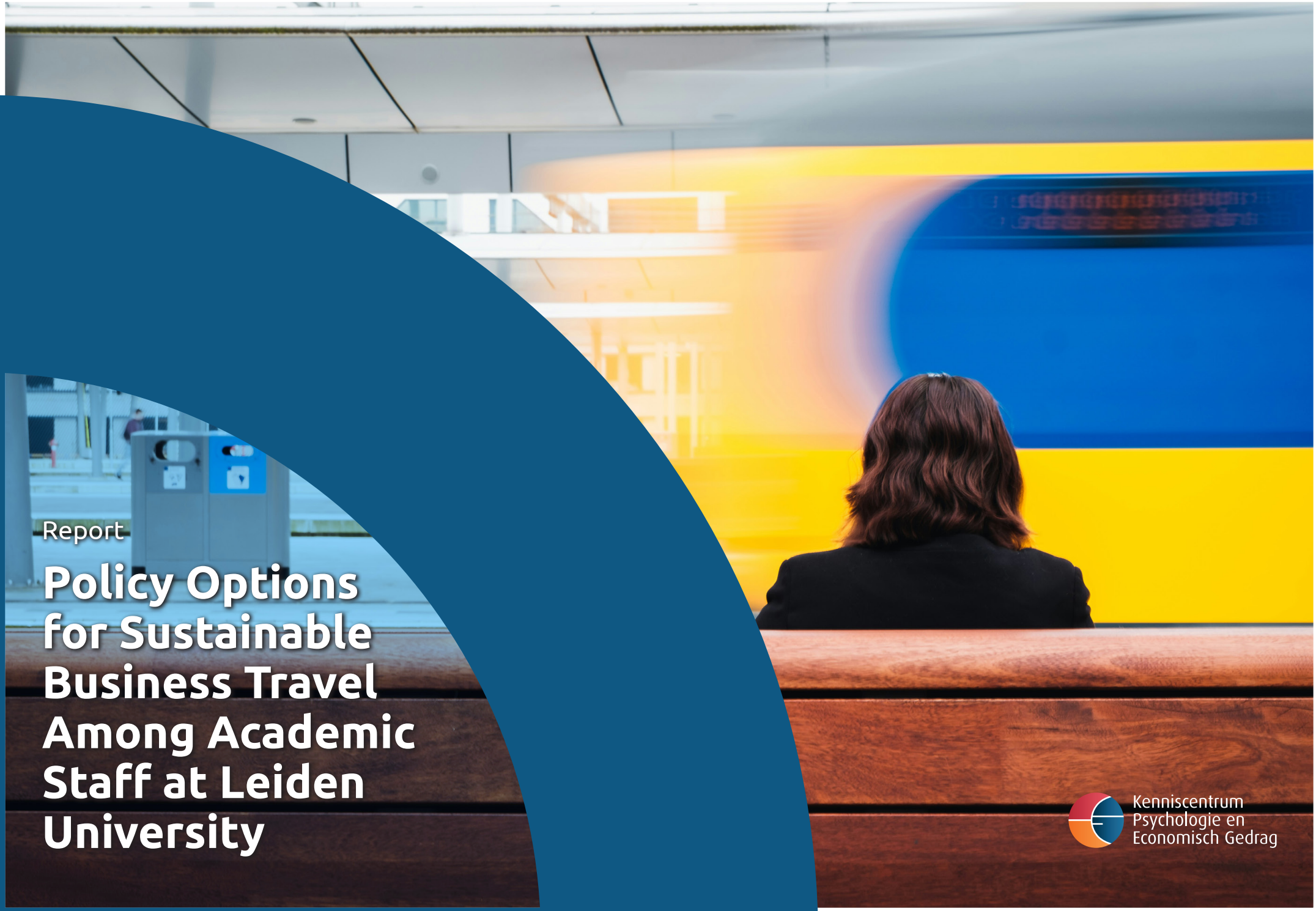
Policy options for sustainable business travel among academic staff at Leiden University: KCPEG Research report

Vliet, A. van der; Hilgevoord, V.; Boer, H. de; Kara, H.; Dijkstra, R.; Mors, E. ter



Report

Policy Options for Sustainable Business Travel Among Academic Staff at Leiden University

Kenniscentrum
Psychologie en
Economisch Gedrag

Authors: Alien van der Vliet, Vera Hilgevoord, Hannah de Boer, Hilal Kara, Ruth Dijkstra, and Emma ter Mors.

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For questions or comments regarding the report, please contact: h.c.de.boer@fsw.leidenuniv.nl

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Table of contents

Introduction

Leiden University (LU) is committed to becoming more sustainable. One key focus is the promotion of sustainable travel, with a specific emphasis on international business travel among academic staff. In early 2023, the Behavioural Insights Team of Leiden University (BIT UL), part of the LU Knowledge Centre Psychology and Economic Behaviour (KCPEG), was commissioned by the LU Sustainability Office to assess the willingness of academic staff to adopt more sustainable practices in their international business travel. The specific aim was to reduce plane travel and promote the use of trains as an alternative mode of transportation. Furthermore, the team was tasked with identifying the (behavioural) factors influencing the current travel behaviour habits of academic staff. The resulting report (De Boer and colleagues, 2023[1]) put forth various potential policy options to promote train travel, guided by the identification of factors that either promote or inhibit such behaviour.

In this report, we present the key findings of a follow-up study aimed at assessing the effectiveness of three concrete policy options devised to promote train travel. These policy options were chosen in consultation with the LU Sustainability Office, taking into account insights obtained from the previous study, as well as considerations regarding their anticipated effectiveness and feasibility of implementation.

The three policy options are the following:

1. Offering default first-class train tickets. The previous study indicated that providing the opportunity to travel first-class could incentivize academic staff to choose train travel over plane travel. Some participants noted that although travelling first-class by train is already possible, it might be frowned upon by others to opt for this choice. By making first-class train tickets the default option, Leiden University encourages the use of trains for international business travel among academic staff.

