centrally located"*
- On more sprinters: *"Supporter"*
- On the incorporation of tracks: *"Fine as is"*
- On mobility hubs: *"Good idea this"*

- On connections with other modalities: *"Yes supporter"*

The second largest reason for supporting the status quo is that respondents are not familiar with the Oude Lijn or have never used it. Respondents repeated this at one or all of the motivation fields. The following statements are from respondents who repeated this 8 times (under each choice):

- *"Never been here so leave everything as it is"*

- *"No idea, no knowledge and experience"*

- *"No idea. Don't know what it looks like there. Never travel by train and I had mentioned that before"*

This CA showed a very high number of respondents who did not motivate their choices. From the motivations that were written out, most respondents think the current situation is fine and does not need any improvement, or respondents do not know the situation. As seen in section 3.3.3, around half of the respondents from cluster 1.6 are also classified as belonging to cluster 2.3. This makes it less reasonable to suggest that cluster 1.6 disagreed with all three statements because they weighed all effects evenly. The other options are more likely. For example, a panel member does not know the Oude Lijn and the context surrounding it as they do not live in South Holland. They did not invest and had no reason to motivate it. Finally, they disagree with all three statements because they did not consider any of the options due to the absence of knowledge of the context.

3.4.4. Cluster 2.4: New Stations

The last analysis looks into the motivations for the three choices for the new stations. 392 respondents belong to this cluster. Table 3.10 contains an overview of the results.

The motivations for the new stations are constant across the three choices and mainly other-regarding. Respondents from cluster 2.4 think it is important that people living in those areas have easy access to public transit, they favour new stations or want to encourage the use of public transport. The first and third of these reasons seem to be other-regarding, as there appears to be no immediate reason for self-interest in these arguments. Examples of the three different categories are:

- *"Then people from Rijswijk can take public transport more easily."*

- *"Accessibility for residents"*

- *"The more stations the better public transport becomes"*

- *"Always good"*

- *"Encourages transport by public transport"*

- *"This making public transport travel accessible to more people"*

The two stations that cost less, Rijswijk Buiten and Dordrecht Leerpark, are chosen for their (cost) effectiveness too. Opposed to the new stations in Rotterdam and Schiedam which are routinely left out due to the high costs. The choice for these two stations is the least favourite in cluster 2.4 out of the three options.

- *"Too expensive"*

- *"Convenient but costs a lot"*

- *"Too expensive for what it delivers"*

The most given reason for not choosing one of the three options is that respondents see no need for a new station in that area.

- *"I have the impression that the station at plaspoelpolder and the other ov connections are sufficient"*

- *"Are already a lot of stations in Rdam"*

- *"Would not recommend this"*

Table 3.10: Results for labelling cluster 2.4 motivations for the new stations

Choice	Category	2 Rijswijk	3 Rotterdam, Schiedam	4 Dordrecht
1	Then people living in that area can travel by public transit more easily	54	44	40
1	I am generally in favour of new stations	45	34	43
1	That encourages use of public transit	27	28	35
1	Simple and effective	12	4	15
1	Then additional housing can be built	4	13	13
1	Then the surrounding stations are relieved (in terms of congestion)	8	14	11
1	Other	34	18	30
0	I think there is little need for this station	21	17	15
0	Expensive	8	26	3
0	I would rather spend this money on other options	4	5	4
0	There are plenty of public transport options near this station	0	5	1
0	Other	6	14	13

3.4.5. Location Effect Motivations

Respondents who fall under the location effect are respondents who live in a municipality where one of the possible new stations is located and made a choice for this station. There is a limited number of motivations for each. 4 out of the 8 people in Rijswijk who chose the new station left a motivation. 6 out of 15 for Dordrecht and 52 out of 95 for Rotterdam and Schiedam. For the first two all motivations are presented. For Rotterdam and Schiedam, a selection is made.

The four motivations from Rijswijk all consider the effect of this station on everyone in Rijswijk and take into account the effect it has on the community.

- *"This station will make public transport easier to reach for many people"*

- *"A lot of people live in Rijswijk Buiten and there will be many more in the coming years, there are people who work in The Hague, Delft, Schiedam and then it is easier and more convenient to go by train provided the office is not too far from the station. Shopping in a city along the Oude Lijn is also easier because most centres of these cities are close to the station."*

- *"Rijswijk Buiten has few connections to other parts of the country. Station is needed"*

- *"Rijswijk Buiten is poorly accessible by public transport there stops 1 bus only once every half hour for other transport you either have to go by bike or car to a train station or tram stop. Access to this enormously growing neighbourhood should definitely be made better!"*

The same applies to Dordrecht with the focus being on students. The final comment listed below includes both the effects for others and also mentions how it may affect themselves.

- *"Important for students"*

- *"Yes ideal, for students"*

- *"To attract more students to Dordrecht"*

- *"Many students so better throughput"*

- *"So that there is a train connection to there instead of just the bus"*

- *"Because leerpark is a place where many students get off plus it's close to my work and would make me consider going by public transport more"*

Finally, Rotterdam and Schiedam. 51 out of 52 motivations talk about the general impact of a station on the local situation. The first four quotes provide a general idea of the kind of motivation present. The last motivation below is the only one where self-interest is clearly present.

- *"better connections more people by train"*

- *"Think this could be very nice considering the crowds in Rotterdam."*

- *"Seems to make sense to me"*

- *"Saves local movements with other public transport means"*

- *"van nelle is difficult to reach with a lot of walking"*

- *"For me, a new statio Kethel would be very convenient!"*

The initial explanation given for the location effect is that it is due to people choosing what benefits themselves the most. The variable used to check for the location effect was not significant when checking for correlation with all choices for the Oude Lijn choice task (LCCA model 2). The variable only associates with one of the eight choices. So the insignificance in association with all eight choices is not remarkable.

However, the difference was significant for the relevant choice; the choice about a new station in their municipality. The respondents in the respective municipality chose a new station more often (section 3.2.1). The CA of their motivations leads us to an alternative, new explanation for the location effect. These people know the context in which the station will be situated. They see the need for such a station and can more easily envision how it will be used. They choose these stations because they see the need and benefit it will bring to its users. A similar but opposite phenomenon was also seen. In cluster 2.3, when respondents are unfamiliar with the situation, they choose to leave it unchanged. They kept the status quo.

3.4.6. Empty Motivation Fields

To conclude, the non-motivators. Around 50 per cent of all respondents provided no motivation (table 3.11). Cluster 2.2 chose on average not to invest in cycling routes and only motivated 47% of the cases, while cluster 2.1 on average did invest and motivated more. As respondents invested more in cycling routes, the more they motivated their choices. Cluster 2.3 has the highest share with two-thirds not motivating.

Interestingly, the amount of empty motivation fields decreases if a non-status-quo option is chosen. When people choose to alter the existing situation they motivate more often. The need to explain why you change the status quo is probably higher than choosing the keep everything the same. People probably don't feel the need to defend their choice for what already is.

The overall lack of stated motivations can be caused by a multitude of things: people don't want to write out their thoughts, people may find it hard to articulate why they chose a certain way, people may not know exactly why they chose a certain way, people's cognitive resources could be depleted by the length and complexity of the PVE (a known disadvantage over simpler choice experiments), or people may find it hard to motivate each choice separately, as all choices are made under a constraint and together form one advice.

Table 3.11: Amount of empty motivations per cluster or choice

Cluster	Concerns	No. of empty fields*	Share of total
2.1	choice 1 motivations	594	45%
2.2	choice 1 motivations	317	53%
2.3	all choice motivations	381	66%
2.4	choice 2, 3, 4 motivations	508	43%
2.1 and 2.2	choices for no money towards cycling routes (0)	375	55%
	choices for a little extra money towards cycling routes (0.5)	473	44%
	choices for a lot extra money towards cycling routes (1)	63	38%

fields with fillers are also considered empty fields (e.g. dots, random numbers)

3.4.7. Motivations as Conversation

That the choices of a choice task are connected would mean that the motivations are too. Section 3.1 discusses how people use the same conversational norms in a survey as in a regular day-to-day conversation (Schwarz, 2008). People want to inform the other party to the best of their abilities but do not want to be redundant. This is seen in the motivations in this PVE too. Respondents avoid being redundant by referring to the motivation they gave for another choice instead of repeating the same information.

The following answers are from cluster 2.1 on the choice for cycling routes:

- *"As above, do own car traffic reduction"*

- *"idem"*

- *"Speaks for itself. See previous answers"*

- *"See answer Dordrecht Leerpark"*

Another example from one respondent in cluster 2.4 on their choices for the different new stations:

- On Dordrecht Leerpark: *"There are a lot of people getting in or out around this place which causes a lot of delay at the stations that are there now."*

- On Rijswijk Buiten: *"Same reasoning as Dordrecht"*

Instead of repeating a similar motivation, respondents refer to the motivation given previously in the same choice task.

3.5. Hypotheses

The following hypotheses are the ones posed at the end of the framework, section 3.1.8. They are not explicitly tested through directed statistical tests, but they are discussed in light of the results from the LCCA and CA.

- **H₁** Women are more other-regarding than men.

Both models used sex as a covariate. However, the variable was only a significant predictor in one model. Males and females do not answer significantly different on the statements on effect consideration. A significant difference was found in model 2, where males tend towards investing in new stations and females towards cycling routes and other modalities. No big differences were found. These differences do not indicate a difference in SIP and ORP between men and women. To conclude, we find no support for this hypothesis.

- **H₂** Non-frequent users of the Oude Lijn are more other-regarding than high-frequent users.

The two variables indicating train and Oude Lijn usage are significant predictors in both models. In model 1 we saw cluster 3, the collectivists, having no self-interest. They don't use the Oude Lijn often or have never used it, thus there is no reason to be self-interested. Cluster 4 in model 1 said to take into account all effects. They use the Oude Lijn relatively often. It seems that they combine both their SIP and ORP. These two cluster only account for 16% of the panel.

In model 2 we see cluster 2 using the train more frequently. They are investing in connections with other modalities. The model-2 clusters are not evidently SIP or ORP-oriented. To conclude, this hypothesis finds some support in model 1.

- **H₃** Older age categories (>35) are more other-regarding than younger age categories.

Age is a significant predictor in model 1 but not in model 2. The younger cluster 1.2 tended more towards self-interestedness. The collectivist cluster 1.3 is very other-regarding and has a very large share of respondents older than 65 while having almost no one younger than 25. Cluster 1.5 was a little older on average and was also more other-regarding. The other cluster differed little in their age or other-regardingness.

The cluster found in model 1, are not clearly seen in model 2. As previously mentioned, the choices for the Oude Lijn are not exclusively SIP or ORP. So, an age difference between clusters is not to be expected in model 2. This hypothesis also finds support from the first model.

- **H₄** Politically left-oriented respondents are more other-regarding than politically right-oriented respondents.

The variable indicating political orientation was not significant in both models. This is possibly due to multiple factors. One is the more complex political landscape in the Netherlands. The left/right separation is difficult to apply when there are more than 20 active parties. The second is that political orientation possibly correlates with other variables like age or education. Thirdly, these investments posed in the PVE are currently not politically controversial. People are not expected to immediately translate their political orientation to best fit these investments. This hypothesis finds no support.

4

Discussion

This chapter presents a discussion on the results of this research. It addresses the implications and limitations.

4.1. Implications

The results of this research have several implications. First, we laid out in which way the PVE method is vulnerable to the self-report caveats. The context sensitivity of the PVE for respondents is likely to be very high. This is in line with the literature on self-report methods (Schwarz, 1999, 2008). The PVE is an online survey tool, where respondents are unable to clarify any questions they might have with a researcher, so they need to rely on contextual clues to answer them. In general, the PVE also presents new policy options to respondents for which they do not have a preference in most cases. Respondents need to form their preference on the spot mostly based on the information provided by the PVE. On the other hand, the PVE has less risk for social desirability responding, as it is fully anonymous, confidential and on a voluntary basis, which are factors reducing a method's SRD vulnerability (Paulhus & Vazire, 2007; Schwarz, 2008).

Due to the context sensitivity of a PVE, generalisation of the results of a PVE to the whole population needs to be done carefully (Schwarz, 2008). A PVE results in an optimal portfolio of projects which the respondents selected. Agreement among respondents does not entail societal agreement. Respondents made choices and formed their preferences inside the context of the PVE. They had to weigh the options and had to consider the constraints. Any citizen who did not partake in the PVE did not form their preferences in that way and might react very differently to the selected portfolio. Nonetheless, all citizens are in principle free to participate in a PVE. Which is different for citizens' meetings for example, for which only certain people are invited. In short, support among PVE respondents does not automatically translate into societal support. Thus, extra attention needs to be paid to ensure there is societal support for the changes proposed in the PVE, besides that the respondents agree with the changes.

Second, we determined the kind of preferences present in this PVE. The majority is other-regarding. This holds for the location effect too. Respondents select projects close by not because this way they stand to benefit the most: a self-centred explanation. In this PVE respondents chose these projects because they know how the current situation falls short and how these investments will benefit the people using it. This research adds an explanation to earlier research that discovered the location effect in another PVE (Mouter, Koster, & Dekker, 2021a; Volberda, 2020). Given a strong location effect, the PVE would still add value compared to simpler options as a CBA because it allows people to express other-regarding preferences.

The results of this research have an impact on the roles a PVE can play in the participatory process. A full representation of views is most important for effective participation (Bleijenberg, 2021; Rowe & Frewer, 2005). A PVE can be used to uncover the different views present in society. All views can then be included in more intensive participation tools like citizen participation meetings. In the case

of the Oude Lijn the main differences between the clusters, on considering different effects, are the usage of the Oude Lijn, residing inside or outside of South Holland, and age. The difference lies in a respondent's ties to the project. Do people use it frequently, or are people impacted by the changes? These factors could also play a role in views on other projects.

4.2. Limitations

This research has several limitations. The first limitation concerns the literature review. The review focused on creating a broad overview of the existing literature. This was done partly by focusing on review papers. These review papers are not new, i.e. not published in the last few years. So there is a chance that we missed out on new insights that could have been relevant for this research.

Next is the content analysis. CA is a flexible method with no fixed research design. This allows it to be tailored to the researcher's needs. However, the lack of standardisation means the results are more subjective. The validity could only be determined by the sole researcher conducting this research. So the results of the content analysis are not robustly validated by another researcher or a third party.

