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TELEWORKERS VERSUS IN-PERSON WORKERS: THE EMPLOYEE PERSPECTIVE OF TRAVEL BEHAVIOR AND ITS ENVIRONMENTAL CONSEQUENCES

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I hereby declare that I have compiled the thesis independently
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ABSTRACT

Teleworking is a highly discussed topic as people are beginning to work from home more often, however, the travel and environmental implications of that are inconclusive due to a lack of qualitative data in the field. This research aims to fill this gap by exploring the intermediary factors between teleworkers' and in-person workers' travel behavior and their resultant environmental impact through the perspective of employees.

The findings of this study highlight the importance of the efficiency, practicality and experience of travel in shaping travel behavior. The teleworkers particularly focused on the prospect of efficiency while in-person workers prioritized agility when deciding to travel. Regarding the understanding of travel-related environmental implications, no significant differences were found between work modes. There was a wide spectrum relating to the extent to which participants considered the environment while traveling, and most employees considered their individual impact on the environment to be relatively low. Together, these findings provide a solid basis for understanding the complexity of employee travel behavior and allow for more effective travel-related policy-making to accommodate changes in this regard. Similarly, understanding the thought processes behind the behaviors of employees allows organizational managers to implement strategies to promote sustainability within their companies. Overall, these findings may lead to more effective and efficient transportation systems and an increase in social responsibility for companies who promote it, benefiting governments, employers and employees alike.

Keywords: Telework, travel behavior, environmental sustainability

INTRODUCTION

In 2020, the greatest global public health threat of the century took place when the COVID-19 pandemic occurred (Chakraborty & Maity, 2020). Governments needed to respond immediately to this threat to society, and central administrations around the world placed a ban on free movement, leaving travels canceled and industries out of order (*Ibid.*). Because of this, many adaptations in the way society functions took place abruptly. Employees began working at home more often and offices were left empty to limit the spread of disease. Approximately half of the U.S. workforce worked from home by May 2020 (Brynjolfsson et al., 2020). Future trends reveal that this change is here to stay and that the projected share of teleworkers will continue to increase in the following years (Barrero et al., 2021; Bick et al., 2023; Currie et al., 2021; Salon et al., 2022). Since teleworkers typically work from home, one may expect overall travel and related environmental consequences to significantly decrease for teleworkers, but the literature surrounding this topic is more complex and requires further research.

Travel behavior is a crucial aspect for organizational managers and governments to understand. Cities all around the world are becoming more technologically advanced and interconnected with one another, however traditional transportation modes continue to be the most prevalently used modes of travel (He et al., 2024). With the new rise of varying work modes and future changes in travel patterns, transportation systems need to be flexible, responsive and offer personalized services for individuals (Kuo et al., 2023). Similarly, managers within organizations must also accommodate changes in employee travel behavior. By carrying out measures that provide the necessary support for those who work outside of the office, managers are able to significantly increase the success of implementing such work modes (Heidt et al., 2023). This may include providing technical support, offering transportation options or implementing other supportive measures for flexible working. Thus, understanding the travel behavior of individuals is crucial to tailoring to upcoming trends and working habits.

The literature contains inconsistencies in regards to the overall travel distance and frequency of teleworkers along with the resultant environmental impact. Additionally, many other aspects play

a role in this matter, including the use of specific travel modes, workers' residency locations, personal preferences and more, each of which has been understudied in different contexts. This complex topic requires an in-depth approach to understanding the phenomenon. Also, COVID-19 is quite a recent event and because of this, much of the literature on the post-pandemic workplace is based on previous data and prospective research (McPhail et al., 2024). Workplace behaviors in a post-pandemic context are subject to great change over time and the long-term effects of telecommuting during this time have yet to be studied (Beck et al., 2020; Zhu & Wang, 2024).

The research problem is that there is a lack of in-depth understanding of workers' travel behavior and their resultant environmental impact between work modes, particularly in the post-pandemic era. Thus, this research aims to explore the influencing factors between teleworkers' and in-person workers' travel behavior as well as their environmental impact. This research addresses the following research questions:

1. What factors influence employees' travel behavior?
2. How do employees understand their environmental impact in relation to travel?
3. Do these factors vary between teleworkers and in-person workers? If so, how?

The first chapter of this thesis provides an overview of the current literature, summarizing current findings from scholars. This section begins by showing the timeliness of this topic and the prevalence of various work modes in today's day and age. It also provides a summary of the findings regarding teleworkers' and in-person workers' travel behavior as well as the resultant environmental impact. Doing so will not only establish the known facts regarding this topic between and among work modes but will also reveal which aspects are still under discussion and require further research.

The second chapter of this research pertains to the methodology used to collect and analyze the data. Then, the third chapter of this research summarizes the findings from the empirical data. Based on these findings, conclusions are drawn in the final chapter. Limitations of this research are also provided followed by potential avenues for future research.

It should also be noted that many of the studies that this research draws from in the literature review were conducted before the COVID-19 pandemic. This is important because pandemic-related travel restrictions may bias and interrupt the results of the studies that seek to address the effects of teleworking on travel behavior (Zhu & Wang, 2024).

1. LITERATURE REVIEW

In this section, an overview of the current literature regarding telework, travel behavior and its environmental impact will be given. Firstly, definitions of the different forms of work found in literature will be elaborated upon which will set up the frame and lens for the empirical section of this research. Following this, an overview of the prevalence and long-term outcomes of telework will be given to demonstrate the value of research in this field. Then, current literature regarding the travel behavior of workers will be drawn from, comparing those who work in-person and those who telework. Finally, the impact of telework and in-person work on the environment will be analyzed through the lens of the theory of planned behavior. These sections will provide a firm framework for this research, summarizing the findings other scholars have discovered as well as shedding light on the current gaps in the literature. They also highlight key features that are of great importance for future policy-making and human resource management decisions.