2. Total travel time framing for plane trips, including airport procedures. Time emerged as another relevant factor influencing academic staff's current travel behaviour. Plane travel was perceived as more time-efficient compared to train travel. By framing the travel time for plane trips as total travel time, which encompasses the time spent on airport procedures such as passport control, security checks, and boarding, the perceived difference in travel time between both modes of transport is reduced. Consequently, train travel becomes relatively more time-efficient and appealing. Moreover, this policy option is expected to be cost-effective to implement, making it an attractive choice for Leiden University to consider.

1 De Boer, H. C., Van der Vliet, A., Egelmeers, T., Koivusaari, S., Van Dijk, W. W, & Ter Mors, E. (2023). Potential Support for a More Sustainable Business Travel Policy Among Academic Staff at Leiden University: KCPEG research report. Leiden: KCPEG. Retrieved from: https://www.kcpeg.nl/en/publications/potential-support-for-a-more-sustainable-business-travel-policy-among-academic-staff-at-leiden-university.

3. Providing ticket booking assistance. Making desired behaviour easier is a key strategy for encouraging its adoption[2]. Since some participants in the previous study identified the ticket booking process as a significant factor influencing their travel behaviour, we considered it relevant to explore further whether academic staff think that booking assistance, particularly for train tickets, may motivate them to travel by train for international business purposes. We further looked into the current booking assistance provided by Leiden University, through its collaboration with Uniglobe. Particularly, whether and how it is used by academic staff and how it is perceived and evaluated.

2 Service, O., Hallsworth, M., Halpern, D., Algate, F., Gallagher, R., Nguyen, S., Ruda, S., & Sanders, M. (2012). EAST: Four simple ways to apply behavioural insights. Behavioural Insights Team (BIT). Retrieved from: https://www.bi.team/publications/east-four-simple-ways-to-apply-behavioural-insights/

Method

Based on findings from the previous study (De Boer and colleagues, 2023[1]) we designed an online survey to address our research questions. This survey was completed by 100 academic staff members of Leiden University. A detailed description of the method, including participants, materials, and measurements, is available in the Appendix.

First-class train tickets and total travel time framing

To assess the extent to which first-class train tickets and total travel time framing affect the preference of academic staff between train and plane travel for international business purposes, participants were asked to indicate their preference between train and plane travel for various travel scenarios. Participants were presented with information cards containing details about the ticket type and travel time of a hypothetical trip.

A control condition was in place, featuring an information card with the ticket type specified as second class (train) or economy class (plane), and framing travel time as the in-vehicle duration for both train and plane travel. This information card is depicted in Figure 1. To examine the impact of first-class train tickets, an information card identical to the control condition was used, except for the ticket type, which was upgraded to first-class for train travel. To test the impact of time framing, another information card was identical to the control condition, except for the framing of travel time, which now encompassed the total travel duration, including airport procedures. In all scenarios, the ticket class for the plane trip remained economy class, and the travel time for train travel remained the in-vehicle duration. Participants were asked to indicate their preference between train and plane travel for each scenario using a slider.

	Train	Plane
	09:00 Amsterdam Central Station 14:50 City centre destination	11:00 Amsterdam Schiphol Airport 12:30 Airport destination
Travel time	5 hours 50 min	1 hour 30 min
Ticket type	2nd Class	Economy

Figure 1. The information card for the medium-distance control condition (second class train tickets and travel time excluding airport procedures).

Furthermore, we chose to assess the effects of these policy options across two travel distances: a medium-distance and a longer-distance trip. Building upon the findings of our previous study (De Boer and colleagues, 20231), we anticipated that the travel preferences of academic staff might vary depending on the travel distance. Specifically, we expected that a preference for train travel over plane travel would be more prevalent for the medium-distance compared to the longer-distance trip and that the two policy options might exhibit stronger effects in the medium-distance scenario.

A medium-distance was operationally defined as 5 hours and 50 minutes by train and 1 hour and 30 minutes by plane, while a longer-distance encompassed 8 hours and 50 minutes by train and 1 hour and 45 minutes by plane. For both distance categories, all three information cards (the control condition, the first-class train tickets scenario, and the total travel time framing scenario) were presented. In total, participants were presented with six different scenarios, as detailed in the Appendix.

Booking assistance

Several questions were posed to assess the types of assistance that would motivate academic staff to opt for train travel when booking tickets, as well as their overall perceptions of the current booking process, especially regarding the use of Uniglobe. To explore potential dissatisfaction with Uniglobe's services, participants were given the option to select reasons for not using Uniglobe and were also provided the opportunity to list additional reasons.