Third is the PVE panel data. This PVE was designed to uncover the wants of citizens about new investments in and around the Oude Lijn. Besides the three extra statements, it was not created with this research in mind. The panel members received a monetary reward for completing the PVE and were forced to complete the general choice task for the Oude Lijn as a whole. Although it is voluntary, there is an extra incentive which is not present in the PVE open to all Dutch citizens. Panel members might not have participated in this PVE were it not for the fact that they are part of this panel and are paid to do so. This could have biased the results. Only part of the panel data was used too. The statistical analyses only looked at the general choice task and did not incorporate the four other choice tasks. These choice tasks might contain different kinds of preferences as the investments are tied to one station. The self-interest could be more present. For example, these projects contain specific investments like bicycle storage. People who do not come to the train station by bike have no incentive out of self-interest to choose such an option.

Another limitation is the constructed political variable. By choosing to reduce the political orientation to only left and right, we might have missed a correlation that was present in another more detailed variable on political orientation. The 26 parties present in the data could also be grouped based on different aspects or a more detailed left/right spectrum (e.g. left, middle, right). Other options include progressive versus conservative, libertarian versus authoritarian, or a combination.

Furthermore, the predictive power of the covariates in the LCCA. The entropy R-squared for the covariates for both models was very low. The entropy R-squared for all variables (indicators and covariates) was good for both models. This indicates that the variables used as covariates are not good predictors of cluster membership based on the indicators. Other non-researched variables might predict the cluster membership better.

The PVE data also contained mostly empty motivation fields. All choices were interpreted using motivations that were written. The reason people do not motivate their choices is unclear. The choices respondents made could be interpreted as either self-interest or other-regarding in most cases, the motivations played a crucial role in the interpretation. If it is the case that the motivations are different for respondents who left their motivation field empty, then this research made invalid or incomplete inferences on the other-regardingness of the respondents.

The last limitation is the context specificity of a PVE. Each PVE is different, and the research results should be viewed with the context of the discussed PVE in mind. This PVE was designed to uncover the wants of citizens about new investments in and around the Oude Lijn. The status quo could only be improved. There are no sacrifices besides an improvement not being realised. Other PVEs with, for example, shorter choice tasks, different constraints or trade-offs will have other factors influencing the behaviour of its respondents.

5

Conclusion

This chapter concludes the research by answering all research questions and provides recommendations for future research.

5.1. Research Questions

The main research question that this research aimed to answer is the following:

To which extent do people state self-interested preferences and other-regarding preferences in a participatory value evaluation concerning public transport investments?

People participating in the PVE for the Oude Lijn mainly show other-regarding preferences. On average respondents state to take into account all three types of effects: the effects for themselves, the people around them, and the collective interest. However, the collective interest is taken into account most. Respondents also mainly motivate their choices from an other-regarding perspective focusing on the collective interest. Self-interested preferences are present, but less. More so among respondents who are younger (<35), respondents residing in the province of South Holland and among respondents using the Oude Lijn more frequently. The PVE's impact on the preference construction of respondents is unknown as all data is from respondents participating in the same PVE. All respondents were exposed to the same PVE, thus there is no uninfluenced group of respondents to test. However, it is most likely that respondent used information from the PVE to form their preferences. This has to be taken into account when generalising results from this PVE.

The location effect is present in this PVE; respondents living in a municipality where a new station might be built, choose the option to realise this station more frequently. Almost all motivations of respondents falling under the location effect are other-regarding. Respondents select the new stations nearby because they know the context; they see the current need and the potential impact these new stations can have.

Three sub-questions aided in answering the main research question.

1. What is measured in a PVE?

The PVE measures preferences through self-reporting by respondents. The fields of economics and behavioural science both agree that people have preferences, but they think differently about what a preference is. The difference is in the stability and construction. Economists generally assume stable preferences that only need to be uncovered. Most behavioural scientists consider preferences to consist of a memory and a judgement component. Most likely, preferences are partly based on memory and partly constructed on the spot. In cases where no preferences are present in memory, they are fully constructed based on the (context) information provided.

The Oude Lijn PVE presented new policy options to respondents, so most respondents did not have a preference yet. Respondents formed their preference on the spot based on the information provided by the PVE itself. Thus, the context sensitivity of preferences in a PVE is likely to be very high. A problem

43

of this context sensitivity for the PVE method lies in the generalisation of its results: the (aggregated) preferences of respondents. Generalising the preferences of respondents, that were influenced by the PVE context, might be problematic. The population as a whole is not exposed to the PVE's context in forming their preferences. So, the preferences of the general population might differ, which can result in resistance to the outcomes of the PVE when they are implemented.

2. To which extent do people express self-interested and other-regarding preferences?

The classical economists assume people are only driven by self-interest. However, people are driven by other factors as well. The concern for the welfare of others, other-regarding preferences, plays a role too. The degree of other-regardingness differs per person and is influenced by the context, as all preferences are sensitive to context. The PVE for the Oude Lijn asks people "*to indicate what choices [they] think the government should make...*". This focus on providing advice to the government leads to the conclusion that the overall context of this specific PVE points towards other-regardingness. This is in accordance with the collective interest being taken into account most by respondents of the Oude Lijn PVE.

3. Which characteristics correlate with differences in self-interested and other-regarding preferences?

Six different groups were identified when looking at how respondents considered the different effects for themselves, the people around them, and the collective interest. On average respondents mainly took into account the collective interest or the effects for others. Groups that were younger (<35) on average, took the effects for themselves into account more. The same holds for groups residing more in the province of South Holland compared to groups residing more in the other provinces of the Netherlands. The reverse applies to groups that are older (>35) and that reside outside of South Holland. They are more exclusively looking at the collective interest. In this PVE, higher age is correlated with increased other-regardingness.

The residence of respondents inside or outside the province of South Holland coincides with the usage frequency of the Oude Lijn and of train usage in general. People outside of South Holland use the Oude Lijn less. People who do not come into contact with the Oude Lijn, as they do not use it or do not live nearby, stand to gain nothing from the investments. They do not have a self-interested preference and are therefore other-regarding. Respondents using the Oude Lijn frequently do stand to gain something. They have a stake in this investment and are therefore more self-interested. Thus, in this PVE a decreased usage frequency is correlated with increased other-regarding preferences.

When looking at the choices respondents made in the PVE, different answers towards the consideration of effects on different groups did not lead to different choices. This is likely due to self-interest and other-regardingness not being mutually exclusive for the analysed choices.

5.2. Recommendations

Multiple avenues exist for further research. First, an interesting option would be analysing a PVE where the choice options are more exclusively self-interested or other-regarding. The choices in this PVE could be regarded as either one. When the division between self-interested and other-regarding choices is clear, respondents will have to choose either one. This can also be combined with further research into the location effect. Does the location effect hold in this case and do people have similar motivations? When conducting PVEs in the future, it is also important to be aware of the impact that the framing of the information, that is provided through the PVE, can have on the preferences that people exhibit.

Second, look into the location effect using the non-panel PVE data. The PVE was conducted on a panel but was also accessible to all Dutch citizens. The panel members were actively invited to participate in this PVE and got paid for participating. These panel members are also familiar with the PVE method and participated if they did not know the Oude Lijn. 'Random' non-panel citizens filling out the PVE might have different motivations resulting in a location effect that could be oriented more towards self-interest.

Third, the power of the socio-demographic variables in predicting how respondents would answer the statements on the effect consideration was low. The correlation between those variables and a respondent's choices was low. It would therefore be worthwhile designing a PVE that also measures other variables that could influence a respondent's preferences. We have seen that affect and emotion influence preferences. Including questions on mood during the PVE could provide insight into this. The same can be done for personality.

Additionally, investigate and reconsider the use of the 'I don't know/I'd rather not say'-option when collecting information on the respondents. The scientific literature is inconclusive on what you measure when people select this option. There is a possibility that people use it as an easy way out. The option could be split up into a separate 'I don't know' and 'I'd rather not say'. Both options can be kept, or one or both can be dropped from the survey. The impact of such changes can be explored by conducting a PVE where these options differ per respondent.

In the content analysis, we saw that respondents would sometimes refer to motivations they provided for other choices. Consider experimenting with providing one field for motivating all choices in a choice task. People need to trade off when making constrained choices, so their motivations are likely interconnected as well. If the information provided by respondents through the motivations stays the same, it will reduce the workload needed for a content analysis and it will probably also reduce the number of empty motivation fields.

The amount of empty motivation fields in a PVE warrants further research as well. Why do most respondents not provide any motivations when they do receive the opportunity? Multiple explanations come to mind. People might think their choices are self-evident, the cognitive burden of the PVE can be too high which results in some respondents not having the mental energy to motivate their choices, or the cognitive burden results in people using heuristics (shortcuts) when making choices, so they aren't able to fully explain their own choices.

Finally, save the order in which the choices are presented to each respondent when conducting a PVE. This allows for an analysis of the serial position effect. Currently, the collected data does not allow this, as the randomised choice order is not saved. The PVE might be prone to a primacy effect if respondents choose the option they first encountered the most. Another way to research the serial position effect would be to employ two identical PVEs, one with a fixed order of choice options and another with a random order or a different fixed order.
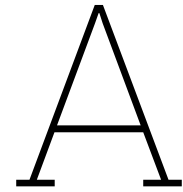
References

Ahn, T. K., Ostrom, E., & Walker, J. M. (2003). Heterogeneous preferences and collective action. *Public Choice*, *117*(3), 295–314. https://doi.org/10.1023/B:PUCH.0000003739.54365.fd

Albarracin, D., & Shavitt, S. (2018). Attitudes and attitude change. *Annual Review of Psychology*, *69*(1), 299–327. https://doi.org/10.1146/annurev-psych-122216-011911

Albarracín, D., Wei Wang, H. L., & Noguchi, K. (2008). Structure of attitudes: Judgments, memory, and implications for change. In W. D. Crano & R. Prislin (Eds.), *Attitudes and attitude change* (1st ed., pp. 19–40). Psychology Press. https://doi.org/10.4324/9780203838068

Alemán, J., & Woods, D. (2020). Solidarity and self-interest: Using mixture modeling to learn about social policy preferences. *Methods, Data, Analyses*, *14*(1), 61–90. https://doi.org/10.12758/mda.2019.06

Andersen, R., & Yaish, M. (2018). Preferences for the distribution of incomes in modern societies: The enduring influence of social class and economic context. *Canadian Public Policy*, *44*(2), 190–205. https://doi.org/10.3138/cpp.2017-014

Arnstein, S. R. (1969). A ladder of citizen participation. *Journal of the American Institute of Planners*, *35*(4), 216–224. https://doi.org/10.1080/01944366908977225

Bardsley, N., & Sugden, R. (2006). Chapter 10 human nature and sociality in economics. In S.-C. Kolm & J. M. Ythier (Eds.), *Handbook of the economics of giving, altruism and reciprocity* (pp. 731–768, Vol. 1). Elsevier. https://doi.org/10.1016/S1574-0714(06)01010-4

Becker, G. S. (1976). *The economic approach to human behavior* (Vol. 803). University of Chicago press.

Bender, K. (2021). Public preferences. In *Handbook on social protection systems* (pp. 507–519). https://doi.org/10.4337/9781839109119.00066

Bleijenberg, C. (2021). *In gesprek of uitgepraat? over de betekenis van gesprekken voor het verloop van lokale participatieprocessen* [Thesis]. https://repository.ubn.ru.nl/handle/2066/233557

Bobbio, L. (2019). Designing effective public participation. *Policy and Society*, *38*(1), 41–57. https://doi.org/10.1080/14494035.2018.1511193

Bogaert, S., Boone, C., & Declerck, C. (2008). Social value orientation and cooperation in social dilemmas: A review and conceptual model. *British Journal of Social Psychology*, *47*(3), 453–480. https://doi.org/10.1348/014466607x244970

Bohner, G., & Dickel, N. (2011). Attitudes and attitude change. *Annual Review of Psychology*, *62*(1), 391–417. https://doi.org/10.1146/annurev.psych.121208.131609

Börger, T. (2012). *Social desirability and environmental valuation* (NED - New edition). Peter Lang AG. http://www.jstor.org/stable/j.ctv9hj9w7

Bouma, J., de Hollander, G., Doren, D., & Martens, A. (2023). *Betrokken burgers – onmisbaar voor een toekomstbestendige leefomgeving* (Report). PBL Planbureau voor de Leefomgeving.

Bouma, J., & de Vries, R. (2020). *Maatschappelijke betrokkenheid bij de leefomgeving. achtergrondrapport bij de balans van de leefomgeving 2020* (Report). https://www.pbl.nl/downloads/pbl-2020-maatschappelijke-betrokkenheid-bij-de-leefomgeving-achtergrond-balans-4164pdf

Boxebeld, S., Mouter, N., & Van Exel, J. (2024). Participatory value evaluation (pve): A new preference-elicitation method for decision making in healthcare. *Applied Health Economics and Health Policy*, *22*(2), 145–154. https://doi.org/10.1007/s40258-023-00859-9

Brandts, J., & Fatas, E. (2012). The puzzle of social preferences. *Revista Internacional de Sociologia*, *70*(EXTRA 1), 113–126. https://doi.org/10.3989/ris.2011.09.03

Brown-Iannuzzi, J. L., Lundberg, K. B., & McKee, S. (2017). The politics of socioeconomic status: How socioeconomic status may influence political attitudes and engagement. *Current Opinion in Psychology*, *18*, 11–14. https://doi.org/10.1016/j.copsyc.2017.06.018

Camerer, C. F., & Fehr, E. (2006). When does "economic man" dominate social behavior? *Science*, *311*(5757), 47–52. https://doi.org/10.1126/science.1110600

Carlsson, F. (2010). Design of stated preference surveys: Is there more to learn from behavioral economics? *Environmental and Resource Economics*, *46*(2), 167–177. https://doi.org/10.1007/s10640-010-9359-4

CBS. (2022). Bevolking; hoogstbehaald onderwijsniveau en regio. https://opendata.cbs.nl/#/CBS/nl/dataset/85525NED/table?ts=1714731543793

CBS. (2023). Bevolking op 1 januari en gemiddeld; geslacht, leeftijd en regio. https://opendata.cbs.nl/#/CBS/nl/dataset/03759ned/table?dl=39E0B

Chakravarty, S., Friedman, D., Gupta, G., Hatekar, N., Mitra, S., & Sunder, S. (2011). Experimental economics: A survey. *Economic and Political Weekly*, *46*(35), 39–78.

Cooper, D. J., & Kagel, J. H. (2016). Other-regarding preferences. *The handbook of experimental economics*, *2*, 217.

Crawford, L. (2019). Conceptual and theoretical frameworks in research. In *Research design and methods: An applied guide for the scholar-practitioner* (pp. 35–48). SAGE Publications.