1.1. Telework defined

Telecommuting is a term used by scholars and can be seen in literature dating back to the 1970s by authors such as Nilles (1975), who states, “A telecommuting network has computational and telecommunications components which enable employees of large organizations to work in offices close to (but generally not in) their homes, rather than commute long distances to a central office” (p. 1143). Since this time, telecommuting has developed and grown in popularity. Employees not only worked in a variety of offices but also began working from home and other locations. Over these transformational years, telecommuting has been referred to by a variety of other terms as well, such as telework, remote work, distributed work, virtual work, flexible work, flexplace, distance work and more (Allen et al., 2015). One of the most prevalent extensions of telecommuting in research today is telework. Generally, telework is used as a broader term to encompass any form of work that involves working from a variety of alternative locations outside of the traditional workspace, including but not limited to home-based work forms (*Ibid.*). This includes part-time telework, which allows for regular in-person visits to the office as well as remote work throughout a given week; it also encompasses full-time telework, in which the worker

does not work from the office at any time. However, varying definitions of telework exist with no singular accepted definition and because of this, researchers have struggled to compare the results of similar studies in this field (*Ibid.*). This has caused many issues that still exist in literature today, as scholars conduct studies with varying results due to the ever-changing definition of telework.

Another common term in the literature is remote work. Sullivan (2003) argued that in general, telework and remote work may be used synonymously, although definitions for both terms have varied over time and have become a complex phenomenon to study. Both terms describe people who work beyond the office, and Vartiainen (2021) states that the use of information and communication technology, or lack thereof, is the primary link between terms. At their core, both remote work and telework focus on the location of the worker, with Mokhtarian (1991) defining remote work as "work done by an individual while at a different location than the person(s) directly supervising and/or paying for it" (p. 3). This definition is very similar to the previous definition of telework, with both terms focusing primarily on the location of the worker. Both terms refer to the act of working from home or other spaces outside of the traditional workplace, with minor differences in the ways workers do so. Other terms also exist under the umbrella term of telework, such as mobile telework, digital online telework, home-based telework and more which further highlight the differences between workers who work outside of the traditional office (Vartiainen, 2021). However, these terms will not be used throughout this research as the author focuses primarily on those who work outside of the traditional working space without the need for other specific variables.

To conclude, each of the terms discussed in this section refers to some form of working from home, with some scholars such as Karanikas and Cauchi (2020) using many of the terms synonymously with one another. Other scholars, however, argue that each term refers to a slightly different mode of work, showing that the definitions for different types of work are not clearly established and may overlap with one another. This shows that discrepancies exist regarding the definitions of working from home, and thus scholars must decide for themselves which is the most suitable in different contexts. As this research focuses on workers who work from home a majority of the time, the terms telework and remote work will be used exclusively throughout the empirical section of this research. These terms will be used interchangeably with one another as the definitions within and between these terms vary within literature and are unclear. Throughout the literature review, however, the author will draw on secondary research using any of the terms that encompass regularly working from a location other than the traditional office and the author will

refer to the same terms as used in cited literature. Additionally, in the empirical section of this research, telework will be compared with the traditional form of work which involves working exclusively at the office. This will be referred to as in-person work as it involves showing up physically to work every day. The terms non-teleworkers and non-telecommuters are also often used while comparing them to their antitheses.

1.2. Prevalence of telework

Although literature regarding the post-pandemic workplace is limited due to the recency of events and lack of long-term evidence, studies have made observations regarding productivity, satisfaction and more to understand how employees have responded to this change (Brunelle & Fortin, 2021; Galanti et al., 2021). With this information, one can make inferences regarding the future of work as literature shows a correlation between people's expectations about their current behavior and their expectations about future behavior (de Haas et al., 2020). This can be seen graphically in Figure 1.

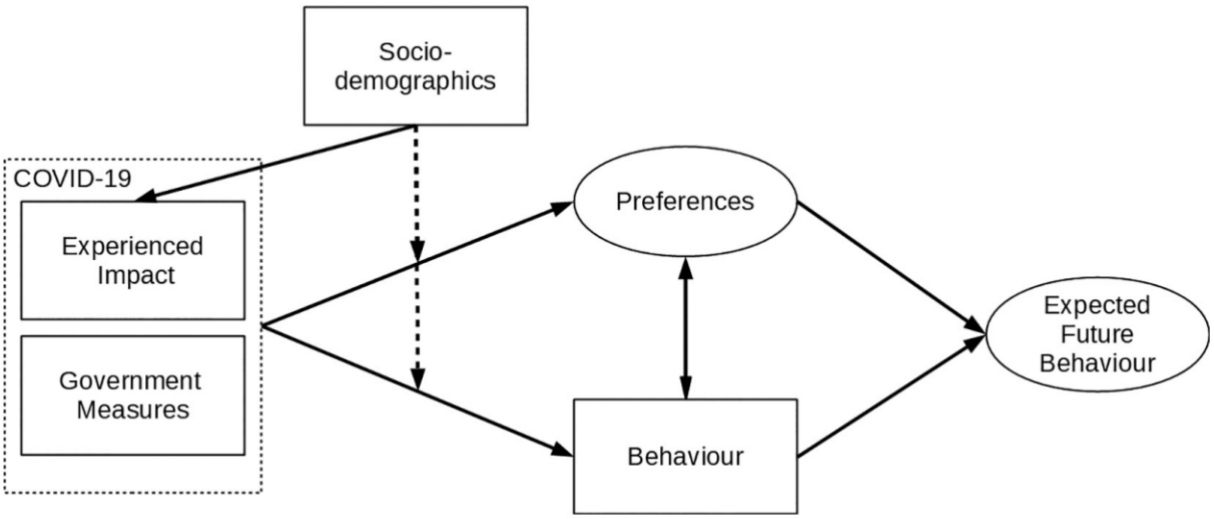

Figure 1. Research framework of the impact of COVID-19
Source: de Haas et al. (2020)

Based on this framework, researchers may be able to use employee preferences to understand the future of work in the longer term. In terms of working from home, the implementation of this new work form was well received by employees in 2020, with many employees reporting better-than-expected experiences and productivity during this time (Barrero et al., 2021). In line with this,

Brunelle and Fortin (2021) assessed the satisfaction levels of teleworkers and office workers based on three main psychological needs: autonomy, competence and relatedness. They discovered that teleworkers were more satisfied than office workers on all three psychological levels (*Ibid.*). This increased satisfaction with remote work among individuals may largely impact the prevalence of remote work moving forward.