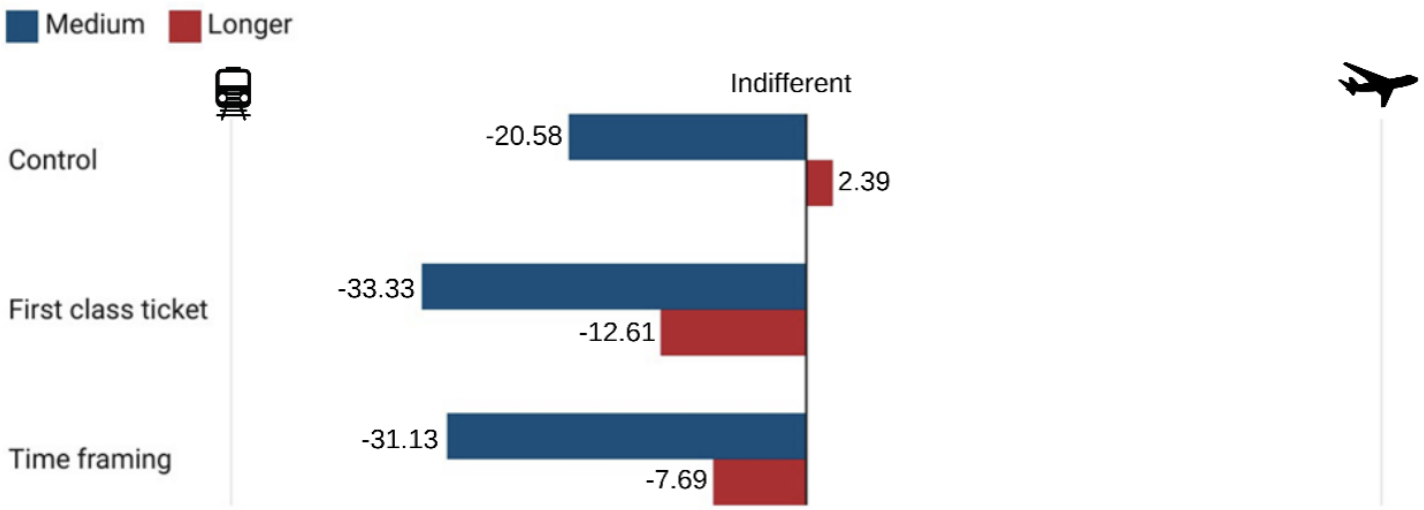
Key findings

In this section, we discuss the key findings of the study. Additional information regarding analyses and results can be found in the Appendix.

Train travel is preferred over plane travel for medium-distance trips

The results show that, on average, participants preferred train travel over plane travel for the medium-distance trip, as depicted in Figure 2. Up to half of the participants expressed absolute certainty in choosing train travel, whereas only a few were certain they would opt for plane travel, as shown in Table 1. As anticipated, this preference for train travel was less prevalent for the longer-distance trip and absent in the control condition.

Figure 2. Results for travel mode preferences as a function of Policy options and Distance. The bars depict the average preferences for travel mode. On the scale, the left (right) side indicates absolute certainty to choose to travel by train (plane). The midpoint of the scale represents indifference between both travel modes.



Distance	Policy options	Absolutely certain [...] train	Absolutely certain [...] plane
Medium	Control	30%	5%
	First-class ticket	55%	2%
	Time framing	47%	2%
Longer	Control	13%	16%
	First-class ticket	28%	8%
	Time framing	21%	8%

Table 1. Results for travel mode preferences as a function of Policy options and Distance. Percentages denote participants expressing absolute certainty in their choice of travel mode, either by train or plane. All other participants indicated preferences falling somewhere in between these two options.

Preference for train travel over plane travel increases with first-class train tickets

The results, as depicted in Figure 2 and Table 1, show that for both distances, participants demonstrated a stronger preference for train travel over plane travel when a first-class train ticket was set as the default option, in contrast to the control condition where the train ticket was for second class. This effect was especially pronounced for the medium-distance trip, where it reinforced an already existing preference. On the other hand, for the longer-distance trip, preferences shifted towards a preference for train travel from a point of indifference.

Preference for train travel over plane travel increases with total travel time framing

The findings, as depicted in Figure 2 and Table 1, reveal that for both distances, the preference for train travel over plane travel was enhanced when airport procedures were included in the travel time, in contrast to the control condition where time spent on airport procedures was not considered. Once more, this effect was stronger for the medium-distance trip, where it reinforced an already existing preference. Again, for the longer-distance trip, preferences shifted from a point of indifference towards a preference for train travel.

Booking assistance may encourage academic staff to travel by train

Approximately half of the participants indicated they would be more inclined to travel by train if they received booking assistance in three pre-specified ways: selecting the optimal trip (considering factors such as time efficiency, convenient departure and arrival times, fewer transfers, and costs), assistance with booking the train, and detailed information about the train's amenities, such as Wi-Fi and power outlets.

Limited use of Uniglobe for train ticket booking

Only a small percentage of participants (16% for train tickets and 34% for plane tickets) reported using Uniglobe, whether through phone, email, or the online portal, to book their tickets[3]. In addition, a share of participants (15% for train tickets and 23% for plane tickets) reported booking tickets through the secretary. Assuming the secretary uses Uniglobe for booking tickets, the total percentage of participants booking tickets through Uniglobe would be higher (29% for train tickets and 45% for plane tickets). In contrast, a

3. These percentages represent participants who selected at least one of the three Uniglobe answer categories, participants who selected more than one category are counted only once.

large proportion of participants (70% for train tickets and 39% for plane tickets) reported booking tickets themselves, particularly in the case of train tickets. When asked about reasons for not using Uniglobe, approximately one-third of participants indicated the desire to retain control over the booking process. Furthermore, there appeared to be a general lack of awareness regarding Uniglobe, with some participants being unaware of its existence, believing it is not required in their department, or lacking knowledge of how to use it. Additionally, dissatisfaction with Uniglobe's services was voiced by some participants, with common complaints revolving around perceived inconvenience and higher costs due to fees[4]. This sentiment is exemplified by the following quote.

"Uniglobe is too difficult to use, especially when travelling with a partner. More control over everything if you book yourself. Cheaper too, as you don't have to pay Uniglobe's fee"

4. Upon reading the draft report of the current study, the LU Sustainability Office clarified to our research team that Uniglobe's fees predominantly encompass CO2-compensation for plane tickets. Participants in this study did not specifically mention this compensation, indicating a potential lack of awareness among academic staff members. It is advisable to ensure clear communication of this information.

Conclusions

The objective of this follow-up study was to assess the effectiveness of three specific policy options aimed at promoting international business train travel among LU academic staff: offering default first-class train tickets, implementing total travel time framing (including airport procedures), and providing ticket booking assistance. As anticipated, both offering first-class train tickets and incorporating total travel time framing resulted in an increased preference among academic staff for train travel over plane travel. For the medium-distance trip, which aligns with LU's current sustainable travel policy, academic staff already favoured train travel over plane travel. This preference was further reinforced when first-class train tickets were offered or when total travel time framing was applied. However, for the longer-distance trip, falling outside the scope of LU's current sustainable travel policy, academic staff initially showed indifference between plane and train travel. This finding is consistent with our previous research (De Boer and colleagues, 20231), which identified longer travel times and higher ticket costs as key barriers to train travel for international business travel among academic staff. Nevertheless, the study findings revealed that this indifference shifted towards train travel when first-class train tickets and travel time framing were introduced.