Creswell, J. W. (2012). *Educational research: Planning, conducting, and evaluating quantitative and qualitative research, 4th edition*. Pearson.

Croson, R., & Gneezy, U. (2009). Gender differences in preferences. *Journal of Economic Literature*, *47*(2), 448–474. https://doi.org/10.1257/jel.47.2.448

Dietz, T., Fitzgerald, A., & Shwom, R. (2005). Environmental values. *Annual Review of Environment and Resources*, *30*(1), 335–372. https://doi.org/10.1146/annurev.energy.30.050504.144444

Dimick, M., Rueda, D., & Stegmueller, D. (2018). Models of other-regarding preferences, inequality, and redistribution. *Annual Review of Political Science*, *21*(Volume 21, 2018), 441–460. https://doi.org/10.1146/annurev-polisci-091515-030034

Doherty, D., Gerber, A. S., & Green, D. P. (2006). Personal income and attitudes toward redistribution: A study of lottery winners. *Political Psychology*, *27*(3), 441–458. https://doi.org/10.1111/j.1467-9221.2006.00509.x

Elo, S., & Kyngäs, H. (2008). The qualitative content analysis process. *Journal of Advanced Nursing*, *62*(1), 107–115. https://doi.org/10.1111/j.1365-2648.2007.04569.x

Epper, T., Fehr, E., & Senn, J. (2020). Other-regarding preferences and redistributive politics. *SSRN Electronic Journal*. https://doi.org/10.2139/ssrn.3526809

Fehr, E., Glätzle-Rützler, D., & Sutter, M. (2011). The development of egalitarianism, altruism, spite and parochialism in childhood and adolescence. *CESifo Working Paper, No. 336*, *Center for Economic Studies and ifo Institute (CESifo), Munich*. https://ideas.repec.org/p/inn/wpaper/2011-07.html

Fehr, E., & Schmidt, K. M. (2006). Chapter 8 the economics of fairness, reciprocity and altruism – experimental evidence and new theories. In S.-C. Kolm & J. M. Ythier (Eds.), *Handbook of the economics of giving, altruism and reciprocity* (pp. 615–691, Vol. 1). Elsevier. https://doi.org/10.1016/S1574-0714(06)01008-6

Furnham, A., & Boo, H. C. (2011). A literature review of the anchoring effect. *The Journal of Socio-Economics*, *40*(1), 35–42. https://doi.org/10.1016/j.socec.2010.10.008

Garcia-Sierra, M., van den Bergh, J. C. J. M., & Miralles-Guasch, C. (2015). Behavioural economics, travel behaviour and environmental-transport policy. *Transportation Research Part D: Transport and Environment*, *41*, 288–305. https://doi.org/10.1016/j.trd.2015.09.023

Gsottbauer, E., & Van Den Bergh, J. C. J. M. (2011). Environmental policy theory given bounded rationality and other-regarding preferences. *Environmental and Resource Economics*, *49*(2), 263–304. https://doi.org/10.1007/s10640-010-9433-y

Henrich, J., Boyd, R., Bowles, S., Camerer, C., Fehr, E., Gintis, H., McElreath, R., Alvard, M., Barr, A., Ensminger, J., Henrich, N. S., Hill, K., Gil-White, F., Gurven, M., Marlowe, F. W., Patton, J. Q., & Tracer, D. (2005). Models of decision-making and the coevolution of social preferences. *Behavioral and Brain Sciences*, *28*(6), 838–855. https://doi.org/10.1017/s0140525x05460148

Johnston, R. J., Boyle, K. J., Adamowicz, W., Bennett, J., Brouwer, R., Cameron, T. A., Hanemann, W. M., Hanley, N., Ryan, M., Scarpa, R., Tourangeau, R., & Vossler, C. A. (2017). Contemporary guidance for stated preference studies. *Journal of the Association of Environmental and Resource Economists*, *4*(2), 319–405. https://doi.org/10.1086/691697

Juschten, M., & Omann, I. (2023). Evaluating the relevance, credibility and legitimacy of a novel participatory online tool. *Environmental Science & Policy*, *146*, 90–100. https://doi.org/10.1016/j.envsci.2023.05.001

Kieskompas. (2023). Tweede kamer 2023 kieskompas. Retrieved May 23, 2023, from https://tweedekamer2023. kieskompas.nl/nl/results/compass#

Kirman, A., & Teschl, M. (2010). Selfish or selfless? the role of empathy in economics. *Philosophical Transactions of the Royal Society B: Biological Sciences*, *365*(1538), 303–317. https://doi.org/10.1098/rstb.2009.0192

Krippendorff, K. (2004). *Content analysis: An introduction to its methodology* (2nd). https://methods. sagepub.com/book/content-analysis-4e

Kritikos, A., & Bolle, F. (2004). Approaching fair behavior: Distributional and reciprocal preferences. In F. Cowell (Ed.), *Inequality, welfare and income distribution: Experimental approaches* (pp. 149–180, Vol. 11). Emerald Group Publishing Limited. https://doi.org/10.1016/S1049-2585(04)11008-9

Krosnick, J. A., & Presser, S. (2010). Question and questionnaire design. In P. V. Marsden & J. D. Wright (Eds.), *Handbook of survey research* (2nd ed., pp. 263–313). Emerald Group Publishing Limited.

Lerner, J. S., Li, Y., Valdesolo, P., & Kassam, K. S. (2015). Emotion and decision making. *Annual Review of Psychology*, *66*(Volume 66, 2015), 799–823. https://doi.org/10.1146/annurev-psych-010213-115043

Levin, J., & Milgrom, P. (2004). *Introduction to choice theory*. Stanford University Press.

Lévy-Garboua, L., Meidinger, C., & Rapoport, B. (2006). Chapter 7 the formation of social preferences: Some lessons from psychology and biology. In S.-C. Kolm & J. M. Ythier (Eds.), *Handbook of the economics of giving, altruism and reciprocity* (pp. 545–613, Vol. 1). Elsevier. https://doi. org/10.1016/S1574-0714(06)01007-4

Machina, M. J. (1987). Choice under uncertainty: Problems solved and unsolved. *Journal of Economic Perspectives*, *1*(1), 121–154. https://doi.org/10.1257/jep.1.1.121

Mariel, P., Hoyos, D., Meyerhoff, J., Czajkowski, M., Dekker, T., Glenk, K., Jacobsen, J. B., Liebe, U., Olsen, S. B., Sagebiel, J., & Thiene, M. (2021). Developing the questionnaire. In P. Mariel, D. Hoyos, J. Meyerhoff, M. Czajkowski, T. Dekker, K. Glenk, J. B. Jacobsen, U. Liebe, S. B. Olsen, J. Sagebiel, & M. Thiene (Eds.), *Environmental valuation with discrete choice experiments: Guidance on design, implementation and data analysis* (pp. 7–36). Springer International Publishing. https://doi.org/10.1007/978-3-030-62669-3_2

Maule, A. J., Hockey, G. R. J., & Bdzola, L. (2000). Effects of time-pressure on decision-making under uncertainty: Changes in affective state and information processing strategy. *Acta Psychologica*, *104*(3), 283–301. https://doi.org/10.1016/S0001-6918(00)00033-0

Ministry of Infrastructure and Water Management. (2023). *Mirt overzicht 2024* (Report). https://www. rijksoverheid.nl/documenten/rapporten/2023/09/19/mirt-overzicht-2024

Molin, E., Mokhtarian, P., & Kroesen, M. (2016). Multimodal travel groups and attitudes: A latent class cluster analysis of dutch travelers. *Transportation Research Part A: Policy and Practice*, *83*, 14–29. https://doi.org/10.1016/j.tra.2015.11.001

Mouter, N., Koster, P., & Dekker, T. (2021a). Contrasting the recommendations of participatory value evaluation and cost-benefit analysis in the context of urban mobility investments. *Transportation Research Part A: Policy and Practice*, *144*, 54–73. https://doi.org/10.1016/j.tra.2020.12.008

Mouter, N., Koster, P., & Dekker, T. (2021b). Contrasting the recommendations of participatory value evaluation and cost-benefit analysis in the context of urban mobility investments. *Transportation Research Part A: Policy and Practice*, *144*, 54–73. https://doi.org/10.1016/j.tra.2020.12.008

Mouter, N., Koster, P., Dekker, T., & Borst, P. (n.d.). *Achtergrondrapport: Een participatieve waarde evaluatie voor de lange termijn ambitie rivieren* (Report).

Mouter, N., Shortall, R. M., Spruit, S. L., & Itten, A. V. (2021). Including young people, cutting time and producing useful outcomes: Participatory value evaluation as a new practice of public participation in the dutch energy transition. *Energy Research & Social Science*, *75*, 101965. https://doi.org/10.1016/j.erss.2021.101965

Mouter, N., van Beek, L., de Ruijter, A., Ignacio Hernandez, J., Schouten, S., van Noord, L., & Spruit, S. (2021). *Brede steun voor ambitieus klimaatbeleid als aan vier voorwaarden is voldaan: Resultaten van een raadpleging onder meer dan 10.000 nederlanders over het nederlandse klimaatbeleid* (Report). Populytics.

Mouter, N., van Cranenburgh, S., & van Wee, B. (2017). Do individuals have different preferences as consumer and citizen? the trade-off between travel time and safety. *Transportation Research Part A: Policy and Practice*, *106*, 333–349. https://doi.org/10.1016/j.tra.2017.10.003

Murdock Jr, B. B. (1962). The serial position effect of free recall. *Journal of Experimental Psychology*, *64*(5), 482–488. https://doi.org/10.1037/h0045106

Nash, K., Gianotti, L. R. R., & Knoch, D. (2015). A neural trait approach to exploring individual differences in social preferences. *Frontiers in Behavioral Neuroscience*, *8*. https://doi.org/10.3389/fnbeh.2014.00458

Norman, G. (2010). Likert scales, levels of measurement and the "laws" of statistics. *Advances in Health Sciences Education*, *15*(5), 625–632. https://doi.org/10.1007/s10459-010-9222-y

Omgevingsbesluit. (2024, January). https://wetten.overheid.nl?jci1.3:c:BWBR0041278&z=2024-01-01&g=2024-01-01

Parks, S., & Gowdy, J. (2013). What have economists learned about valuing nature? a review essay. *Ecosystem Services*, *3*, e1–e10. https://doi.org/10.1016/j.ecoser.2012.12.002

Paulhus, D. L., & Vazire, S. (2007). The self-report method. In *Handbook of research methods in personality psychology* (pp. 224–239, Vol. 1).

Rallis, S. (2018). Conceptual framework. In *The sage encyclopedia of educational research, measurement, and evaluation* (pp. 355–356, Vol. 4). SAGE Publications. https://doi.org/10.4135/9781506326139

Rowe, G., & Frewer, L. J. (2005). A typology of public engagement mechanisms. *Science, Technology, & Human Values*, *30*(2), 251–290. https://doi.org/10.1177/0162243904271724

Schwarz, N. (1999). Self-reports: How the questions shape the answers. *American Psychologist*, *54*(2), 93–105. https://doi.org/10.1037/0003-066X.54.2.93

Schwarz, N. (2007). Cognitive aspects of survey methodology. *Applied Cognitive Psychology*, *21*(2), 277–287. https://doi.org/10.1002/acp.1340

Schwarz, N. (2008). Attitude measurement. In W. D. Crano & R. Prislin (Eds.), *Attitudes and attitude change* (1st ed., pp. 41–60). Psychology Press. https://doi.org/10.4324/9780203838068

Sen, A. (1973). Behaviour and the concept of preference. *Economica*, *40*(159), 241–259. https://doi.org/10.2307/2552796

Slovic, P. (1995). The construction of preference. *American Psychologist*, *50*(5), 364–371. https://doi.org/10.1037/0003-066X.50.5.364

Tausch, F., Potters, J., & Riedl, A. (2013). Preferences for redistribution and pensions. what can we learn from experiments? *Journal of Pension Economics and Finance*, *12*(3), 298–325. https://doi.org/10.1017/s1474747212000388

van 't Veer, R., Annema, J. A., Araghi, Y., Homem de Almeida Correia, G., & van Wee, B. (2023). Mobility-as-a-service (maas): A latent class cluster analysis to identify dutch vehicle owners' use intention. *Transportation Research Part A: Policy and Practice*, *169*, 103608. https://doi.org/https://doi.org/10.1016/j.tra.2023.103608

Volberda, L. (2020). *Analyzing citizens' views on new spatial infrastructure projects: From the average view towards various clusters within the participatory value evaluation method* [Thesis]. http://resolver.tudelft.nl/uuid:7003ab94-a4fb-4f59-b7a2-81b271b1ee7d

Warren, C., McGraw, A. P., & Van Boven, L. (2011). Values and preferences: Defining preference construction. *WIREs Cognitive Science*, *2*(2), 193–205. https://doi.org/10.1002/wcs.98

White, M. D., & Marsh, E. E. (2006). Content analysis: A flexible methodology. *Library Trends*, *55*(1), 22–45. https://doi.org/10.1353/lib.2006.0053

Williamson, K., Given, L. M., & Scifleet, P. (2018). Chapter 19 - qualitative data analysis. In K. Williamson & G. Johanson (Eds.), *Research methods (second edition)* (pp. 453–476). Chandos Publishing. https://doi.org/10.1016/B978-0-08-102220-7.00019-4

Willits, F. K., Theodori, G. L., & Luloff, A. (2016). Another look at likert scales. *Journal of Rural Social Sciences*, *31*(3), 6. https://egrove.olemiss.edu/jrss/vol31/iss3/6

A

Literature Review Process

A systematic literature review is conducted to review the knowledge on self-interested preferences and other-regarding preferences (section 3.1.6). This appendix describes the process leading up to the final selection of literature. Figure A.1 provides a visualisation of the process.

Identification. First, the database Scopus was searched for review articles only. The framework is aimed at providing an overview of the broad literature. By selecting reviews only, a broad coverage is possible in a limited time. Two separate searches were conducted for either SIP or ORP. There is no one specific term used for ORP, therefore this search included a wide range of search terms.

Screening. Second, all articles were screened based on their title and abstract on the relevance to either SIP, ORP or both and with a link to economic or psychological disciplines. This resulted in the exclusion of most articles.

Eligibility. Third, all articles were checked on duplicates. Accessibility of the articles was checked too. All review articles were accessible.