Adaptations took place to accommodate this new change with many online platforms, such as Zoom, Microsoft Teams, Slack and Outlook, helping enable workers to fulfill their duties from home (Leonardi, 2021). This has been a significant aspect contributing to the ease of work, allowing employees to communicate easily with others and giving them the ability to conduct all necessary work-related tasks from home. Also, this new surge of telework may cause more new technologies to develop that aid remote work and lead to further increased productivity (Bick et al., 2023). With technological advancements occurring at a rapid speed, the potential for ease of work in different locations may also increase. Working from home also allows employees to remain in the comfort of their homes without the need to commute to work or spend additional time to and from their place of work. Factors such as these may also contribute to the increase of home work satisfaction and implementation in the long term, beyond the initial crisis of the pandemic.

Of course, like any work mode, telework has its potential downfalls as well. For example, employees may experience a sense of social isolation when working from home more often (Sewell & Taskin, 2015). Also, Golden and Eddleston (2019) found that frequent teleworkers may experience lower salary growth due to the flexibility stigma associated with flexible work modes, arguing that face-to-face contact is crucial to combat these negative effects. The problems that individuals face while working from home may also be exacerbated by the presence of children, with Arntz et al. (2020) arguing that working from home may potentially bring back traditional gender roles as women need to tend to their children. Despite these issues, however, working from home was quite well received by employees and easy to implement, and thus may continue gaining popularity in the workforce moving forward. A year into the pandemic in June 2021, the share of work-from-home days remained elevated at 28.5%, approximately double the pre-pandemic level (Bick et al., 2023). Salon et al. (2022) found that the fraction of workers who telework occasionally will increase from 23% to 40% after the pandemic, with the increase in frequent teleworkers being even more significant from 13% to 26%, most likely due to increased opportunity to work from home moving forward, along with the desire to continue working in the same way as during the

pandemic. Overall, studies have predicted that the elevated levels of working from home in the economy will continue well into the long term (Barrero et al., 2021; Bick et al., 2023). Because of this, work from home as a concept must be thoroughly researched in all regards, so that employers and employees understand how it impacts society, not just in regards to employee satisfaction but also in terms of travel behavior, the environment and more.

1.3. Teleworkers' and in-person workers' travel behavior

Travel behavior is a very important topic for those who are interested in the demand of transportation systems, among which route choices, mode choices, travel time choices and their combinations are most commonly modeled (Avineri, 2012). These factors will be discussed regarding teleworkers and in-person workers in order to understand the behavioral standpoints of the two work modes.

Due to the nature of their work, teleworkers commute to work less often than their office-working counterparts; however, the literature surrounding overall commute distance is inconclusive. De Abreu e Silva and Melo (2018a) found that home teleworking reduces commuting frequency but increases the distances traveled for work and non-work purposes. This is most likely due to the fact that teleworkers may live farther away from work than in-person workers. Zhu and Wang (2024) mention theories that suggest that workers seek a balance between the costs of housing and costs of commuting based on income and worker preferences. This implies that as one of the costs increases, workers tend to decrease the other costs to keep the overall costs at an equilibrium. In this case, since teleworkers commute less often than office workers and thus have lower costs associated with commuting, they may have more financial flexibility regarding housing costs. Because of this, workers are able to rebalance their budgets to accommodate more spacious housing in exchange for proximity to work (Zhu et al., 2023). This may lead to an increased travel distance for teleworkers in comparison to office workers. However, this increased distance between teleworkers' residential location and office may not be of much significance to total travel time in relation to in-person workers. Mokhtarian et al. (2004) found that one-way commute distances were higher for telecommuters than in-person workers; however, they concluded that the average quarterly per capita total commute distances were generally lower for telecommuters, showing that telecommuters do not travel to work often enough for this increased distance to be a significant issue. Similarly, Rafiq et al. (2022) observed a proportional relationship between the

lower number of workplace visits caused by the pandemic and person-miles traveled. Thus, the literature suggests that teleworkers may commute less overall in comparison to their office-working counterparts.

However, many studies have shown that teleworkers travel more than in-person workers when it comes to non-work-related travel. He and Hu (2015) suggest that this higher non-work travel may be primarily caused by unobserved differences between teleworkers and non-teleworkers such as preference, job type and other related factors. Zhu et al. (2018) came to similar conclusions, finding that telecommuters consistently travel longer and more frequently than non-telecommuters after holding other factors constant. These findings suggest that teleworkers typically live farther away from non-work-related destinations and are more flexible with their time, thus tending to travel longer and more frequently when they have the ability to work from home (*Ibid.*). This shows that although teleworkers typically commute less, this may be offset by the distance and frequency of non-work-related travel.