Furthermore, while booking assistance is – in theory – valued by academic staff and has the potential to promote international business train travel, the current practical implementation through Uniglobe can be improved. The study findings show that most academic staff members book tickets themselves, with many unaware of the services offered by Uniglobe. Additionally, there is dissatisfaction among some staff members regarding Uniglobe's services, emphasizing inconvenience as a notable issue when using Uniglobe for bookings.

Recommendations

Based on these findings, we recommend the following:

- Implement first-class tickets as the default option for train travel to enhance comfort and appeal to travellers.
- Include airport procedures in the travel time calculation for plane trips, to provide a more accurate comparison with train travel and thereby increase the relative attractiveness of train travel.
- Offer assistance in selecting optimal train trips, considering factors such as time efficiency, convenient departure/arrival times, minimal transfers, and cost-effectiveness, and provide detailed information about onboard amenities, such as Wi-Fi and power outlets.
- Improve communication about Uniglobe's services to tackle the general lack of knowledge and awareness, including clear instructions on its usage and the requirement to use Uniglobe for ticket booking.
- Conduct further evaluation of Uniglobe's services, addressing issues such as slow communication and the user-friendliness of its online portal, as perceived by academic staff.

By implementing these measures, the aim is to not only encourage academic staff to choose train travel over plane travel for international business trips, but also to streamline the booking process and improve their overall travel experience.

Appendix:

Extended method and results

Method

Participants

Participants were recruited via convenience sampling over a span of 2 weeks, from January 29 to February 11 2024, using three methods: 1) The survey was posted on the LU staff website, 2) it was included in the weekly staff newsletter sent via email on two occasions (January 30 and February 6, 2024), and 3) flyers were distributed across various university buildings. As the study focused on the travel behaviour of academic staff, participants identifying as non-academic staff were excluded from the analyses. The final sample for the statistical analyses comprised 100 participants. An a priori statistical power analysis confirmed that this sample size is sufficient to infer robust statistical conclusions.

Participants' ages ranged from 24 to 77 years old, with an average age of 39 years, and 21% of participants chose not to disclose their age. Regarding gender, 38% of the participants identified as male, 50% identified as female, and 12% preferred not to say. Representation across all faculties within Leiden University was achieved, except for Medicine/LUMC, with the following distribution: Archaeology (3%), Governance and Global Affairs (6%), Humanities (6%), Law (15%), Science (47%), Social and Behavioural Sciences (20%), and 3% preferred not to specify their faculty. All academic positions were represented: PhD candidates (32%), post-docs (7%), assistant professors (24%), associate professors (11%), full professors (13%), and other academic positions (13%). Regarding participation in our previous study on the behavioural drivers behind academic staff's business travel behaviour, 48% indicated that they had not participated, 17% indicated that they had, and 35% were unsure or preferred not to answer.

When asked about their current international business travel, nearly all participants reported travelling internationally (within Europe) for work at least once (96%) or twice (71%) per year. Both plane and train travel are prevalent: participants mentioned travelling by plane (66%) and by train (83%) within Europe at least once a year. Beyond Europe, participants travelled for work at least once (55%) or twice (15%) per year.

Ethics

The study was approved by the Leiden University Psychology Research Ethics Committee (2023-11-06-E. ter Mors-V1-5070).

Procedure

The survey was conducted using Qualtrics. Before proceeding with the survey, participants read an information letter and provided their consent. Following this, participants were asked to specify their position at the university. Next, participants were presented with a series of six information cards. These cards visually summarised information about a hypothetical business trip, including details about ticket type and travel time (see "Materials" for detailed information). For each card, participants were asked to indicate their preferences between train and plane travel using a slider. After expressing their preferences for each scenario, participants answered questions regarding their travel behaviour, followed by inquiries about the ticket booking process, including specific questions about Uniglobe. Lastly, participants responded to demographic questions and provided their comments on Leiden University's travel policy through an open-ended question. Upon completion of the survey, participants were debriefed and thanked for their participation.

Materials

First-class train tickets and total travel time framing

The information cards used in this study were adapted from Curtale and colleagues (2023), due to their ability to predict actual behaviour. Each information card presented an international travel scenario. Participants were asked to imagine attending an international conference and indicate their preference between train and plane travel. The scenarios varied in terms of train ticket type (first class vs. second class), travel time framing (including vs. excluding airport procedures) and distance (medium or longer), as explained on pages 2, 3 and 4 of this report. Figure A1 depicts the six information cards.

5. Curtale, R., Larsson, J., & Nässén, J. (2023). Understanding preferences for night trains and their potential to replace flights in Europe. The case of Sweden. Tourism Management Perspectives, 47, 101115. https://doi.org/10.1016/j.tmp.2023.101115

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C1 - Control group

	Train	Plane
	09:00 Amsterdam Central Station 14:50 City centre destination	11:00 Amsterdam Schiphol Airport 12:30 Airport destination
Travel time	5 hours 50 min	1 hour 30 min
Ticket type	2nd Class	Economy

C2 - Ticket type

	Train	Plane
	09:00 Amsterdam Central Station 14:50 City centre destination	11:00 Amsterdam Schiphol Airport 12:30 Airport destination
Travel time	5 hours 50 min	1 hour 30 min
Ticket type	1st Class	Economy

C3 - Travel time framing

	Train	Plane
	09:00 Amsterdam Central Station 14:50 City centre destination	09:00 Amsterdam Schiphol Airport 13:30 City centre destination
Travel time	5 hours 50 min	4 hours 30 min (Incl. airport procedures)*
Ticket type	2nd Class	Economy

*Includes time spent on airport procedures (e.g., checking in your luggage, security screening, passport control, boarding) and traveling to the city centre.