Included. Finally, the literature search process resulted in 25 review articles on SIP and ORP within relevant fields of study. Section 3.1.6 provides a synthesis of the articles of this review.
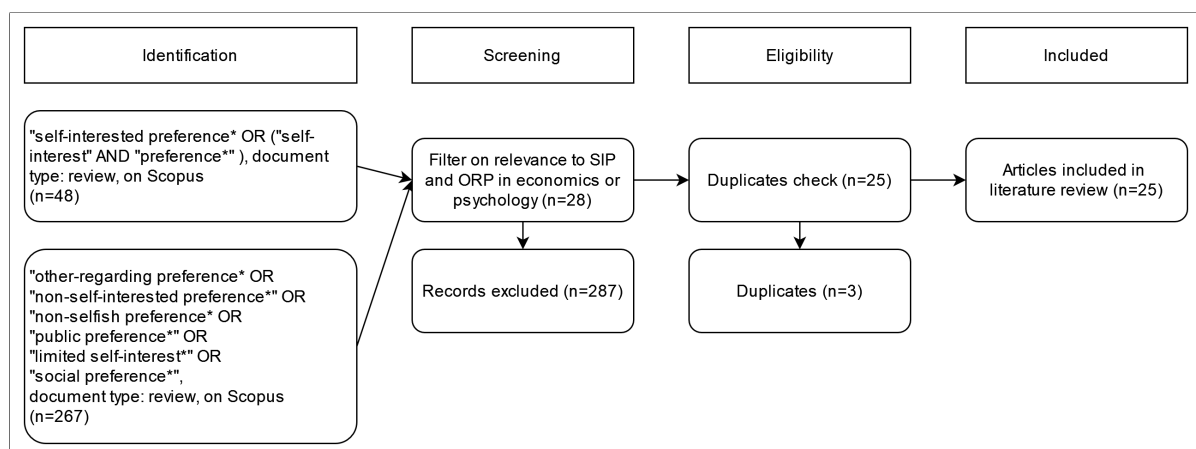

Figure A.1: Selection process literature review

B

PVE Design Oude Lijn

This appendix presents the design of the PVE survey used for the consultation on the Oude Lijn improvements. The PVE consists of four main parts. The first part is about giving advice for different stations on the Oude Lijn. The second part is for advice on the railway as a whole. The third part is for advice on potential new stations along the Oude Lijn and the choices associated with these new stations. The fourth and final part consists of general questions about the respondents themselves and how they viewed the PVE.

The first three parts consist of choices (choice task or multiple choice) and in some cases the option is given to provide a written motivation for those choices. The lay-out and sequence of each part is different, so each section of this appendix begins with a description of the lay-out and sequence, and then follow figures of the relevant parts.

B.1. Introduction

The PVE starts with an introduction consisting of a short video explaining the situation around the Oude Lijn (figure B.1). Next up is information about the data management and asks if individuals whish to participate (figure B.2). The introduction conlcludes with quesions concerning basic information the respondent and their travel behaviour (fiures B.3 and B.4).

Welkom bij deze raadpleging over de Oude Lijn

In het **filmpje** hieronder leggen we uit waar deze raadpleging over gaat.

⌄ Wil je de tekst liever lezen? Klik dan hier.

De Zuidelijke Randstad is één van de drukste regio's van Nederland en groeit nog altijd.

Dat betekent dat ook het aantal woningen en kantoren groeit.

Die groei vindt vooral plaats in de steden, zo houden we het buitengebied zo groen mogelijk.

Als er meer mensen wonen en werken in een regio, is het belangrijk dat zij zich makkelijk kunnen verplaatsen.

Daarom wordt de komende jaren het spoorsysteem tussen de steden Leiden, Den Haag, Delft, Schiedam, Rotterdam en Dordrecht verbeterd. Dit traject noemen we ook wel 'de Oude Lijn'.

Omdat de keuzes van de overheid grote invloed hebben op hoe het spoorsysteem en de stationsgebieden er in de toekomst uitzien, wil de overheid ideeën en meningen van de inwoners hierin meenemen.

In deze raadpleging vragen we je daarom aan te geven welke keuzes de overheid volgens jou moet maken over het verbeteren van de Oude Lijn en de stationsgebieden.

De resultaten zullen worden gebruikt bij het maken van belangrijke keuzes over de Oude Lijn.

Figure B.1: Introduction on the PVE and the subject

Over deze raadpleging

Deze raadpleging wordt uitgevoerd door onderzoekers van Populytics. We doen dat in opdracht van de gezamenlijke overheden langs de Oude Lijn. Meedoen kost ongeveer 15 tot 20 minuten. Iedereen van 18 jaar of ouder mag meedoen.

Hoe gaan we om met jouw gegevens?

We verzamelen geen gegevens waarmee iemand kan weten wie jij bent. Onderaan deze pagina vind je al onze regels over privacy door te klikken op 'Privacyverklaring'.

Wat gebeurt er met de antwoorden?

De antwoorden van deze raadpleging worden gebruikt om keuzes te maken over de Oude Lijn en de stationsgebieden. Hiervoor maken we een rapport. Wil je het rapport ook ontvangen als het af is? Op de laatste pagina van deze raadpleging kan je je e-mailadres hiervoor achterlaten. We kunnen die niet koppelen aan je antwoorden.

De raadpleging bestaat uit vier delen:

- Deel 1: Advies over de stations langs de Oude Lijn. Welke keuzes moet de overheid daar maken?
- Deel 2: Advies over de Oude Lijn als geheel. Welke keuzes moet de overheid maken?
- Deel 3: Advies over nieuwe stations. Als er nieuwe stations komen, welke keuzes moet de overheid daar dan maken?
- Deel 4: Vragen over jezelf en over de raadpleging.

◯ Ik heb de informatie gelezen en wil deelnemen

◯ Ik heb de informatie gelezen en wil niet deelnemen

Figure B.2: Information on data collection and agreement to participate

We starten met wat vragen over jezelf

Wat is je leeftijd?* (1/7)

Selecteer ⌄

Wat past het beste bij je?* (2/7)

Selecteer ⌄

Wat is de hoogste opleiding die je hebt afgemaakt?* (3/7)

Selecteer ⌄

In welke provincie woon je?* (4/7)

Selecteer ⌄

Figure B.3: Questions about the respondents themselves - part 1

Hoe vaak maak je gebruik van de trein?* (5/7)

Selecteer ⌄

De Oude Lijn loopt langs de volgende intercitystations:

Leiden Centraal - Den Haag Laan van NOI - Den Haag Hollands Spoor - Delft - Schiedam Centrum - Rotterdam Centraal - Dordrecht.

Klik hier voor een kaartje

Hoe vaak reis je op (een gedeelte van) de Oude Lijn?* (6/7)

Selecteer ⌄

Hoe vaak stap je in of uit op de volgende stations langs de Oude Lijn?* (7/7)

	Eén of meerdere keren per week	Enkele keren per maand	Enkele keren per jaar	Vrijwel nooit	Ik ben hier nog nooit in- of uitgestapt	Weet ik niet / Zeg ik liever niet
Leiden Centraal	◯	◯	◯	◯	◯	◯
Den Haag Laan van NOI	◯	◯	◯	◯	◯	◯
Schiedam Centrum	◯	◯	◯	◯	◯	◯
Dordrecht	◯	◯	◯	◯	◯	◯

Figure B.4: Questions about the respondents themselves - part 2

B.2. Part 1: Choice Task for Different Stations

The first main part concerns the choice tasks on improvement for train stations along the Oude Lijn: Leiden Centraal, Den Haag Laan van NOI, Schiedam Centrum, Dordrecht. Each respondent has the option to provide advice on a selection of train station or to skip this part entirely (figure B.5). Each station's choice task follows the same structure:

- An introduction on the specific station with a video on how the choice tasks works and what is expected of respondents (Leiden: figures B.6 and B.7, The Hague: figure B.14, Schiedam: figure B.17, Dordrecht: B.24);

- The choice task itself with randomly ordered options (Leiden: figures B.8 and B.9, The Hague: figures B.15 and B.16, Schiedam: figure B.18, Dordrecht: B.25 and B.26);

- The option to provide written motivations for each option in the choice task (as example, Leiden: figure B.10;

- The option to provide general advice on the station (as example, Leiden: figure B.11);

- Questions on the respondent's usage of the station (as example, Leiden: figures B.12 and B.13).

For the stations Schiedam Centrum and Dordrecht extra binary or multiple choice questions are asked concerning specific improvements (Schiedam: figures B.19, B.20, B.21, B.22 and B.23, Dordrecht: figure B.27).

Figure B.5: Option to choose for which stations to provide advice

Welke keuzes moeten we maken in en rond het station van Leiden?

Het stationsgebied van Leiden heeft een oppervlakte van 13 hectare. Dat is ongeveer 20 voetbalvelden.
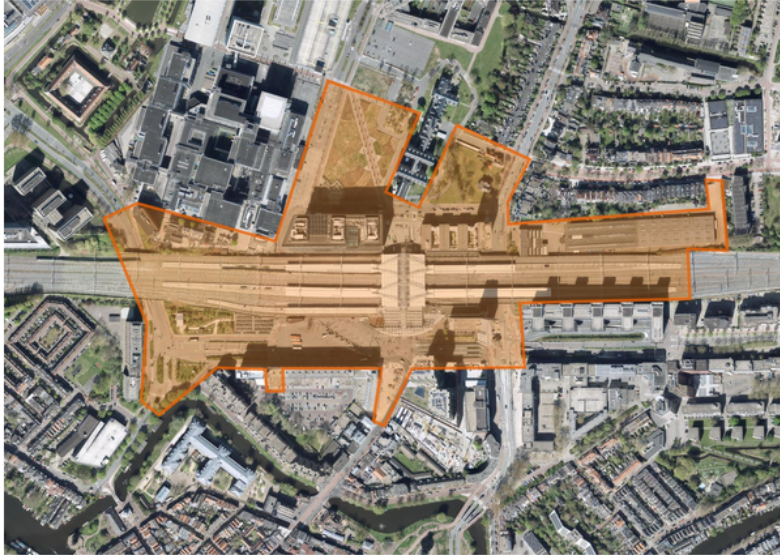
De gemeente moet veel moeilijke keuzes maken over hoe het stationsgebied eruitziet. We willen veel, maar er is niet heel veel ruimte. Stel dat de overheid een deel van de ruimte in en rond het station kan veranderen. Waarvoor zou deze ruimte dan volgens jou moeten worden gebruikt? Ga ervan uit dat overal in het stationsgebied veranderingen mogelijk zijn. En er is op dit moment nog een beetje ruimte te verdelen.

Figure B.6: Overview of the area around Leiden Central

In het **filmpje hieronder** leggen we uit hoe je een advies kunt geven.

⌄ Wil je de tekst liever lezen? Klik dan hier.

Zo meteen ga je je advies geven.

Je ziet straks meerdere dingen waaraan de overheid ruimte kan geven. Bij elk ding zie je een schuifje dat je kan verplaatsen.

Vind je dat de overheid meer ruimte aan iets moet geven? Dan zet je het schuifje naar rechts.

Vind je dat de overheid minder ruimte aan iets moet geven? Dan zet je het schuifje naar links.

Bij sommige dingen kan je niet kiezen om er minder ruimte aan te geven.

Bij elk ding zie je aangegeven hoeveel ruimte en geld iets kost.

Rechtsboven in het scherm zie je twee metertjes. Op smartphone staan de metertjes onderin het scherm. Als het metertje voor ruimte in het rood staat, dan heb je te veel ruimte verdeeld.

Als het metertje voor kosten in het rood staat, dan zijn de kosten te hoog.

Wil je meer weten? Klik dan op de i-knop.

Ben je tevreden met je advies? Klik dan op 'Volgende'.

Figure B.7: Explanation on how to provide advice for Leiden Central

Figure B.8: Project portfolio choices for Leiden Central - part 1
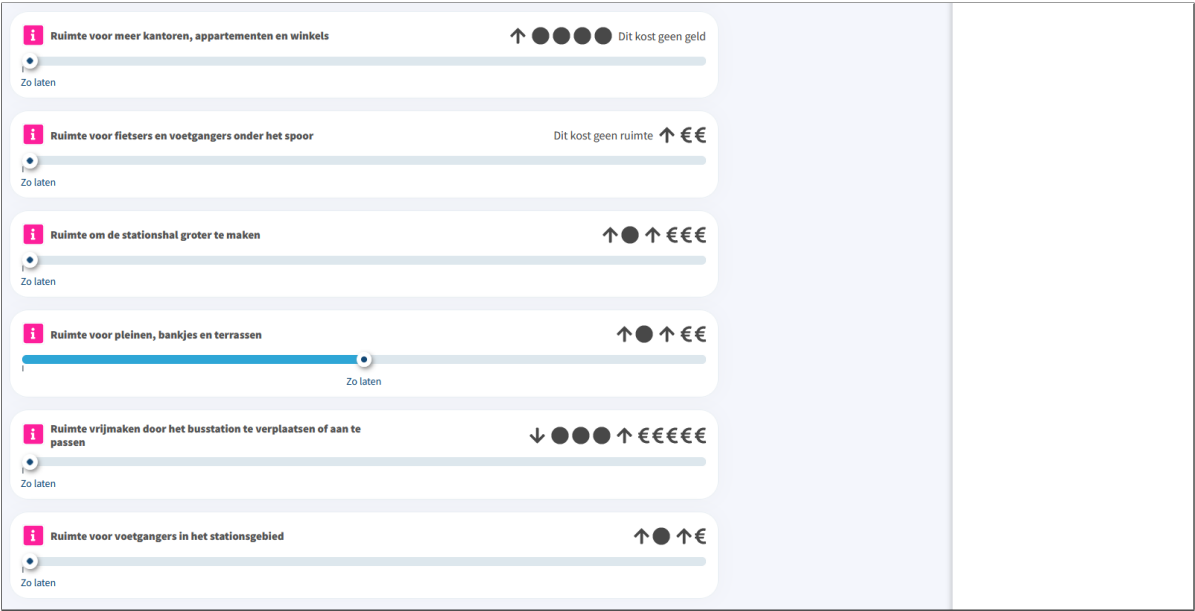
Figure B.9: Project portfolio choices for Leiden Central - part 2

Wil je uitleg geven bij je antwoorden?

Bedankt! We vinden het interessant om te weten waarom je dit advies hebt gegeven.

Kan je uitleggen waarom je deze keuzes hebt gemaakt?

i **Ruimte voor fietsenstallingen boven de grond**   ↑ ●●●●● ↑ €€

Zo laten

i **Ruimte voor fietspaden in het stationsgebied**   ↑● ↑€

Zo laten

i **Ruimte voor bomen en planten**   ↑ ●●● ↑ €€

Zo laten

Figure B.10: Motivations for choices for Leiden Central

Zijn er nog andere adviezen die je aan de overheid wil geven over station Leiden Centraal?