These differences between commute and non-commute travel bring researchers to predict teleworkers' net travel in comparison with office workers'; however, scholars have divided opinions on this topic. Some argue that teleworking limits the amount of traveling that workers conduct (Irawan et al., 2022; Rafiq et al., 2022). Irawan et al. (2022) suggest that to minimize travel, teleworking should be encouraged and implemented. Other scholars, however, state the opposite, arguing that teleworking may increase workers' overall travel demand and lead them to conduct more out-of-home activities (He & Hu, 2015; Zhu et al., 2018). Zhu et al. (2018) argue against policies that promote teleworking, stating, "Policies that promote telecommuting may indeed increase, rather than decrease, people's travel demand, regardless of the size of the MSA. This seems to contradict what telecommuting policies are designed for" (p. 409). To bring benefits to current telecommuting policies, the overall travel behavior of workers must be fully understood.

The modes by which teleworkers and in-person workers travel also vary. Chakrabarti (2018) states that frequent teleworkers typically have a 41% higher chance of walking or riding a bicycle for more than one mile, a 71% higher odd of conducting half an hour or more of physical activity, a 71% less chance of riding transit as well as 3.58 times greater odds of driving more than ten miles. These statistics show that the difference between travel modes is quite significant between in-person workers and teleworkers. Numerous studies have found similar results, concluding that if other factors remain equal, teleworkers are more active throughout the day and spend less time

traveling by car on average (Lachapelle et al., 2018; Ozbilen et al., 2021; van der Loop et al., 2019; Wang & Ozbilen, 2020). Alongside this, studies have shown that teleworkers are more flexible with the timing of their travels and because of this, they typically spend less time traveling during rush hour, thus alleviating congestion (Elldér, 2020). However, some studies have found opposing results. De Abreu e Silva and Melo (2018a) argue that in one-worker households, teleworking increases weekly travel distance, particularly by car. This is most likely due to the fact that teleworkers have higher commute distances along with the fact that teleworkers are more likely to own a car (*Ibid.*). Bieser et al. (2021) found that this may also be dependent on the chosen location of work teleworkers use instead of the office, stating that those who work from a telecommuting center travel by car less than if they worked from home. This shows that the use of specific travel modes is highly contextual and largely depends on the location of workers, ownership of a car and other factors that may interfere with these results.

The frequency, distance and mode of travel between teleworkers and in-person workers is still under discussion. Teleworkers seem to travel less often than in-person workers regarding work-related travel, but more when traveling for non-work purposes. However, different studies with different methodologies have shown many varying results, showing that this topic is complex and requires a deeper understanding of contextual differences between these types of workers. As most of the studies that have been conducted are quantitative in nature, the literature lacks an in-depth understanding of these discrepancies in the literature.

1.4. Teleworkers' and in-person workers' environmental impact

When looking at the research regarding the environmental impact of teleworkers and non-teleworkers, scholars typically focus on pollutant or greenhouse gas emissions as well as transportation-related energy consumption (Zhu & Wang, 2024). These measurements are based on predominant factors relating to telecommuting's impact on the travel behavior of workers (*Ibid.*). This shows the importance of travel behavior in understanding the environmental impact of work and because of this, many studies have been conducted to quantify the travel impacts of teleworking in comparison with in-person work. However, some results have been contradictory with one another, as some scholars argue that teleworking promotes environmental sustainability while others argue the contrary (*Ibid.*). This divide in the literature has inhibited the ability of researchers to fully understand the environmental implications of the new rise in teleworking.

In terms of greenhouse gas emissions and air pollution, most scholars argue that teleworking is effective as a policy to reduce such emissions. Alonso et al. (2017) compared three land use and transportation policy measures, namely cordon toll, teleworking and re-densification, to address the effectiveness of each policy and the challenges that they face. They found that among the three policies, teleworking was the most effective in reducing congestion as well as improving traffic flow during peak hours (*Ibid.*). Similarly, a case study in Switzerland used longitudinal data to show that teleworking reduced traffic volume and in turn, reduced air pollution as well (Giovanis, 2018). These studies show that teleworking may be a very useful tool to limit air pollution and other emissions caused by transportation. However, some studies indicate that teleworking may achieve the opposite effect. For example, Cerqueira et al. (2020) analyzed the environmental impact of working from home on carbon dioxide emission levels and found that teleworking does not decrease these emissions due to a number of rebound effects, such as farther travel distances and increased non-work trips that mitigate the significance of working from home for teleworkers. Zhu and Mason (2014) also mention that these rebound effects may cancel out the effectiveness of teleworking for reducing greenhouse gas and carbon dioxide emissions, stating that policies promoting teleworking may bring undesired results for the environment. Thus, it is crucial for future research to focus on these rebound effects and understand their significance in different contexts and cultures before implementing teleworking policies.

Energy use is another important aspect of the environmental impact of telework and in-person work. Since the location and use of technology differ between these workers, the resultant energy use may differ as well. Villeneuve et al. (2021) argue that teleworking may increase overall energy use as many people have begun using more home office equipment, appliances and air conditioning while teleworking. They found that many of the participants in their study reported higher electricity bills while working from home, with 20.9% of participants reporting a 25-50% increase, and 51.4% of participants believed their electricity usage was 10-25% higher (*Ibid.*). Rehmani et al. (2022) found that teleworking leads to reduced office usage but an increase in computer systems at home. They state that energy related to air conditioning and heating systems remained stable as teleworkers had those in their houses regardless of their work form, however, stationary items were used more in regards to telework (*Ibid.*). Another factor that may affect the energy use of workers is the type of equipment used. More energy-efficient office equipment will lead to higher environmental benefits and should be utilized as much as possible (Guerin, 2021; Nakanishi, 2015). Thus, ensuring that high-quality equipment is used at home or in the office is

crucial to ensuring an environmental change in the economy. Naturally, as teleworkers shift to working from home, office spaces will modify their energy use as well, with several studies showing that office energy decreases as employees work from home (Navaratnam et al., 2022; Rehmani et al., 2022). However, Nakanishi (2015) argues that this may depend on whether or not companies implement this teleworking throughout their company or not. If teleworking is widespread then part of the office can be closed and they will reduce energy at work, however, if only a few workers telework, then these benefits will not be present (*Ibid.*). Thus, it is important to ensure that companies implement policies relating to the type of equipment and frequency of teleworking among employees to best benefit the environment.