C1 - Control group

	Train	Plane
	09:00 Amsterdam Central Station 17:50 City centre destination	11:00 Amsterdam Schiphol Airport 12:45 Airport destination
Travel time	8 hours 50 min	1 hour 45 min
Ticket type	2nd Class	Economy

C2 - Ticket type

	Train	Plane
	09:00 Amsterdam Central Station 17:50 City centre destination	11:00 Amsterdam Schiphol Airport 12:45 Airport destination
Travel time	8 hours 50 min	1 hour 45 min
Ticket type	1st Class	Economy

C3 - Travel time framing

	Train	Plane
	09:00 Amsterdam Central Station 17:50 City centre destination	09:00 Amsterdam Schiphol Airport 13:45 City centre destination
Travel time	8 hours 50 min	4 hours 45 min (Incl. airport procedures)*
Ticket type	2nd Class	Economy

*Includes time spent on airport procedures (e.g., checking in your luggage, security screening, passport control, boarding) and traveling to the city centre.

Figure 1. Information cards. Top column: medium-distance, bottom column: longer-distance

The medium-distance trip, approximately 6 hours, was selected to align with LU's current sustainable travel policy. This policy advises academic staff to opt for train travel when destinations are within 500 km or reachable within a 6-hour train journey. By including a longer-distance trip in this study, we aimed to assess the effectiveness of policy options if LU were to adopt a more ambitious travel policy, extending travel mode recommendations to greater distances. The estimated travel times for these distances were determined based on trips to real cities (Berlin and Zurich, respectively). They were calculated and adjusted using ticket booking websites and The Train Zone map (version 2.0) by Utrecht University. To mitigate participant bias towards specific cities, destination names were omitted from the information cards. The travel time for plane trips was framed as either in-vehicle time or total travel time, inclusive of airport procedures such as security screening, passport control and boarding. Airport procedures were estimated to take approximately 3 hours, which was added to the travel time.

For each information card, participants were asked the following question: "Considering the information about this trip, please indicate your preference for travel mode between train and plane by adjusting the slider below". The slider ranged from "absolutely certain that I would choose to travel by train" to "absolutely certain that I would choose to travel by plane" for each scenario. The slider spanned from -50 to 50, with 0 representing the point of indifference between the two travel modes. To prevent participant bias, the numerical values corresponding to preferences on the slider were not visible to the participants. The sequence of the information cards was counterbalanced, and participants were randomly assigned to a specific order.

Perceived influence of policy options

To assess whether participants perceived that the first-class train tickets and total travel time framing affected their travel mode preferences, participants answered the following statements: "My choices in this survey between travelling by train or plane depended on whether the train ticket was 1st or 2nd class" and "My choices in this survey between travelling by train or plane depended on whether the travel time by plane included the time spent on airport procedures" on a 7-point scale ranging from 1 (strongly disagree) to 7 (strongly agree).

Environment and other reasons

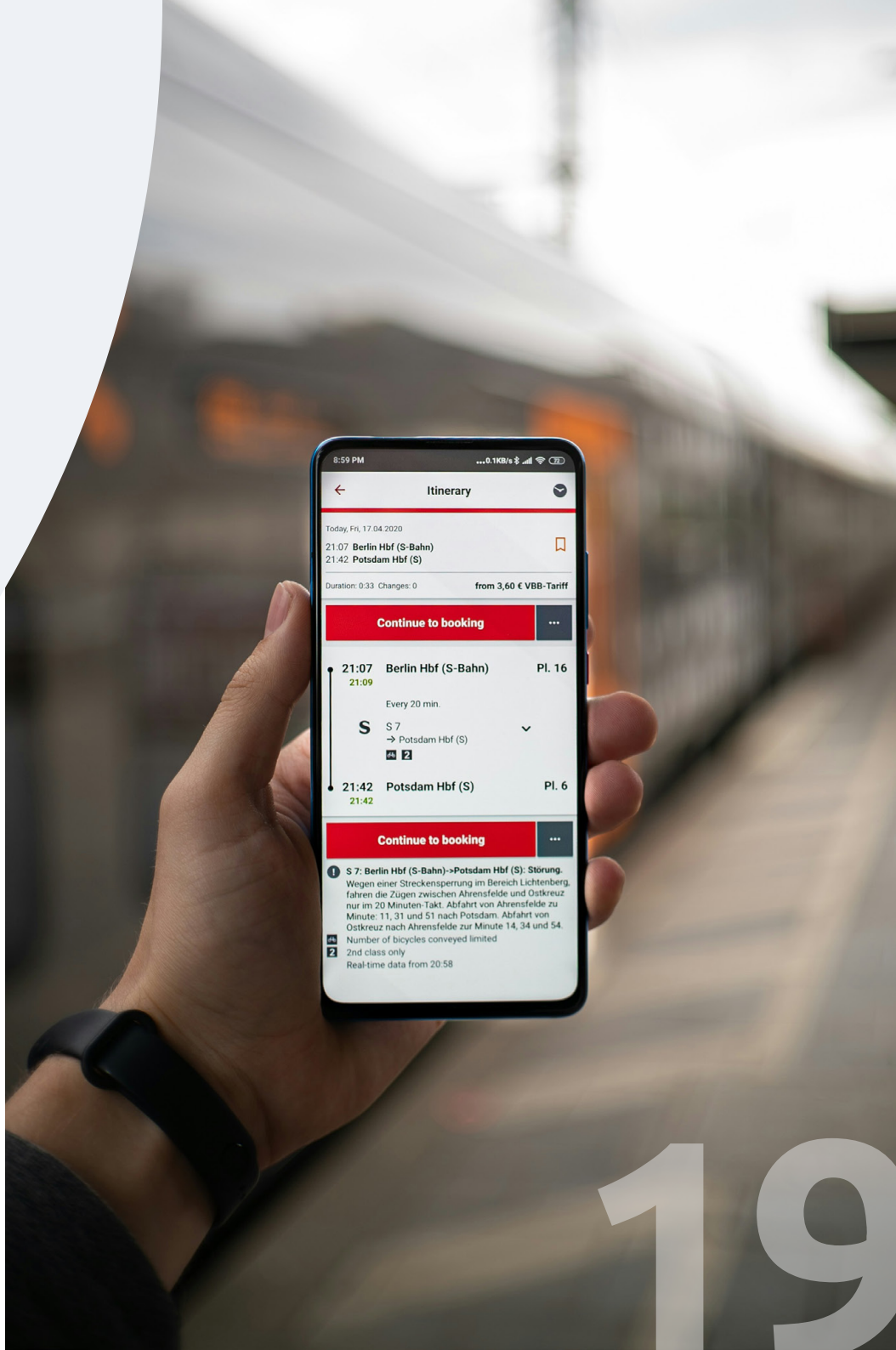
In addition to the investigated policy options, various other factors may influence academic staff's decisions between travelling by train or plane (see De Boer and colleagues, 20231). To explore this further, we included the following question: "Are there any other factors that contributed to your decision between travelling by train or plane?". Participants were given the option to select multiple answers from the following factors: "Environmental impact of travel mode", "Estimated travel costs", "Time", "Remote work options while travelling", "Comfort of travel", "Expected number of transfers", "Anticipated chance of strikes, delays and cancellations", and "Other".