We horen het graag (1/1)

Figure B.11: Question for any last remarks for Leiden Central

Tot slot: Hoe gebruik je het station Leiden Centraal?

Wat is voor jou van toepassing? Er zijn meerdere antwoorden mogelijk (1/4)

- [ ] Ik woon in de buurt van dit station
- [ ] Ik werk in de buurt van dit station
- [ ] Ik woon of werk niet in de buurt van dit station

Waarvoor gebruik je dit station het meest? (2/4)

- ( ) Voor reizen tussen mijn huis en mijn werk
- ( ) Voor reizen in mijn vrije tijd
- ( ) Voor andere reizen
- ( ) Ik gebruik dit station niet
- ( ) Weet ik niet / Zeg ik liever niet

Figure B.12: Questions about the respondent's usage of Leiden Central - part 1

Als je met de trein op dit station aankomt, hoe reis je dan meestal verder? (3/4)

- ○ Lopend
- ○ Met de fiets
- ○ Met de ov-fiets
- ○ Met de bus
- ○ Met de trein
- ○ Met de auto
- ○ Met een andere vorm van deelvervoer
- ○ Anders
- ○ Weet ik niet / Zeg ik liever niet

Als je met de trein vanaf dit station vertrekt, hoe reis je dan meestal naar dit station toe? (4/4)

- ○ Lopend
- ○ Met de fiets
- ○ Met de ov-fiets
- ○ Met de bus
- ○ Met de trein
- ○ Met de auto
- ○ Met een andere vorm van deelvervoer
- ○ Anders
- ○ Weet ik niet / Zeg ik liever niet

Figure B.13: Questions about the respondent's usage of Leiden Central - part 2

Waarvoor moet de overheid in en rond het station van Den Haag Laan van NOI meer en minder ruimte maken?

Hieronder zie je het stationsgebied van Den Haag Laan van NOI.

Stel dat de overheid een deel van de ruimte in en rond het station kan veranderen. Waarvoor zou deze ruimte dan volgens jou moeten worden gebruikt? Ga ervan uit dat overal in het stationsgebied veranderingen mogelijk zijn. En er is op dit moment nog een beetje ruimte te verdelen.

Figure B.14: Overview of the area around Den Haag Laan van NOI

Figure B.15: Project portfolio choices for Den Haag Laan van NOI - part 1

Figure B.16: Project portfolio choices for Den Haag Laan van NOI - part 2

Figure B.17: Explanation on how to provide advice for Schiedam Centrum

Figure B.18: Project portfolio choices for Schiedam Centrum

Figure B.19: Introduction for extra questions for Schiedam Centrum

Korte route van de tram naar het station

Nu stopt de tram een eindje van het station af. In de open lucht. Reizigers moeten schuin oversteken van de tramhalte naar het station.Dat is te zien op plaatje A.

De overheid kan de tramhalte dichter bij het station bouwen. Namelijk onder de viaducten. Dat is te zien op plaatje B. Dan komt er ook een nieuwe ingang in het station. Daardoor is het minder ver lopen naar het station.
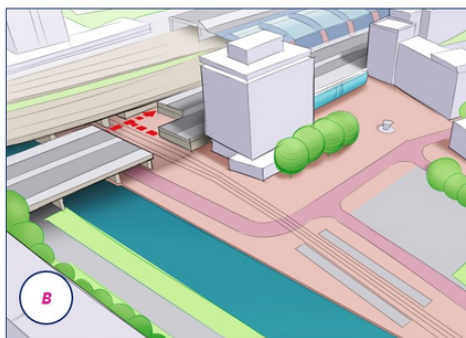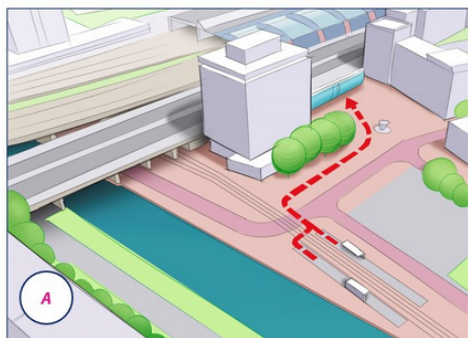
Wat adviseer jij? (1/4)

○ Optie A: Geen nieuwe tramhalte. De situatie blijft zoals die nu is.

○ Optie B: Nieuwe tramhalte. Die komt onder de viaducten dichtbij het station. Het station krijgt een nieuwe ingang.

Figure B.20: First extra question for Schiedam Centrum

Waar komt het nieuwe busstation?

Er is op dit moment geen echt busstation. Er zijn gewoon wat losse bushaltes. En die haltes staan een stuk uit elkaar. Daardoor moeten de bussen verder rijden dan nodig. De overheid wil graag een klein busstation maken. Dan staan de haltes dicht bij elkaar.

Waar vind jij dat het busstion moet komen?
Het busstation kan op drie plekken komen:

Optie A. Het busstation kan ten oosten van het station komen. Dat is ook op de Horvathweg, voorbij de Spoorstraat. Daar is meer ruimte. Het is dan wel iets verder lopen naar het station.

Optie B: Het busstation kan op dezelfde plek komen als nu. Dat is op de Horvathweg naast het station en de metro. Het is niet ver lopen naar het station. Het busstation ligt dan tussen de gebouwen in.

Optie C: Het busstation kan op de Brandersbrug komen. Dan hebben de bushaltes uitzicht op de Schie. Het is dan ook goed te zien vanuit andere plekken. Maar het is dan wel verder lopen naar het station.
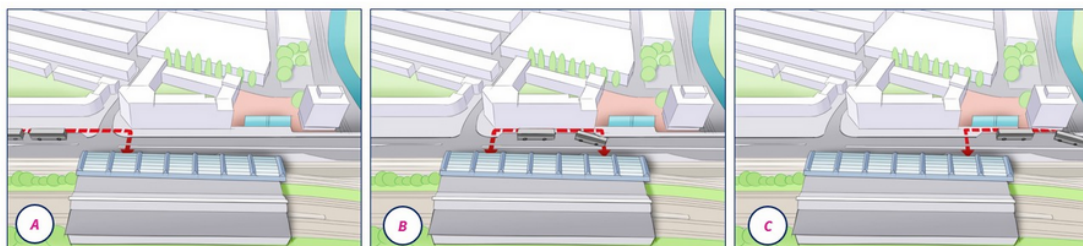
Wat adviseer jij? (2/4)

○ Optie A: Een busstation ten oosten van het station. Dat is op de Horvathweg, voorbij de Spoorstraat.

○ Optie B: Een busstation op dezelfde plek als nu op de Horvathweg.

○ Optie C: Een busstation op de Brandersbrug, boven de Schie.

Figure B.21: Second extra question for Schiedam Centrum

Hoe groot wordt het nieuwe busstation?

Er is op dit moment geen echt busstation. Er zijn gewoon wat losse bushaltes. En die haltes staan een stuk uit elkaar. Daardoor moeten de bussen verder rijden dan nodig. De overheid wil graag een klein busstation maken. Dan staan de haltes dicht bij elkaar.

Hoe groot moet het busstation worden?
Optie A: De overheid kan kiezen om weinig haltes te bouwen. Dan staan de haltes dicht bij elkaar. De bussen vertrekken dan niet altijd vanaf dezelfde halte. Reizigers moeten dan goed kijken bij welke halte de bus vertrekt.

Optie B: De overheid kan ook kiezen om iets meer haltes te bouwen. Dan heeft een bus altijd dezelfde halte. Mensen hoeven dan minder te zoeken. De haltes staan dan wel iets verder uit elkaar. En er is meer ruimte nodig voor het busstation.
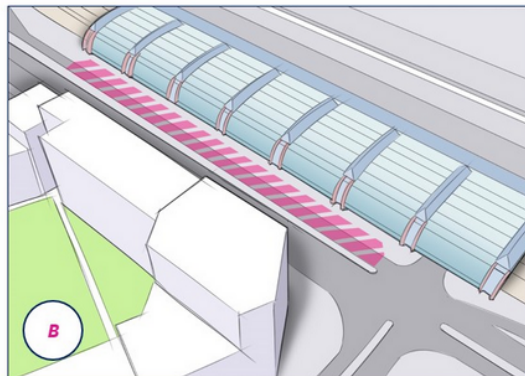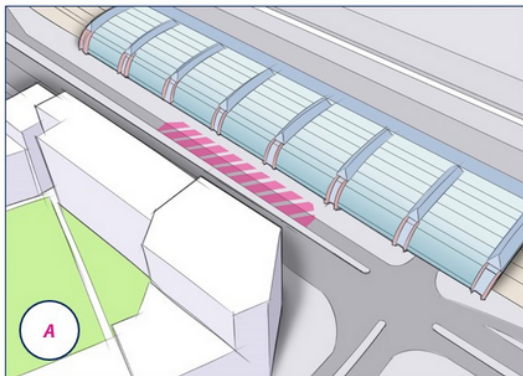
Wat adviseer jij? (3/4)

○ Optie A: Een kleiner busstation met een paar haltes.

○ Optie B: Een groter busstation met vaste haltes voor de bussen.

Figure B.22: Third extra question for Schiedam Centrum

Nieuwe plek voor taxi's en Kiss&Ride

Nu zijn de taxiplekken en de strook Kiss&Ride alleen nog bij het Stationsplein. Dat is te zien op plaatje A. Dat is niet ver lopen vanaf het station. En ook niet ver vanaf het centrum. Er rijden wel veel taxi's en auto's rond het Stationsplein. Daardoor is het drukker.

De overheid kan een strook maken voor de taxi's en de Kiss&Ride bij de bushaltes op de Horvathweg. Dat is te zien op plaatje B. Dan wordt het rustiger rond het Stationsplein. Er is daar meer ruimte voor voetgangers. Maar het is dan wel wat verder lopen vanaf het centrum. En reizigers moeten dan een trap of een lift nemen.
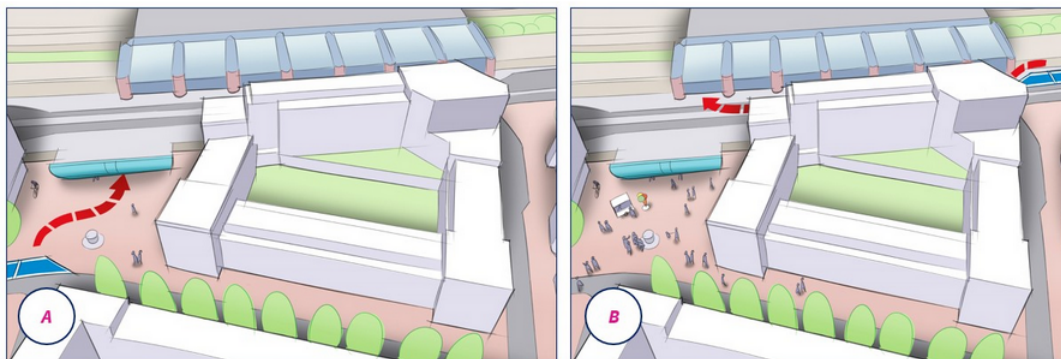
Wat adviseer jij? (4/4)

○ Optie A: De taxiplekken en Kiss&Ride blijven op dezelfde plek bij het Stationsplein.

○ Optie B: De overheid verplaatst de taxiplekken en Kiss&Ride naar de Horvathweg, bij de bushaltes.

Figure B.23: Fourth extra question for Schiedam Centrum

Waarvoor moet de overheid bij het station Dordrecht meer of minder ruimte maken?

Stel dat de overheid een deel van de ruimte van het station kan veranderen. Waarvoor moet de overheid die ruimte dan gebruiken? Ga ervan uit dat je op alle plekken in de omgeving iets kan veranderen.

In het **filmpje hieronder** leggen we uit hoe je een advies kunt geven.

Figure B.24: Explanation on how to provide advice for Dordrecht
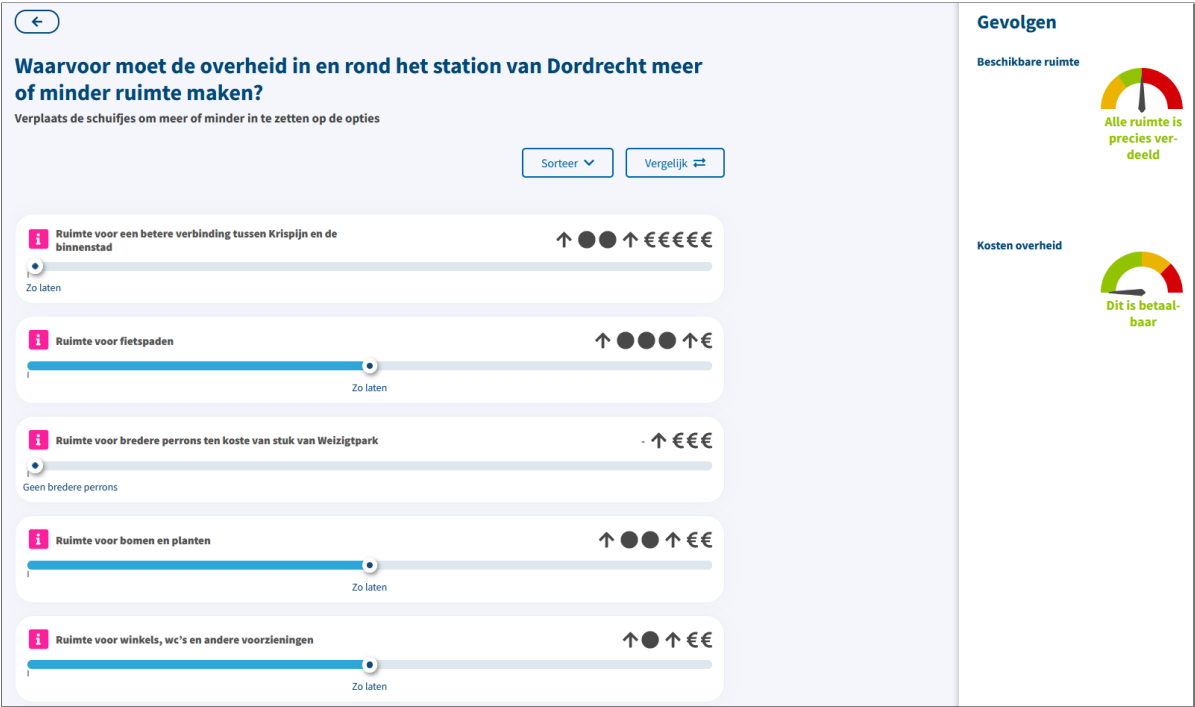
Figure B.25: Project portfolio choices for Dordrecht - part 1
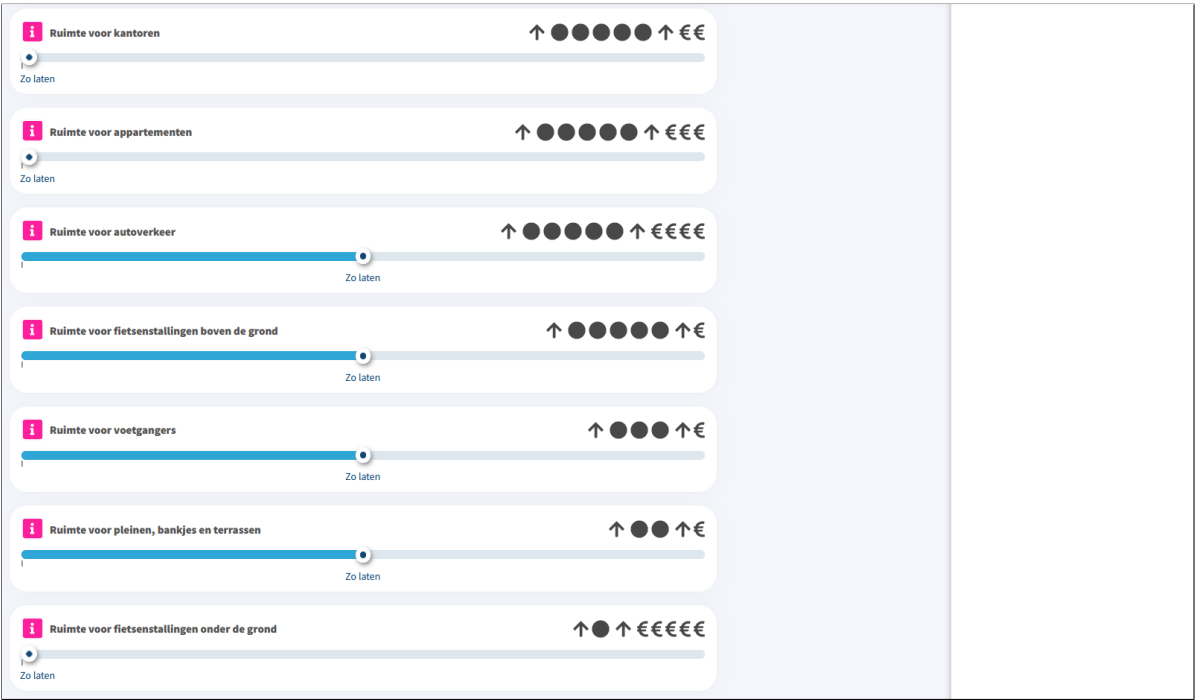
Figure B.26: Project portfolio choices for Dordrecht - part 2