Overall, the literature contains many inconsistencies relating to the net environmental impact of teleworkers and in-person workers. Similarly to the discrepancies found in the literature regarding travel behavior, these inconclusive results may be due to the lack of an in-depth understanding of the thought processes behind workers' behavior related to environmental issues. Ajzen (1991) developed the theory of planned behavior to highlight the existence of other factors that contribute to the behavior of individuals. According to this theory, intentions are the primary driving factor leading to behavior, which is composed of three main parts: the attitude toward the behavior, the subjective norm and the perceived behavioral control (*Ibid.*). This is demonstrated in Figure 2.

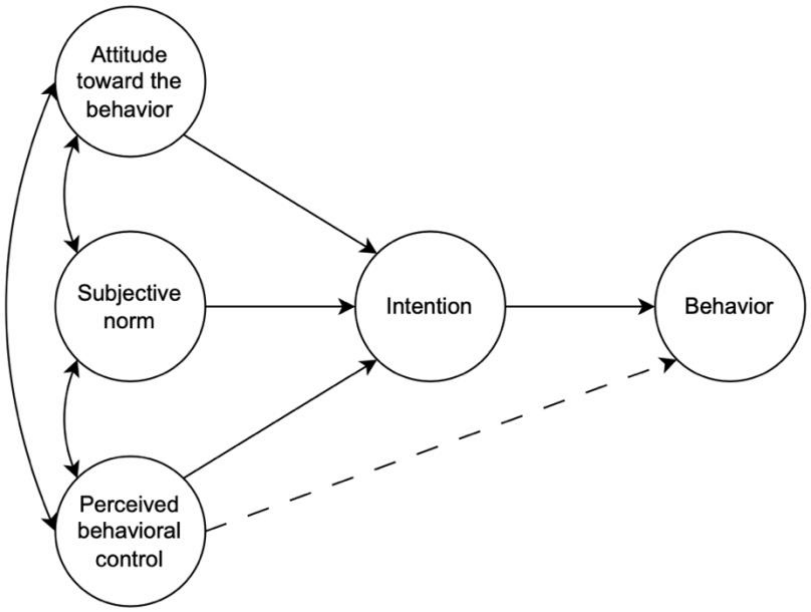

Figure 2. Theory of planned behavior
Source: Ajzen (1991)

According to this theory, behavior may be predicted by the ways in which individuals perceive the importance of named behavior as well as how others around them behave, creating the attitude and subjective norm. Finally, the importance of the perceived control of the behavior is also important, as individuals must feel that they have a certain level of control over the outcome of situations before acting upon them.

This theory has been widely utilized in literature, both in organizational settings and domestically (Yuriev et al., 2020), as it proves to be a very feasible and valid predictor of behavior (Ulker-Demirel & Ciftci, 2020). This theory may also be implemented to understand the underlying causes of the travel-related environmental impacts of employees in the workforce. For example, Greaves et al. (2013) applied this theory and found that it accounted for 46% and 61% of the variance in employees' intentions to engage in certain environmental behaviors in the workplace. Thus, using this theory to understand where employees stand in relation to the three components that drive intentions may provide a solid basis for understanding the discrepancies in the literature between the environmental impacts of teleworkers and in-person workers. In turn, this will allow for more effective policy-making in the future.

2. METHODOLOGY

This section of the thesis describes the methodology of the empirical part of this research. Firstly, the author explains the approach utilized for the research overall as well as the data collection methods used. Following this, the data analysis methods are described.

2.1. Data collection

The aim of this research is to explore the intermediary factors between teleworkers' and in-person workers' travel behavior and their resultant environmental impact. To achieve this, empirical data was collected to provide an in-depth analysis of employees' attitudes and behavior regarding travel behavior and travel-related environmental issues.

Qualitative research allows for the collection of non-numerical data to understand people's experiences, attitudes and behavior, and brings a new depth of studies that cannot be achieved through quantitative analysis (Pathak et al., 2013). This gives way to understanding the underlying beliefs, attitudes and preferences that may relate to the ways in which employees conduct their travel. This research also follows an interpretive approach, which acknowledges the subjective experiences of individuals, providing information from the participants' point of view to analyze the behaviors, intentions and emotions (Tracy, 2019, p. 60). This type of research provides the necessary information to understand the underlying factors between teleworkers' and in-person workers' travel habits. As this thesis aims to answer exploratory questions regarding the travel behavior of employees, this research method and type will aid in fulfilling the goals of this research.

Semi-structured interviews were conducted as they allow the researcher to prepare an interview guide that broadly covers the themes to be touched upon during the interview while maintaining the free-flow, in-depth experience that unstructured interviews provide (Qu & Dumay, 2011). The author curated an interview guide with eight questions to bring up with the interviewees as deemed fit. These questions helped generate an organic conversation where participants were able to share

their honest opinions and considerations relating to travel and the travel-related environmental impacts. The list of prepared questions used during the interviews can be seen in Appendix 1. Additionally, a purposeful sampling method was used for this research, which is a non-random sampling method that ensures that certain categories of cases are sufficiently represented in the sample (Robinson, 2014).

Table 1. Interviewees' general information

Name	Age	Gender	Work position	Weekly office visits
Interviewee A	32	Female	Freelancer	0
Interviewee B	28	Male	Research engineer	0.2
Interviewee C	29	Female	Internal communications specialist	1-2
Interviewee D	30	Male	Web engineer	2
Interviewee E	30	Female	Project manager	2-3
Interviewee F	28	Non-binary	Post-doctoral researcher	5
Interviewee G	26	Male	TV director	5
Interviewee H	32	Female	Marketing specialist	4

Source: Prepared by the author

Eight interviews were conducted with workers of various teleworking and in-person working patterns, including those who work fully in-person and fully remotely. All of the interviewees are between the ages of 26 and 32 to minimize the variation of answers caused by large age gaps between participants. Additionally, all participants are residents of Estonia. The participants varied in terms of gender and working positions, however, which can be seen in Table 1.