Booking assistance

Participants were asked to evaluate three types of assistance: 1) assistance in selecting the best trip, 2) assistance in booking train tickets, and 3) assistance in providing detailed information about the train's amenities. For each type of assistance, participants were asked to respond to the following statement: "I am more likely to travel by train for international work-related travel if..." on a 7-point scale ranging from 1 (strongly disagree) to 7 (strongly agree).

Additionally, participants were asked about their current use of assistance platforms for booking train and plane tickets for international business travel. The question posed was: "How do you book your train (plane) tickets for international work-related travel?". Response options included: 1) Uniglobe: online portal, 2) Uniglobe: via e-mail, 3) Uniglobe: via telephone, 4) Secretary, 5) I book the ticket myself, 5) Not applicable: I don't travel internationally, and 6) Other, please specify... (open-ended). Participants were allowed to choose multiple answers.

Participants who indicated using an assistance platform other than Uniglobe were presented with a follow-up question: "Leiden University provides Uniglobe as an assistance platform for booking tickets. If you book your train (plane) tickets without utilizing Uniglobe, why?". Response options included: 1) I want to be in control of the booking process, 2) It is not required in my department, 3) I didn't know about Uniglobe, 4) I don't know how to make use of it, 5) My colleagues don't make use of it, 6) I am not satisfied with their services. Please specify... (open-ended), and 7) Other, please specify... (open-ended). Participants were allowed to choose multiple answers.



Analyses and results

This section describes the analyses conducted and presents additional results. All analyses were conducted using SPSS software. The dataset and syntax used for the analyses are available on request.

Distance	Policy options	Mean	Standard deviation
Medium	Control	-20.58	31.90
	First-class ticket	-33.33	25.79
	Time framing	-31.13	26.71
Longer	Control	2.39	35.81
	First-class ticket	-12.61	35.74
	Time framing	-7.69	34.88

Table 1. Results for travel mode preferences as a function of Policy options and Distance (N = 100). Preferences were measured on a scale ranging from -50 (I am absolutely certain that I would choose to travel by train) to 50 (I am absolutely certain that I would choose to travel by plane). The scale midpoint was 0, indicating indifference between both travel modes.

First-class train tickets and total travel time framing

We analysed the effects of Policy options and Destination on participants' preferences for travel mode. Policy options had three levels: control, first-class train tickets, and total travel time framing, while distance had two levels: medium and longer. We conducted a two-way ANOVA with these factors as independent variables, and preferences for travel mode as the dependent variable. The travel mode preferences of participants are depicted in Table A1.

A test of within-subjects contrasts revealed that, similar to our previous study (De Boer and colleagues, 2023[1]), the preferences for train and plane travel statistically significantly differed for the medium and longer-distance trips ($p < .001$). Participants demonstrated a stronger preference for train travel for the medium-distance trip compared to the longer-distance trip. Moreover, as anticipated, preferences for travel mode significantly differed between the scenarios involving first-class train tickets and total travel time framing compared to the control condition ($p < .001$). As anticipated, participants displayed a stronger preference for train travel in both policy option scenarios compared to the control condition.

Furthermore, to ascertain whether participants, on average, had a preference for travelling by train over plane, a t-test was used to determine whether the mean travel preference for each distance differed from the midpoint of the scale. This was confirmed for the medium-distance trip. However, for the longer-distance trip, this was not the case, indicating that participants, on average, did not demonstrate a clear preference for either train or plane travel for this distance.

Perceived influence of policy options

When asked about the influence of the policy options, involving first-class train tickets and total travel time framing, on their choice between travelling by train or plane, participants, on average, rated their agreement at 3.83 and 4.29 respectively on a 7-point scale ranging from 1 (strongly disagree) to 7 (strongly agree). This indicates that participants are aware of the impact of these policies on their behaviour. Interestingly, participants showed a stronger agreement regarding the effect of total travel time framing on their behaviour compared to first-class train tickets, a trend not mirrored in their travel mode preferences on the slider (see Table A1).