Monumentaal stationsgebouw als entree van het station?

De gemeente wil dat station Dordrecht een stationshal krijgt. Een stationshal is een overdekte ruimte. Vanaf daar kun je alle perrons bereiken. En vaak kun je er ook je treinkaartje kopen of je ov-chipkaart opladen. De gemeente wil misschien het monumentale stationsgebouw de stationshal van Dordrecht maken. Nu zitten hier een AH To Go en een geldwisselkantoor (GWK). En je kunt via het stationsgebouw perron 1 bereiken.

Adviseer je om het monumentale stationsgebouw weer als stationshal te gebruiken? Kies dan optie A. Dan is het nodig dat de stationstunnel en de loopbrug allebei uitkomen in de stationshal. Dat is op dit moment niet zo. Het kost geld om deze toegang te bouwen.

Adviseer je om het monumentale stationsgebouw niet als stationshal te gebruiken? Kies dan optie B. De overheid kan het gebouw dan ergens anders voor gebruiken. Maar dan moet de overheid op een andere plek ruimte gebruiken voor een AH To Go en GWK. En voor een plek om op de trein te wachten. Dat kost net zo veel geld als het monumentale stationsgebouw verbouwen.

Wat heb je liever? (1/1)

○ Optie A: monumentale stationsgebouw wordt stationshal

○ Optie B: monumentale stationsgebouw wordt geen stationshal

Figure B.27: Extra question for Dordrecht

B.3. Part 2: Choice Task for the Oude Lijn Railway

The second main part concern potential improvements for the Oude Lijn in general. It consist of the option to participate in part 2 (figure B.28), instructions on how the choice task works (figure B.29), the choice task itself (figures B.30 and B.31), and the option to motivate the choices made (similar to figure B.10).

Deel 2: Advies geven over keuzes voor de Oude Lijn

Nu start het tweede deel van de raadpleging.

Het vorige deel ging over losse stations. Het tweede deel gaat over de Oude Lijn als geheel. Welke keuzes moet de overheid daarvoor maken?

- Moeten er nieuwe stations komen?
- Moeten er meer sprinters rijden?
- Moeten we fietsverbindingen en openbaar vervoerverbindingen naar de stations toe verbeteren?
- Moeten de sporen minder zichtbaar zijn in het landschap?

Wil je de overheid hier een advies over geven? Dit kost je ongeveer 5 minuten. (1/1)

Ja, ik wil de overheid graag een advies geven over dit soort keuzes

Nee, ik wil de overheid geen advies geven over dit soort keuzes en ik wil dit onderdeel overslaan.

Figure B.28: Option to participate in part 2 of the PVE

Zo geef je advies

Op de volgende pagina kun je advies geven. In **het filmpje** hieronder leggen we uit hoe dat werkt.

⌄ Wil je de tekst liever lezen? Klik dan hier.

Zo meteen ga je advies geven.

Je krijgt straks 8 investeringen te zien die de overheid kan doen op en rond de Oude Lijn.

Vind je dat de overheid een investering moet doen? Dan zet je het schuifje een beetje naar rechts. Vind je dat de overheid heel sterk in iets moet investeren? Dan zet je het schuifje helemaal naar rechts. Sommige opties kan je alleen maar wel of niet kiezen.

Rechts in het scherm zie je de gevolgen van jouw advies. Op smartphone zie je die onderin het scherm. Je ziet een metertje dat de kosten voor de overheid bijhoudt. Staat het metertje in het rood? Dan kan je niet verder. Je adviezen kosten dan te veel geld.

Eronder zie je nog twee metertjes. Daar kun je zien hoeveel extra mensen met het openbaar vervoer op belangrijke plekken kunnen komen. En wat de mogelijkheden zijn om extra huizen te bouwen in de buurt van stations van de Oude Lijn.

Wil je meer weten over een investeringsoptie en de gevolgen? Klik dan op de i-knop.

Ben je tevreden met je advies? Klik dan op 'Volgende'.

Figure B.29: Explanation on how to provide advice in part 2

Figure B.30: Project portfolio choices for the Oude Lijn railway - part 1

Figure B.31: Project portfolio choices for the Oude Lijn railway - part 2

B.4. Part 3: Choice Task for Potential New Stations

The third part of the PVE consist of questions on four potential new stations along the Oude Lijn: Rijswijk Buiten, Schiedam Kethel, Rotterdam van Nelle, Dordrecht Leerpark. First respondents can select for which stations to provide advice (figure B.32). Afterwards, Respondents get four identical questions for each station they selected. To illustrate, figures B.33, B.34, B.35 and B.36 contain the questions for Rijswijk Buiten.

Deel 3: Als er nieuwe stations komen, welke keuzes moet de overheid daar dan maken?

Dit is het derde deel van de raadpleging. Dit deel gaat over de nieuwe stations.

Er komen misschien nieuwe stations langs het traject. Als die gebouwd worden, moet de overheid keuzes maken. Je kunt de overheid hier een advies over geven.

Kies je ervoor om over geen van de stations advies te geven? Dan ga je direct door naar het laatste deel.

Kruis aan over welke je een advies wil geven. Je kunt meerdere stations kiezen. (1/1)

- ☐ Rijswijk Buiten
- ☐ Schiedam Kethel
- ☐ Rotterdam van Nelle
- ☐ Dordrecht Leerpark
- ☐ Geen van deze stations

Figure B.32: Option to choose for which new stations to provide advice

Wat zou jij liever hebben bij station Rijswijk Buiten?

Als dit station er komt, dan kan de overheid verschillende dingen doen om het beter bereikbaar te maken. Zo kan de overheid bijvoorbeeld vooral aandacht besteden aan goede fietsroutes naar het station. En aan goede fietsenstallingen bij het station. De overheid kan ook vooral aandacht besteden aan goede routes met het openbaar vervoer naar het station. En aan haltes voor het openbaar vervoer bij het station.

Waar moet de overheid meer aandacht aan besteden? (1/4)

- ○ Optie A: Goede fietsroutes naar en stallingen bij het nieuwe station
- ○ Optie B: Goede routes met openbaar vervoer naar en haltes bij het nieuwe station

Figure B.33: First question concerning Rijswijk Buiten

Wat zou jij liever hebben bij station Rijswijk Buiten?

Als dit station er komt, dan komt er een brug of een tunnel om bij de sporen te komen. Vanaf de brug of de tunnel is het perron te bereiken met vaste trappen en een lift. Vanaf de straat kun je met vaste trappen naar de tunnel of de brug. Daarnaast kunnen we kiezen voor een hellingbaan (plaatje A) of voor een lift (plaatje B). Een lift is sneller dan een hellingbaan, maar een lift heeft wel een risico op storingen.
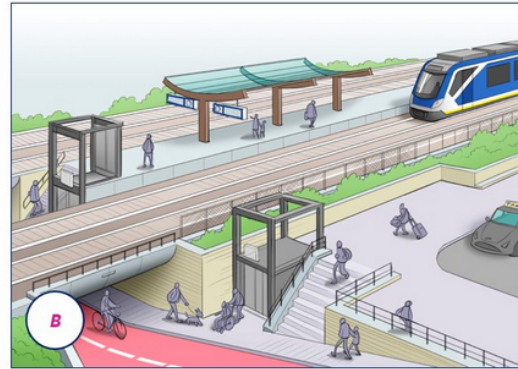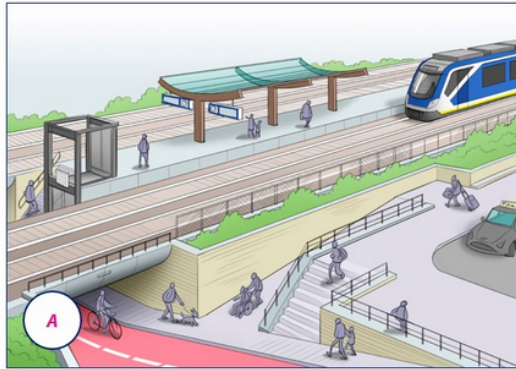
Let op: deze plaatjes zijn bedoeld om de vraag duidelijker te maken. Ze geven geen goed beeld van hoe het station en de omgeving er straks uit komen te zien.

Wat vind jij dat de overheid moet bouwen? (2/4)

○ Optie A: Een hellingbaan

○ Optie B: Een lift

Figure B.34: Second question concerning Rijswijk Buiten

Wat zou jij liever hebben bij station Rijswijk Buiten?

Als dit station er komt, dan bouwt de overheid een fietsenstalling met 1000 tot 2000 plekken. Zo kan iedereen er zijn fiets neerzetten. Maar als het druk is, zul je soms wat langer moeten zoeken naar een plek.

Rondom de fietsenstalling is nog ruimte over en we willen graag weten hoe die ruimte volgens jou moet worden gebruikt. Er zijn drie mogelijkheden:

A. De overheid maakt de fietsenstalling ruimer. Dan is er altijd genoeg plek. En mensen hoeven niet lang te zoeken naar een plek.

B. De overheid zorgt voor extra bomen, struiken en gras.

C. De overheid zorgt voor parkeerplaatsen voor auto's (een Park&Ride). Daar kunnen mensen die met de trein gaan goedkoop hun auto parkeren. Zo kunnen mensen makkelijker met de auto naar het station komen.

Let op: deze plaatjes zijn bedoeld om de vraag duidelijker te maken. Ze geven geen goed beeld van hoe het station en de omgeving er straks uit komen te zien.

Wat vind jij dat de overheid moet bouwen? (3/4)

○ Optie A: Een ruime fietsenstalling

○ Optie B: Extra bomen, struiken en gras

○ Optie C: Parkeerplaatsen voor mensen die met de trein gaan

Figure B.35: Third question concerning Rijswijk Buiten

Wat zou jij liever hebben bij station Rijswijk Buiten?

Als dit station er komt, dan kan de overheid kiezen voor één ingang of meerdere ingangen.

Het voordeel van één ingang (plaatje A) is dat er meer reizigers bij elkaar lopen. Hoe meer mensen ergens lopen hoe veiliger het aanvoelt. Als alle reizigers dezelfde weg lopen is de kans ook groter dat er een Kiosk komt, want dit zijn potentiële klanten.

Het voordeel van meerdere ingangen (plaatje B) is dat je het perron sneller kan bereiken vanuit allerlei richtingen. Je hoeft minder lang te lopen.

Let op: deze plaatjes zijn bedoeld om de vraag duidelijker te maken. Ze geven geen goed beeld van hoe het station en de omgeving er straks uit komen te zien.

Wat vind jij dat de overheid moet bouwen? (4/4)

○ Optie A: Eén ingang

○ Optie B: Meerdere ingangen

Figure B.36: Fourth question concerning Rijswijk Buiten

B.5. Part 4: Questions About the Respondent and the Consultation

The final part of the PVE concerns question about the respondent and their view on the PVE consultation and contains a final message concluding the whole PVE (figures B.37, B.38, B.39, B.40, B.41, B.42 and B.43).

Deel 4: Vragen over jezelf en over de raadpleging.