2.2. Data analysis

The author of this research followed a thematic analysis approach to analyze the data. Braun and Clarke (2006) define thematic analysis as "a method for identifying, analysing and reporting patterns (themes) within data" (p. 79). This approach allows for data collected through interviews to be categorized within and amongst one another to find broader themes. Firstly, the author took the recorded data and transcribed it into written text. This process of transforming audio recordings into written language is an interpretive process where researchers must listen to the audio, interpret the meanings, decide which nuances should remain in the transcription and write the transcription in the most accurate manner possible in order to capture the true meanings within the interviews (McMullin, 2023).

Once this was completed, the coding process began. Codes are words or phrases that the researcher uses to symbolize and attribute meaning to information within the interview which allows for detection of patterns, categorization and other analytic processes to take place in later stages (Saldaña, 2013). The author read the transcriptions, assigning codes to certain words, phrases and sections to categorize them and make connections with other texts. These codes helped the author analyze the patterns within and between conducted interviews and ultimately aided in narrowing down the data to applicable pieces of information, which in turn helped fulfill the goals of the research. Once initial codes had been generated, the author searched for themes and categorized the codes accordingly. Then the author reviewed the themes in order to finalize them, as it is important to ensure that clear, distinct differences can be seen between themes (Braun & Clarke, 2006). Once this was finished, the author presented the results and discussion, followed by final concluding remarks.

3. ANALYSIS AND DISCUSSION

This section summarizes the findings analyzed through the interviews conducted for this research. In Section 3.1., numerous factors relating to interviewees' travel behavior are explored, demonstrating the extensive thought processes of individuals regarding travel. These factors are categorized into three main components, however, these are composed of several sub-factors which show that various factors contribute to participants' overall travel behavior. Following this, Section 3.2. highlights participants' understanding of their travel-related environmental impact, considering the extent to which they think about such topics as well as their beliefs that their personal impact plays a role in the issue as a whole. Throughout these sections, analyses are made through the lens of work modes, highlighting the opinions and thoughts of those who telework as well as work primarily from the office which will be compared in Section 3.3. Finally, a discussion of the results, relating them to the identified gap in the literature, makes up Section 3.4.

3.1. Factors impacting travel behavior

Participants widely varied in their overall travel behavior in terms of frequency, modes and regularity of travel they undertake. Regarding the regularity of travel, some participants stated that they have quite routine work schedules which start and end at a set time every day, while others are more flexible with their time both during and outside of traditional working hours. This is likely due to their work modes, as working in the office requires set hours while working from home allows for more flexibility in this regard. Interviewee D, a teleworker who visits the office approximately twice a week, also mentioned that "it's a little bit different office versus at home," showing that the work mode he implements that day impacts how his day looks. However, fluctuations in daily travel may also be due to the particular jobs that individuals have. For example, Interviewee A, a fully remote worker, works as a freelancer which naturally eliminates the strict requirements of formal working hours. Interviewee E also mentions that her work requires a lot of flexibility and that these fluctuations are "because [she is] a project manager." However, certain jobs often require particular work modes, and thus these factors may intertwine with one another.

The frequency in which interviewees travel also varies, which is most likely due to their work modes. For example, Interviewee B, who visits the office approximately once per month, stated that "some days [he doesn't] leave the house" and that the days which he does are typically not on work days, for non-work purposes. In terms of non-work related activities, most of the teleworkers mentioned a few regular outings they undertake on a regular basis such as going out "for a coffee or for lunch" (Interviewee A), or "just some occasional going around Estonia" (Interviewee D). The in-person workers, on the other hand, seem to have more active lives outside of the office. For example, Interviewee F conducts workshops and organizes events as hobbies outside of work, and Interviewee G travels with an ensemble and attends live events. Interviewee H also has an active life outside of the office, however, this relates more to tending to her family as she "[brings her] child to swimming and piano lessons and things like that." No clear differences were found relating to the frequency of long-distance travel, however, as most participants mentioned occasional trips, typically one or two per year.

Regarding travel modes, participants primarily travel by plane to reach longer-distance destinations, however, the modes they use to travel locally vary. Interviewees E, G and H use cars while the others travel by bicycle, scooter or public transportation. Although the interviewees who drive cars state that this is primarily for convenience and efficiency, it is important to note that these interviewees visit the office with great regularity which may contribute to the importance of such factors. Many of the other interviewees, however, mentioned that they used to have a car when they lived in different countries but found it unnecessary in Estonia since the country is small and the infrastructure allows for easy travel without a car.

Overall, three main factors emerged from the interviews which participants highlighted as impacting their travel behavior. These relate to the efficiency, practicality and experience of travel. Each of these factors will be discussed separately and in more detail.

3.1.1. Efficiency

The distance covered while traveling from one location to another was discussed by many interviewees as well as how that impacts the frequency and ways in which they travel. One teleworker used the word "absurd" (Interviewee C) to describe the time it takes to reach certain destinations and thus tries to limit certain trips for that reason. Although Estonia is quite small and

the distances covered are often much smaller in comparison to other countries, it is still something that interviewees take into consideration. Having previously lived in London, Interviewee F stated:

> I'm used to a life where my best friend would be an hour away from me. But we live in the same city. So if you can appreciate that bias, here everything just feels super close. But yeah, sometimes I go to the other side of Tallinn and that feels like a long way away compared to someone who was on the same street as me.