Order effects

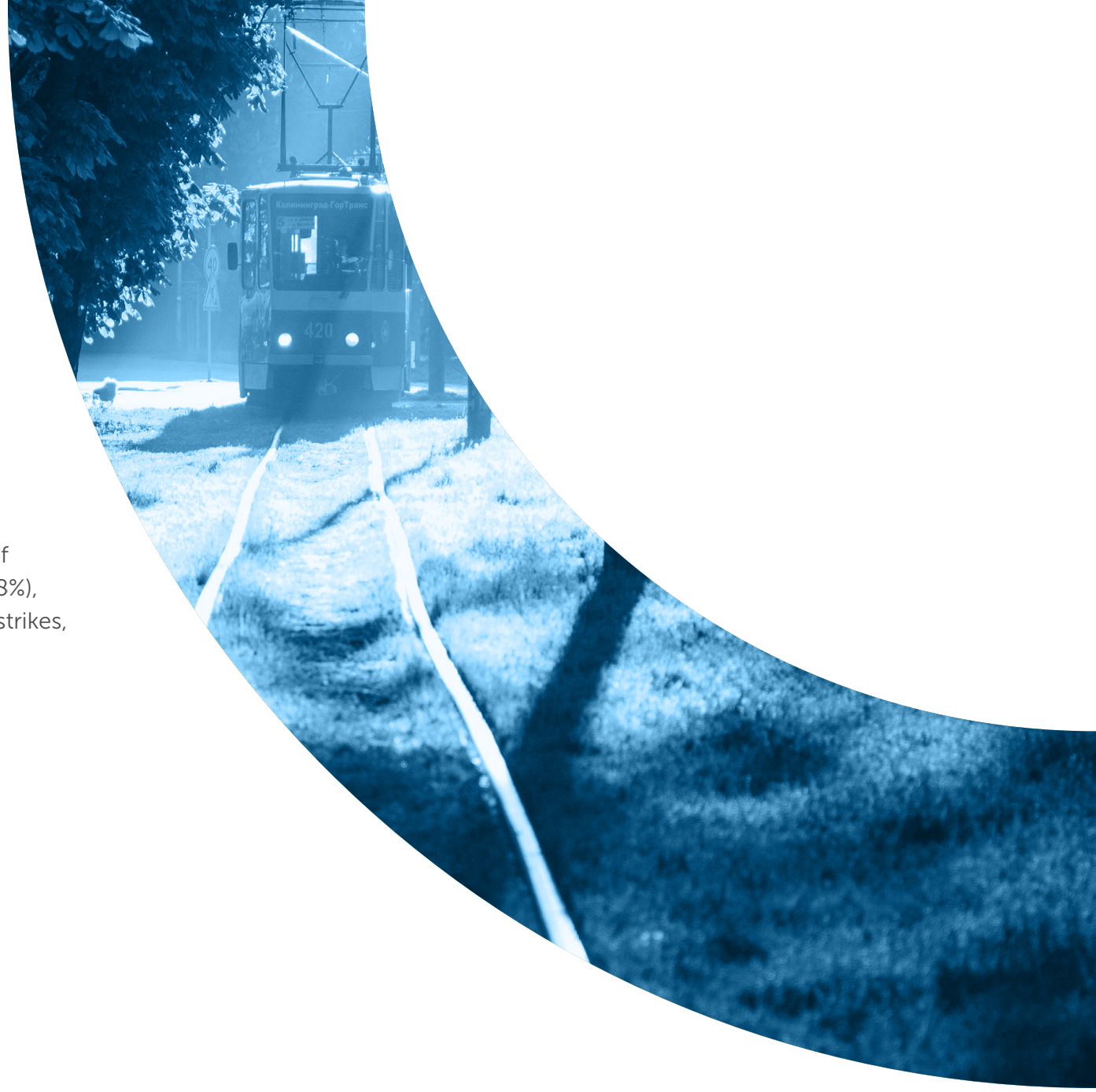
Some participants first were presented with the three information cards featuring the medium-distance trip, followed by the three information cards featuring the longer-distance trip, while for others, this order was reversed. Additionally, within each distance, some participants were shown the first-class train tickets policy option before the total travel time framing policy option, while for others, this order was reversed. This randomisation of order was implemented to eliminate and examine order effects, which are effects resulting from the sequence in which stimuli are presented.

We found no order effect for Policy options: whether participants viewed the first-class train tickets information card first or the total travel time framing information card first did not impact their preferences. However, there does seem to be an order effect for Distance. As depicted in Figure A2 below, preferences between train travel and plane travel for the medium-distance trip remained largely unaffected by the order in which the cards were displayed. However, for the longer-distance trip, preferences between train and plane travel varied depending on whether participants first viewed a medium-distance or a longer-distance trip. When considering only participants who first viewed the medium-distance information cards before the longer-distance cards, a preference for plane travel in the control condition emerged for the longer-distance trip. This preference shifted, on average, to a stance of indifference when presented with the two policy options. Conversely, when considering only participants who first viewed the longer-distance information cards before the medium-distance cards, the initial indifference in the control condition for the longer-distance trip shifted, on average, to a preference for train travel when presented with the two policy options.

The order effect for Distance could be attributed to an anchoring effect, wherein individuals are disproportionately influenced and biased towards an initially presented value when making decisions. The policy implications may be limited, as academic staff selecting their travel mode likely already have a predetermined destination in mind and thus may not be directly comparing distances. However, if an anchor is present in the environment, such as when people are checking travel times in an overview with different destinations or in other communications where various distances are displayed, this may inadvertently decrease an individual's likelihood of choosing train travel.

Environment and other reasons

In addition to the investigated policy options of first-class train tickets and total travel time framing, various other factors may influence academic staff's decisions between travelling by train or plane. Consistent with the findings of our previous study (De Boer and colleagues, 20231), participants indicated that the following factors contributed to the decision between travelling by train or plane: Environmental impact of travel mode (69%), comfort of travel (60%), time (58%), expected number of transfers (55%), remote work options while travelling (48%), estimated travel costs (34%) and anticipated chance of strikes, delays and cancellations (41%).