We willen je als laatste nog enkele vragen stellen:

1. Over deze raadpleging
2. Over jezelf

Figure B.37: Introduction for the final part of the PVE

Vragen over deze raadpleging

Geef aan of je het eens bent met onderstaande stellingen (1/6)

	Helemaal mee eens	Mee eens	Neutraal	Mee oneens	Helemaal mee oneens	Weet ik niet / Zeg ik liever niet
Ik vertrouw erop dat dit een eerlijk onderzoek is	○	○	○	○	○	○
Ik vond het een belangrijk onderwerp om mijn mening over te geven	○	○	○	○	○	○
Ik vond de raadpleging moeilijk te begrijpen	○	○	○	○	○	○
Deze methode moet vaker worden ingezet om inwoners te betrekken bij overheidsbeleid	○	○	○	○	○	○
Doordat ik meedoe aan deze raadpleging heb ik geleerd over de keuzes die de overheid moet maken over dit thema	○	○	○	○	○	○
Als veel mensen meedoen aan deze raadpleging, dan zijn de uiteindelijke besluiten over dit onderwerp voor mij beter te accepteren	○	○	○	○	○	○
Als de overheid vaker op deze manier inwoners laat meedenken over dit soort keuzes, dan krijg ik meer vertrouwen in de besluiten van de overheid	○	○	○	○	○	○

Figure B.38: Questions about the PVE - part 1

Heb je al eens je mening gegeven aan de overheid over dit onderwerp? (2/6)

☐ Nee

☐ Ja, via een enquête

☐ Ja, via een fysieke of online bijeenkomst

☐ Ja, ik ben actief betrokken bij een belangenclub

☐ Anders, namelijk

In deze raadpleging vragen we advies aan een grote groep inwoners. De overheid vraagt ook advies aan onafhankelijke experts. Welk advies vind je het belangrijkste? (3/6)

○ Alleen het advies van inwoners is belangrijk, het advies van experts is niet belangrijk

○ Het advies van inwoners is belangrijker dan het advies van experts

○ Het advies van inwoners is even belangrijk als het advies van experts

○ Het advies van inwoners is minder belangrijk dan het advies van experts

○ Het advies van inwoners is helemaal niet belangrijk, alleen het advies van experts is belangrijk

○ Weet ik niet / Zeg ik liever niet

Figure B.39: Questions about the PVE - part 2

Welk rapportcijfer geef je aan deze raadpleging? (4/6)

Selecteer ⌄

Wat vind je goed aan deze raadpleging? (5/6)

Wat vind je niet goed aan deze raadpleging? (6/6)

Figure B.40: Questions about the PVE - part 3

Figure B.41: Questions about the respondent - part 1

In wat voor huis woon je? (3/5)

○ Koopwoning

○ Huurwoning in de sociale huursector

○ Huurwoning in de vrije sector

○ Anders

○ Weet ik niet / Zeg ik liever niet

Ben je woningzoekend? (4/5)

○ Ja

○ Nee

Wat doe je voornamelijk in het dagelijks leven? Als meerdere opties bij je passen kies dan diegene die het meest bij je past (5/5)

Selecteer ⌄

Dit waren de laatste vragen

Als je op 'Volgende' klikt, dan verzend je jouw antwoorden. Deze kun je dan niet meer wijzigen.

Figure B.42: Questions about the respondent - part 2

Bedankt voor het meedoen! Je antwoorden zijn verstuurd

De raadpleging is nu afgerond. Je kunt deze pagina nu sluiten.

Wil je het rapport ontvangen? Of wil je uitgenodigd worden voor andere raadplegingen? Of wil je anderen uitnodigen voor deze raadpleging? Dat kan op deze pagina. Populytics biedt deze dienst aan jou aan.

We hebben dan wel wat gegevens van je nodig. Deze gegevens koppelen we niet aan de antwoorden die je hebt gegeven. Ze komen ook niet bij de gezamenlijke overheden langs de Oude Lijn terecht. Zo houden we de raadpleging anoniem.

Wil je meer weten over hoe wij je persoonsgegevens verwerken? Klik dan onderaan de pagina op onze privacyverklaring.

Figure B.43: Concluding message for the whole PVE

C
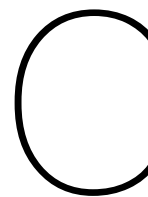
LCCA: Preparation and Results

This appendix contains the data preparation for the latent class cluster analyses and presents the model fit results and model outcomes.

C.1. Data Preparation

Before the data was used for the cluster analysis, different alterations were made. The data was made available by Populytics who constructed and conducted the PVE. They made three new variables which we used in the cluster analyses. They coded the statements on the usage of the train and the Oude Lijn as well as the province of residence. Usage of the train and Oude Lijn was coded as follows. The options 'Once or several times a week' and 'A few times a month' are combined into 'at least several times a month'. The options 'A few times a year', 'Almost never' and 'I have never travelled by train' are combined into 'less often or never'. The option 'Don't know / Would rather not say' was dropped. For the province of residence, the options were coded as follows. People living in the province of South Holland are coded to 1, all other options were coded to 0.

The following variables were coded after the data was received from Populytics. The three added statements, discussed in section 2.2, were coded from -2 to 2. 'Strongly disagree' is -2, 'disagree' is -1, 'neutral' is 0, 'agree' is 1, and 'strongly agree' is 2. The option 'Don't know / Would rather not say' was dropped for all three statements. The variable indicating the occupation of the respondents was reduced from 14 options to 3 by grouping the options in the following way:

- Work: Full-time employed (>35 hours), Part-time salaried employee (<35 hours), Entrepreneur (self-employed), Entrepreneur (with personnel), Job seeker;

- Study: HBO/WO student, MBO student, Secondary school student, Combining study and part-time job;

- Other: Early retirement/retired, Volunteer, Housewife or houseman, Other, I would rather not say.

To take into account the political orientation of a respondent, the variable indicating the party on which the respondent voted in the last election needed to be coded. The question contained 26 possible parties, that were coded as follows, according to Kieskompas (2023):

- Left: 50Plus, BIJ1, ChristenUnie, D66, DENK, GROENLINKS / PvdA, LEF - Voor de Nieuwe Generatie, Nederland met een PLAN, NSC, PartijvdSport, Piratenpartij - De Groenen, Politieke Partij voor Basisinkomen, PvdD, SP, Splinter, Volt;

- Right: BBB, BVNL / Groep van Haga, CDA, FVD, JA21, LB (Libertaire Partij), PVV, Samen voor Nederland, SGP, VVD.

Lastly, a variable was created to indicate if a respondent lived in a municipality where one of the possible new stations was located to see if people favour stations close to where they live. The following

categories were made. Respondents living in Rotterdam or Schiedam were coded 1, respondents living in Dordrecht were coded 2, respondents in Rijswijk were coded 3, and all other respondents were coded 4.

C.2. Model 1: Different Views

The first model was built using the statements as indicator variables and different socio-demographic variables as active and inactive covariates. Section 3.3.1 discusses the results from this model.

Measurement Model

Table C.1 contains the results of the measurement models with 1 up to 10 clusters. As indicators, the three statements regarding the consideration of effects on self or others were added. The statements are coded so that strongly disagree is represented by -2 and strongly agree by 2 with neutral being 0. A measurement model was built starting with 1 up to 10 clusters to find the most parsimonious number of clusters. The BIC decreased till cluster 6. Afterwards, the BIC increased and decreased one cluster after another. However, the AIC kept decreasing as the amount of clusters increased. The local measure, BVR, was used to determine the amount of clusters. A 6-cluster model was the model with the fewest clusters where there were no significant residual associations left between the indicators.

Structural Model

In total 11 variables are included as covariates. After an initial structural model was built, the inclusion of variables as active or inactive variables was done based on the significance of the Wald statistic. The variable with the highest p-value (above 0.05) was excluded, and then the structural model was run again. In the end, 4 variables were deemed not significant in predicting cluster membership and were turned into inactive variables to additionally profile the clusters. The following variables are included:

- Active - Area type: rural, urban;

- Active - Work status: job (paid), student, other;

- Active - Education: low, medium, high;

- Active - Train usage: at least several times a month, less frequent or never;

- Active - Oude Lijn usage: at least several times a month, less frequent or never;

- Active - Province: South Holland, other;

- Active - Age: < 25, 25-34, 35-44, 45-54, 55-64, > 65;

- Inactive - Sex: male, female;

- Inactive - Political orientation: left, right;

- Inactive - Type of residence: homeowner, renting (private), renting (social), other;

- Inactive - Location type: city centre, suburb, village, countryside.

Table C.2 contains all results for first latent class cluster model. The conditional probability is the probability for a particular response or variable level given cluster membership.

Table C.1: LCCA measurement model 1 fit

No. of classes	L^2	df	p-value	BIC(LL)	AIC(LL)	Bivariate residuals		
						Self-PAM	Self-Collective	PAM-Collective
1	2090.0182	112	0.00	24045.5777	23973.6138	301.4195	15.0815	368.3090
2	1569.4282	108	0.00	23556.9756	23461.0238	97.6737	95.3061	161.3856
3	1324.1532	104	0.00	23343.6886	23223.7488	146.3077	4.7491	10.5868
4	1016.5147	100	0.00	23068.0381	22924.1103	14.0608	2.6010	20.5506
5	818.5171	96	0.00	22902.0284	22734.1127	1.6016	7.0509	7.3923
6	679.7439	92	0.00	22795.2432	22603.3395	3.4985	0.9125	1.2239
7	524.6989	88	0.00	22672.1862	22456.2945	0.2628	0.6238	0.8678
8	494.2742	84	0.00	22673.7494	22433.8698	0.1766	0.0588	0.7443
9	430.9293	80	0.00	22642.3925	22378.5250	0.3672	0.0394	0.0009
10	402.8769	76	0.00	22646.3280	22358.4725	0.3614	0.0002	0.0007

Table C.2: Conditional probabilities LCCA model 1

	Cluster						Sample total
	1	**2**	**3**	**4**	**5**	**6**	
Indicators							
Effects for myself							
• Totally disagree	1%	1%	39%	0%	24%	**63%**	7%
• Disagree	17%	10%	**48%**	0%	**51%**	33%	19%
• Neutral	**45%**	39%	12%	2%	23%	4%	**36%**
• Agree	31%	**41%**	1%	22%	3%	0%	28%
• Totally agree	5%	10%	0%	**76%**	0%	0%	10%
Mean	0.22	0.51	-1.25	1.74	-0.95	-1.59	0.16
Effects for people around me							
• Totally disagree	0%	3%	24%	0%	0%	**48%**	4%
• Disagree	5%	20%	**40%**	0%	0%	37%	12%
• Neutral	38%	**53%**	32%	0%	5%	14%	**37%**
• Agree	**51%**	23%	4%	15%	**51%**	1%	**37%**
• Totally agree	6%	1%	0%	**85%**	44%	0%	10%
Mean	0.57	-0.02	-0.84	1.84	1.39	-1.33	0.36
Collective interest							
• Totally disagree	0%	3%	0%	0%	0%	**43%**	2%
• Disagree	0%	19%	0%	0%	0%	35%	5%
• Neutral	8%	**76%**	1%	0%	0%	21%	24%
• Agree	**80%**	2%	**60%**	17%	10%	0%	**51%**
• Totally agree	12%	0%	39%	83%	**90%**	0%	18%
Mean	1.03	-0.24	1.38	1.83	1.90	-1.22	0.79
Covariates							
Age							
• 25	14%	16%	2%	13%	14%	**28%**	13%
• 25 - 34	**21%**	**25%**	14%	**30%**	17%	27%	**21%**
• 35 - 44	20%	21%	15%	21%	**21%**	10%	20%
• 45 - 54	18%	17%	22%	15%	18%	18%	18%
• 55 - 64	13%	9%	18%	11%	12%	10%	12%
• 65+	15%	12%	**29%**	10%	18%	8%	15%
Education							
• Low	21%	22%	17%	29%	19%	29%	21%
• Medium	**42%**	40%	**44%**	35%	38%	**45%**	**41%**
• High	38%	38%	39%	**36%**	**43%**	26%	38%
Work status							
• Job (paid)	**61%**	59%	55%	60%	**64%**	32%	**60%**
• Student	13%	21%	2%	20%	12%	**41%**	15%
• Other	25%	20%	42%	20%	24%	28%	25%

Table C.2: Conditional probabilities LCCA model 1 (Continued)

Train usage							
• Al least several times a month	42%	45%	18%	**65%**	40%	42%	41%
• Less frequent or never	**58%**	**55%**	**82%**	35%	**61%**	**58%**	**59%**
Oude Lijn usage							
• Al least several times a month	27%	30%	5%	**50%**	24%	29%	27%
• Less frequent or never	**73%**	**70%**	**95%**	50%	**76%**	**71%**	**73%**
Area type							
• Urban area	**65%**	**62%**	**59%**	**73%**	**81%**	44%	**64%**
• Rural area	35%	38%	41%	27%	19%	**56%**	36%
Province							
• South Holland	48%	**51%**	18%	43%	44%	13%	45%
• Other	**52%**	49%	**82%**	**57%**	**56%**	**88%**	**55%**
Sex [inactive]							
• *Man*	*42%*	*42%*	*48%*	*44%*	*47%*	*40%*	*43%*
• *Woman*	*58%*	*57%*	*52%*	*56%*	*53%*	*60%*	*57%*
Political orientation [inactive]							
• *Right*	*42%*	*38%*	*41%*	*42%*	*42%*	*41%*	*41%*
• *Left*	*53%*	*58%*	*55%*	*56%*	*54%*	*59%*	*55%*
Type of residence [inactive]							
• *Home owner*	*60%*	*56%*	*60%*	*50%*	*56%*	*31%*	*58%*
• *Renting (private sector)*	*11%*	*14%*	*12%*	*15%*	*10%*	*14%*	*12%*
• *Renting (social housing)*	*27%*	*28%*	*28%*	*33%*	*29%*	*53%*	*28%*
• *Other*	*2%*	*2%*	*0%*	*2%*	*6%*	*2%*	*2%*
Location [inactive]							
• *City Centre*	*37%*	*37%*	*27%*	*44%*	*34%*	*30%*	*36%*
• *City Suburb*	*30%*	*31%*	*34%*	*26%*	*43%*	*29%*	*31%*
• *Village*	*28%*	*26%*	*34%*	*22%*	*16%*	*34%*	*27%*
• *Countryside*	*4%*	*4%*	*5%*	*3%*	*5%*	*3%*	*4%*

C.3. Model 2: Different Choices

The second model was built using the statements as covariates, just like the different socio-demographic variables. The choices for the general choice task of the Oude Lijn were used as indicators. Section 3.3.2 discusses the results of this model. Table C.1 contains the results of the measurement models with 1 up to 10 clusters.

Measurement Model

As indicators, the eight choices regarding improvement for the Oude Lijn are added. The choices are summed up below. They are numbered, but the choices are presented randomly to respondents. The choice for new stations consists of a 'do' or 'don't'. The incorporation of tracks in the landscape consists of the choices 'standard construction', 'building with a tunnel box', and 'building with a tunnel'. The other choices consist of a degree of money allocation (no extra money, a little extra money, a lot of extra money). A measurement model was built starting with 1 up to 10 clusters to find the most parsimonious number of clusters. The AIC keeps decreasing as the amount of clusters in a model increases. The BIC was lowest for a model with 4 clusters. A 4-cluster model was selected.