To combat this, he uses a bike to cycle to work every day as well as for non-work activities because "it's fast to get around" (Interviewee F). Interviewee D, who visits the office a few days per week, also mentioned the importance of speed while traveling, stating, "I absolutely hate the public transport because it's slow and you have to wait," which has caused him to travel by scooter instead. Additionally, the time waiting for transportation or riding on it often feels wasted and unproductive. Many employees must plan according to busy schedules, fitting in work, hobbies, grocery trips, cooking and more. Thus, commute time is often something they would like to limit as this time could be used for more enjoyable activities such as "to watch a nice movie or to read something" (Interviewee C).

To maximize efficiency while traveling, some participants mentioned that they utilize a "circular" method to get around, which refers to connecting many smaller trips into one large trip. One teleworker emphasized the utility of such trips, explaining that she "[has] the feeling that that time is really being useful because [she's] not only solving one thing but lots" (Interviewee C). These types of circular trips can be implemented with long-distance travel as well, as "you can essentially half the flights you take if you just add a few more days" (Interviewee F). Furthermore, Interviewee E, a teleworker who visits the office approximately two or three times per week, mentioned that she avoids peak traffic, planning her drives outside of specific times of the day in an attempt to save time. This demonstrates that participants modify their travel behavior in order to maximize the use of their time.

Overall, the efficiency of travel, both in terms of time and productivity, is something that interviewees, both those who visit the office daily as well as those who telework, take into consideration before going anywhere and often determines the frequency and modes in which they travel.

3.1.2. Practicality

Another aspect that participants have discussed in detail is the practical considerations regarding travel. Firstly, participants mentioned the importance of freedom and agility in the ways they travel locally. Interviewee F, who rides a bike to work every weekday, likes this mode because he "can be very agile" and go from one location to another with ease. The use of personal transportation modes, whether by bike, scooter or car seems more preferable to most participants than public modes of transportation. Interviewee C, who teleworks part-time, also noted that the availability of personal transportation modes is very important to him, which has led him to use personal scooters and search for a car to purchase. In line with this, participants have highlighted the importance of the reliability of transportation modes when traveling both long and short distances. For instance, Interviewee E, who works at home and at the office, travels by car partly due to the fact that traveling by public transportation can be very unreliable. She states, "The buses that are coming from there … They're quite chaotic basically. So, if you want to be somewhere on time, you just need to have a car" (Interviewee E). Reliability comes into play with long-distance travel as well. One teleworker mentioned that trust is one of the top priorities when choosing airlines to travel with and went on to describe the risks of settling for less reputable ones:

> It's always hassle … I've heard some stories about it, like the customer service or when something is canceled. It's just they have reduced their own cost so much that they don't actually care about the customer that much or they don't even have resources to deal with those kinds of bad scenarios. (Interviewee D)

To minimize these inconveniences, participants typically opt for more reliable modes of transportation.

Along with the freedom and reliability of travel, money also plays a large role, particularly for long-distance travel. Public transportation is free for residents of Tallinn which alleviates the impact that money has on short-distance travel among participants. When talking about Tallinn's free transportation, one interviewee said, "It just relieves that decision of like, 'ah, should I?'" (Interviewee F), stating that it alleviates the concern of accumulative transportation costs. Because of this, many of the participants do not take money into consideration when traveling shorter distances. This is also partly because "the order of magnitude is much smaller than like flight tickets" (Interviewee B). However, money plays a much larger role with long-distance travel. Both in-person workers and teleworkers stated that money is one of the first things they take into consideration when purchasing airplane tickets. Alongside this, additional costs must be

considered when traveling longer distances, such as the transportation costs when in a different country, the amount of money you still need to spend on rent at home and more which were mentioned by some participants as well.

Other practical aspects also come into play such as the weather. Interviewees mentioned that when the weather is cold, they typically travel less and if they do go out, they avoid using modes that expose them to such weather like bicycle or walking. Overall, participants of all work modes have discussed the importance of the practical aspects of travel before deciding to go anywhere, whether long or short distance. This includes the ability to be agile throughout the day, the availability and reliability of transportation methods as well as the costs incurred while traveling.

3.1.3. Experience

Another aspect that impacts participants' travel behavior is the experience of the travel itself. This primarily impacts the choice of transportation mode among participants. For example, Interviewee D mentioned that he almost purchased a Mini Cooper primarily for the feeling of it:

> It has so much character. It's not just a way to travel, it has some emotional value to it. So when you actually sit into it, you feel like 'oh, it makes me feel good,' you know? Because I don't want it to be just another thing or device. That is, the only purpose is to get from point A to point B. I want it to give something extra, like emotional value to it.

Many participants also like to travel by foot or bicycle for the experience of it as well. Some participants mentioned that walking allows them to clear their minds and to feel more "energy flowing inside" (Interviewee E). Similarly, riding a bicycle provides a refreshing experience as expressed by one in-person worker when they said that "it's a nice moment of introspection or reflection of the day" (Interviewee F). This shows that the enjoyment aspect of travel is something that many participants take into consideration when traveling.

Together with this, participants expressed the importance of limiting stress and negative experiences as well. One part-time teleworker mentioned that he does not like to use public transportation because there are "many people that are just there at the same time and they rub against you" (Interviewee D). He also mentioned that he tries to "reduce the friction" (Interviewee D) of the travel experience in order to go out more often. Another teleworker also shared a negative experience while using public transportation in Tallinn, describing that the wind was blowing and that the overall experience of waiting for transportation was "a torture" (Interviewee C), and that if she would have had a car at that moment, she would have used it instead.

Overall, the main factors that participants described regarding travel behavior are the efficiency, practicality and experience of the travel itself. This includes a variety of sub-factors, such as the time, money, distance, experience, weather conditions and more that teleworkers and in-person workers think about before traveling.

3.2. Understanding of travel-related environmental impacts

The travel-related environmental understanding of participants will be discussed in detail in this section. This includes two primary parts, namely their attitude toward travel-related environmental impacts as well as the understanding of their own personal impact on the issue.