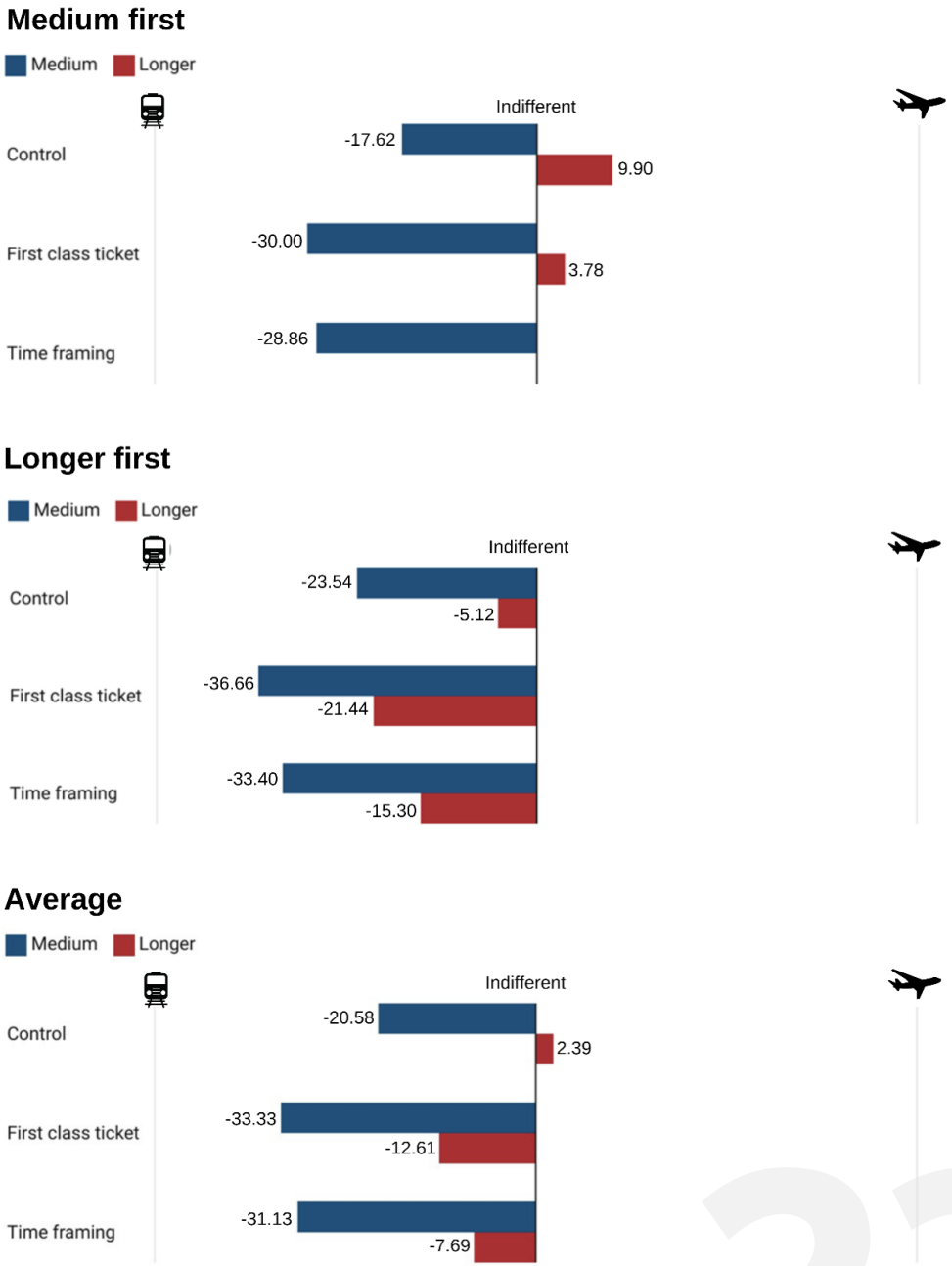


Figure 2. Results for travel mode preferences as a function of Policy options, Distance, and sequence order. The bars depict the average preferences for travel mode. On the scale, participants positioned on the left (right) side express absolute certainty in choosing to travel by train (plane), while the midpoint represents indifference between both travel modes. The third graph mirrors the graph on page 5 of this report.

Booking assistance

Tables A2, A3 and A4 present the findings for the booking assistance questions. These results suggest that various forms of assistance could potentially stimulate academic staff to opt for train travel for international business trips, including assistance in selecting the best trip, booking train tickets, and providing detailed information about train amenities. Additionally, many staff members book tickets themselves, indicating that a substantial portion of ticket are not booked through Uniglobe.

	Selecting the best trip	Booking train tickets	Providing detailed information about train amenities
Strongly disagree	8%	11%	11%
Disagree	15%	17%	17%
Somewhat disagree	6%	5%	5%
Neither agree nor disagree	10%	15%	15%
Somewhat agree	19%	22%	22%
Agree	24%	19%	19%
Strongly agree	18%	11%	11%

Table 2. Results for the booking assistance questions "I am more likely to travel by train for international work-related travel if I am given assistance in..." (N = 100). Percentages denote the share of participants that selected each answer category.

	Booking train tickets	Booking plane tickets
Uniglobe: online portal	7%	20%
Uniglobe: via e-mail	10%	17%
Uniglobe: via telephone	2%	1%
Secretary	15%	23%
I book the tickets myself	70 %	39%
Not applicable; I don't travel internationally	2%	7%
Other, please specify... (open-ended)	9%	15%

Table 3. Results for the question "How do you book your [train or plane] tickets for international work-related travel?" (N = 100). Percentages denote the share of participants that selected each answer category. Participants could select multiple answers.

Some example responses from the category "Other, please specify..." regarding train tickets included: "I often plan vacation travel around work travel" and "I use Google Maps to indicate which websites to use". Examples of responses concerning plane tickets were: "The last time I travelled by plane, the ticket was booked by a university abroad" and "I book myself only when required - I don't like waiting for travel expenses to be reimbursed".

	Booking train tickets	Booking plane tickets
I want to be in control of the booking process	40%	31%
It is not required in my department	12%	3%
I didn't know about Uniglobe	23%	15%
I don't know how to make use of it	17%	9%
My colleagues don't make use of it	5%	3%
I am not satisfied with their services. Please specify... (open-ended)	15%	9%
Other, please specify... (open-ended)	20%	26%

Table 4. Results for the question "Leiden University provides Uniglobe as an assistance platform for booking tickets, if you book your [train or plane] tickets without utilizing Uniglobe, why?" (N = 100). Percentages denote the share of participants that selected each answer category. Participants could select multiple answers.

When asked to specify why participants are dissatisfied with Uniglobe's services, participants mentioned experiencing hassles, such as slow responses from customer service and difficulty using their online portal. Additionally, participants noted that tickets booked through Uniglobe tend to be more expensive due to extra fees.

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Authors: Alien van der Vliet, Vera Hilgevoord, Hannah de Boer, Hilal Kara, Ruth Dijkstra, and Emma ter Mors.

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