- Choice 1: Better cycle routes to the stations

- Choice 2: Build a new station: Rijswijk Buiten

- Choice 3: Build 2 new stations: Schiedam Kethel and Rotterdam Van Nelle

- Choice 4: Build a new station: Dordrecht Leerpark

- Choice 5: More sprinters per hour

- Choice 6: Make the new tracks between Delft and Schiedam less visible in the landscape

- Choice 7: More places with shared bicycles, shared scooters and shared cars near stations

- Choice 8: Better connections from bus, tram and metro to stations

Table C.3: LCCA measurement model 2 fit

No. of classes	L^2	df	p-value	BIC(LL)	AIC(LL)
1	4260.4711	1930	0.00	33520.3807	33442.1001
2	2108.3659	1921	0.00	31440.4697	31307.9949
3	1624.3895	1912	1	31028.6876	30842.0185
4	1507.9615	1903	1	30984.4539	30743.5906
5	1437.0794	1894	1	30985.7661	30690.7084
6	1397.1932	1885	1	31018.0741	30668.8222
7	1338.5570	1876	1	31031.6322	30628.186
8	1293.3718	1867	1	31058.6412	30601.0008
9	1235.6648	1858	1	31073.1285	30561.2938
10	1185.2785	1849	1	31094.9364	30528.9075

Structural Model

In total 15 variables are included as covariates. After an initial structural model was built, the inclusion of variables as active or inactive variables was done based on the significance of the Wald statistic. The variable with the highest p-value (above 0.05) was excluded, and then the structural model was rerun. In the end, 7 variables were deemed insignificant in predicting cluster membership and were turned into inactive variables to additionally profile the clusters. The following variables are included:

- Active - Statement 1 - effects for myself: Strongly disagree, disagree, neutral, agree, strongly agree

- Active - Statement 2 - effects on people around me: Strongly disagree, disagree, neutral, agree, strongly agree

- Active - Statement 3 - collective interest: Strongly disagree, disagree, neutral, agree, strongly agree

- Active - Sex: male, female;

- Active - Education: low, medium, high;

- Active - Work status: job (paid), student, other;

- Active - Train usage: at least several times a month, less frequent or never;

- Active - Oude Lijn usage: at least several times a month, less frequent or never;

- Active - Province: South Holland, other;

- Inactive - Political orientation: left, right;

- Inactive - Location type: city centre, suburb, village, countryside.

- Inactive - Area type: rural, urban;

- Inactive - Type of residence: homeowner, renting (private), renting (social), other;

- Inactive - City with potentially new station?: Rotterdam or Schiedam, Dordrecht, Rijswijk, No;

- Inactive - Age: < 25, 25-34, 35-44, 45-54, 55-64, > 65;

- Inactive - Home seeker: yes, no.

Table C.4 contains all results for the second latent class cluster model. The conditional probability is the probability for a particular response or variable level given cluster membership.

Table C.4: Conditional probabilities LCCA model 2

	Cluster				Sample total
	1	**2**	**3**	**4**	
Indicators					
1. Cycling routes					
• No extra money	17%	**77%**	**97%**	24%	**46%**
• A little extra money	**70%**	23%	3%	**68%**	**46%**
• A lot of extra money	13%	0%	0%	9%	7%
Mean	0.48	0.12	0.01	0.43	0.30
2. Rijswijk Buiten					
• Don't	**91%**	**89%**	**99%**	26%	**82%**
• Do	9%	11%	1%	**74%**	18%
3. Schiedam Kethel Rotterdam Van Nelle					
• Don't	**85%**	**85%**	**100%**	43%	**81%**
• Do	15%	15%	0%	**57%**	19%
4. Dordrecht Leerpark					
• Don't	**92%**	**91%**	**98%**	26%	**83%**
• Do	8%	9%	2%	**74%**	17%
5. More sprinters					
• 6x per hour (status quo)	**51%**	**50%**	**100%**	**51%**	**60%**
• 8x per hour	46%	47%	0%	46%	38%
• 12x per hour	3%	3%	0%	3%	2%
Mean	0.26	0.26	0.00	0.26	0.21
6. Incorporation of tracks					
• Standard construction	**61%**	**74%**	**97%**	58%	**70%**
• Building with tunnel box	35%	24%	3%	37%	27%
• Building with a tunnel	4%	2%	0%	5%	3%
Mean	0.22	0.14	0.01	0.23	0.16
7. Mobility hubs					
• No extra money	43%	**75%**	**99%**	43%	**61%**
• A little extra money	**52%**	24%	1%	**51%**	36%
• A lot of extra money	6%	1%	0%	5%	3%
Mean	0.32	0.13	0.01	0.31	0.21
8. Connections bus, tram, metro					
• No extra money	16%	**49%**	**100%**	19%	39%
• A little extra money	**68%**	**49%**	0%	**67%**	**51%**
• A lot of extra money	16%	3%	0%	14%	10%
Mean	0.50	0.27	0.00	0.47	0.35
Covariates					
Effects for myself					
• Totally disagree	8%	3%	4%	10%	7%

Table C.4: Conditional probabilities LCCA model 2 (Continued)

• Disagree	23%	14%	12%	24%	19%
• Neutral	**36%**	34%	**42%**	**34%**	**37%**
• Agree	24%	**37%**	30%	24%	28%
• Totally agree	8%	12%	11%	8%	10%
Mean	0.02	0.42	0.31	-0.06	0.15
Effects for people around me					
• Totally disagree	5%	3%	5%	4%	4%
• Disagree	14%	11%	9%	11%	12%
• Neutral	**36%**	38%	44%	34%	**38%**
• Agree	37%	**38%**	31%	**39%**	36%
• Totally agree	8%	10%	11%	12%	10%
Mean	0.31	0.41	0.35	0.44	0.36
Collective interest					
• Totally disagree	1%	2%	3%	2%	2%
• Disagree	3%	8%	9%	4%	5%
• Neutral	20%	28%	35%	19%	24%
• Agree	**56%**	**48%**	**40%**	**52%**	**50%**
• Totally agree	21%	14%	13%	24%	18%
Mean	0.93	0.65	0.50	0.93	0.79
Sex					
• Man	38%	42%	47%	**51%**	43%
• Woman	**62%**	**58%**	**53%**	49%	**57%**
Education					
• Low	17%	19%	33%	25%	22%
• Medium	**43%**	39%	**37%**	**41%**	**41%**
• High	40%	**42%**	30%	34%	38%
Work status					
• Work	**62%**	**65%**	**52%**	**54%**	**60%**
• Study	11%	16%	21%	18%	15%
• Other	27%	19%	27%	28%	25%
Train usage					
• Al least several times a month	39%	**51%**	35%	41%	41%
• Less frequent or never	**61%**	49%	**65%**	**60%**	**59%**
Oude Lijn usage					
• Al least several times a month	22%	39%	27%	24%	27%
• Less frequent or never	**78%**	**61%**	**73%**	**76%**	**73%**
Province					
• Other	**58%**	48%	**62%**	**52%**	**55%**
• South Holland	43%	**52%**	38%	48%	45%
Political Orientation [inactive]					

Table C.4: Conditional probabilities LCCA model 2 (Continued)

• *Right*	*40%*	*41%*	*42%*	*41%*	*41%*
• *Left*	***55%***	***55%***	***54%***	***56%***	***55%***
Location [Inactive]					
• *City Centre*	***35%***	***40%***	***35%***	***35%***	***36%***
• *Ciry Suburb*	*32%*	*30%*	*27%*	*33%*	*31%*
• *Village*	*28%*	*25%*	*27%*	*26%*	*27%*
• *Countryside*	*4%*	*3%*	*7%*	*4%*	*4%*
Area type [inactive]					
• *Urban area*	***64%***	***67%***	***55%***	***65%***	***63%***
• *Rural area*	*35%*	*31%*	*41%*	*33%*	*35%*
Type of residence [Inactive]					
• *Home owner*	***59%***	***55%***	***55%***	***56%***	***57%***
• *Renting (private sector)*	*12%*	*14%*	*12%*	*12%*	*12%*
• *Renting (social housing)*	*26%*	*28%*	*28%*	*29%*	*28%*
• *Other*	*2%*	*1%*	*3%*	*2%*	*2%*
New station? [Inactive]					
• *Rotterdam, Schiedam*	*9%*	*11%*	*7%*	*11%*	*9%*
• *Dordrecht*	*2%*	*2%*	*2%*	*1%*	*2%*
• *Rijswijk*	*1%*	*1%*	*0%*	*0%*	*1%*
• *No*	***89%***	***86%***	***91%***	***88%***	***88%***
Age [inactive]					
• *< 25*	*12%*	*15%*	*14%*	*12%*	*13%*
• *25 - 34*	***22%***	***25%***	***21%***	*18%*	***22%***
• *35 - 44*	*20%*	*20%*	*19%*	***22%***	*20%*
• *45 - 54*	*18%*	*17%*	*18%*	*19%*	*18%*
• *55 - 64*	*13%*	*10%*	*13%*	*12%*	*12%*
• *> 65*	*16%*	*12%*	*16%*	*17%*	*15%*
Home seeker [inactive]					
• *Yes*	*17%*	*22%*	*24%*	*20%*	*20%*
• *No*	***83%***	***78%***	***76%***	***80%***	***80%***

D

Content Analysis: Codebook and Results

This appendix contains the codebook and all results for the content analysis. Both are presented for each analysis separately. Following the ordering as in chapter 3.4.

D.1. Process

The first two steps in the content analysis process are part of the research design and chapter 3.1 containing the framework, as described in section 2.4. The third step is selecting the unit of analysis. The motivation for a choice is the unit of analysis for the first and last analyses. However, during the coding of cluster 2.3, the second analysis, we found that most motivations followed the same pattern for all choices. So, these motivations were analysed per respondent. So all 8 motivations for all 8 choice task choices were seen as the unit of analysis. Because of this, the categories used for this analysis needed to be abstracted a level higher than the categories of the initially developed code book.

The fourth step concerns the codebook, which was constructed as follows. First, a researcher from Populytics constructed an initial list of categories by analysing 100 randomly selected (non-empty) motivations. For each choice option, a list of categories was constructed. Afterwards, two researchers outside of Populytics [1] analysed 200 motivations for every choice. Each motivation was categorised to further test the initial codebook. Extra categories were added if needed or existing categories were expanded. Lastly, the research of Populytics checked the labelling and finalised the codebook.

The fifth step is about protocols. The process results in the codebook is the main protocol in this content analysis. Another protocol is copied from Populytics which deals with multiple arguments in a single motivation. If a motivation contains multiple arguments, the first mentioned argument determines the label. The sixth and final step is the actual major content analysis and reporting. All results are presented below.

---

[1]The researcher conducting this research was one of the two researchers outside of Populytics performing this analyses

D.2. Codebook and Results

D.2.1. Clusters 2.1 and 2.2: Cycling Routes

Table D.1 contains the relevant part of the codebook which consists of the categories and the accompanying code and the choice option it belongs to. Choice option 1 for this choice entails investing 'a lot of extra money' in cycling routes, choice option 0.5 entails investing 'a little extra money', and choice option 0 is 'no extra money'.

Table D.1: Codebook and results for labelling cluster 2.1 and 2.2 cycling routes motivations

Choice	Category	Code	Cluster 2.1	Cluster 2.2
1	Then more people go by public transit, it becomes more accessible	A1	10	0
1	Cycling is good for the environment	A2	14	0
1	Fewer people will use cars	A3	8	0
1	I am generally in favour of cycling	A4	43	0
1	Current cycling routes are insufficient	A5	2	0
1	Other	A6	10	0
1	It is safer	A7	10	0
1	Accessibility	A8	6	0
0.5	Then more people go by ov	B1	24	1
0.5	Cycling is good for the environment	B2	23	3
0.5	Then fewer people go by car	B3	61	0
0.5	I am generally in favour of cycling	B4	188	20
0.5	Other	B6	40	6
0.5	It is safer	B7	105	5
0.5	Then the station is easier to reach	B8	70	3
0.5	Then fewer people have to walk to the station	B9	1	0
0.5	Then you promote cycling and discourage cars (under B3)	B10	0	0
0.5	Then more people go to the station by bike	B11	55	1
0.5	That is convenient (under B4)	B12	0	0
0.5	Ideas/conditions	B13	1	0
0	Cycling routes are fine now	C1	50	140
0	Cycle routes take up (too) much space	C2	0	0
0	No priority/too expensive	C3	6	8
0	I do not use the cycle routes	C4	0	6
0	Unaware of the situation	C5	6	43
0	Other	C6	7	41
1			63	0
0.5	Empty	Z	451	22
0			80	295

D.2.2. Cluster 2.3: All Choices

Table D.2 contains the relevant part of the codebook. Besides the first two options on the table, all motivations that contain a more in-depth motivation are grouped in the 'sensible motivation' category. As mentioned before, all 8 motivations for the choices in this choice task are grouped and seen as one. Motivations consisting of mere dots, random numbers or letters are grouped under 'empty' as well. As they contain no more information than an empty motivation box.

Table D.2: Codebook and results for labelling cluster 2.3 generalising all motivations

Category	Code	Cluster 2.3
Fine; The current situation suffices	A1	102
Don't know; I do not know the situation there	A2	53
Sensible motivation	B1	40
Empty; Nonsense	Z	381

D.2.3. Cluster 2.4: New Stations

Table D.3 contains the relevant part of the codebook which consists of the categories and the accompanying code and the choice option it belongs to. Choice option 1 for these choices entails building a new station ('Do') and choice option 0 entails not building a new station ('Don't').

Table D.3: Codebook and results for labelling cluster 2.4 motivations for the new stations

Choice	Category	Code	2 Rijswijk	3 Rotterdam, Schiedam	4 Dordrecht
1	Then people living in that area can travel by public transit more easily	A1	54	44	40
1	That encourages use of public transit	A2	27	28	35
1	Then the surrounding stations are relieved (in terms of congestion)	A3	8	14	11
1	This station is not so expensive	A4	0	0	0
1	I am generally in favour of new stations	A5	45	34	43
1	Simple and effective	A6	12	4	15
1	Then additional housing can be built	A7	4	13	13
1	Condition: if necessary	A8	0	0	0
1	Other	A9	34	18	30
0	I think there is little need for this station	B1	21	17	15
0	I personally have no need for this station	B2	0	0	0
0	Expensive	B3	8	26	3
0	I would rather spend this money on other options	B4	4	5	4
0	Then there will be extra stops and longer travel time	B5	0	0	0
0	There are plenty of public transport options near this station	B6	0	5	1
0	Other	B7	6	14	13
	Empty	Z	169	170	169