3.2.1. Attitude

The attitudes toward travel-related environmental impacts varied largely between participants regarding the amount in which they think about travel-related environmental issues. For example, when asked whether they consider the environmental impacts of traveling, one interviewee said, “I have thought about it a lot, actually” (Interviewee E), while another simply answered “No” (Interviewee G). Many of the participants landed somewhere between these two extremes, considering it a little bit. One interviewee used to consider it more when she had a car as she felt that she was wasting gas using her own car rather than public modes of transportation but since then has not considered it very much. Participants also varied in regards to which aspects they believe impact the environment most. One of the teleworkers expressed that the travel-related environmental impacts most likely come from daily travels as “some of the environmental gains we can get probably could come from our day-to-day instead of maybe a once-a-two-month, once-a-quarter type of travel” (Interviewee B). On the contrary, another teleworker, although taking steps to reduce the environmental impact of daily travel as well, said that “flights are the most polluting” (Interviewee A). Thus, the amounts in which participants think about their environmental impacts as well as the understanding of which travel mode should be focused on most varies among interviewees, both between and among different work modes.

Some participants also mentioned the impact that those around them have on their own attitudes toward environmental considerations, stating that “if one person is trying to make a change, it really affects others” (Interviewee H). For example, one in-person worker mentioned this “knock-

on effect" (Interviewee F), stating that seeing people ride bicycles or walk makes others want to do the same. Similarly, a teleworker emphasized the importance of the surrounding culture, expressing that "you kind of just follow the environment" (Interviewee B) and make the same decisions as others in the nearby vicinity. This shows that teleworkers and in-person workers alike experience a ripple effect, demonstrating that the actions of one person often affect others.

3.2.2. Perceived personal impact

Regarding individuals' travel-related impact on the environment, participants emphasized that they believe their own impact is relatively small. Many still try to be mindful of their everyday decisions, however participants agreed that it does not make a large difference, but rather that real change lies in the government's hands. One teleworker stated, "It's definitely not like a chicken and egg problem, it's definitely a chicken problem" (Interviewee B), arguing that if the government would make changes to the infrastructure that facilitate environmental living, individuals would use it more. Interviewee F, who often travels to work by bicycle, also shared this view, stating that "it's really the infrastructure change that will make any developments whereas individual change will only go so far." This shows that both teleworkers and in-person workers consider the government to be in the most powerful position to make any changes.

Additionally, some participants mentioned that they feel many companies are greenwashing and that these companies, namely the ones that may have a significant impact on the environment, care more about profits than they do about the environment. One teleworker states that because of this, "everything is corrupted" and that "what we can do in our personal life is … like a small piece of dust" (Interviewee E). Seeing those in power greenwashing and making choices that harm the environment in large ways makes them feel as though their personal impact is insignificant and that there is little use for them to make changes in their routines. As one teleworker stated: "When I think about millionaire people that have their private jets or something, I know that the impact that they cause is so much bigger than us individually. So I try to understand that my impact is not that bad" (Interviewee C). Thus, making a change does not feel like it has a large impact on the grand scale.

To conclude, participants varied greatly in their attitudes toward travel-related environmental issues, with some thinking about the issue more than others. However, many of the participants experienced a roll-on effect where the actions of others around them often dictate their own actions.

Overall, however, nearly all participants, regardless of their work modes, shared the belief that significant environmental change depends on the government.

3.3. Teleworkers versus in-person workers

Results show that the main factors participants take into consideration when traveling are the efficiency, practicality and experience of the travel. However, the interviews also reveal that these factors interact with one another and that it is difficult to clearly state which of these factors plays the largest role for one individual. For example, when asked about how they choose their mode of transportation, one interviewee answered, “How hard it is to get to that place, what time of day, and how rushed I feel probably. So probably I would say a good part depends on my planning [chuckles], which could vary” (Interviewee B). Thus, although prioritizing time as a main factor for transportation, many other sub-elements contribute depending on the context. Also, many different factors come into play when deciding on transportation mode, with some interviewees having multiple reasons behind their choices in no particular order. For example, one interviewee travels locally by scooter because of the speed of it as well as the flexibility it gives him, both of which are equally important to him. Another participant mentioned that she drives by car primarily for convenience, however, the importance of convenience stems from the fact that she is a mother of a young child, stating, “I think that I can make a bigger change with this travel issue in the future, when my child goes to school … But right now it’s a rather complicated time of my life” (Interviewee H), mentioning that it is easier to travel when she is not with her child. Her choice of transportation mode is also highly dependent on whether her significant other is using their shared car or not as well, showing that the presence of two-worker households may play a role as well. This shows that the topic is quite complex and that many factors contribute to the decision-making process of participants. These intertwined thought processes and preferences make it difficult to distinctly differentiate between employees of different work modes.

With that said, slight differences were found between in-person workers’ and teleworkers’ travel behavior and the factors that impact it. Results show that in-person workers primarily prioritize convenience while traveling shorter distances. Although the ways in which they do so may vary, with one of the workers traveling by bicycle and the others primarily by car, the reasoning typically remains the same: these modes provide them with the practicality and agility they desire in their

everyday lives. However, it is difficult to determine whether this is due to the mode of work and the fact that they need to visit the office regularly or whether other factors come into play.

Regarding teleworkers, many of the interviewees focused on the efficiency of the local travel itself. For example, Interviewee D strongly emphasized the fact that he "absolutely hate[s]" public transportation as it is slow. Another teleworker drives a car primarily to save time as well, with many teleworkers stating that the efficiency of travel often dictates their travel behavior. However, similarly to the interviewees who work in person, it is difficult to determine whether the work mode affects the factors that impact employees' travel or whether this is due to underlying causes. For example, one teleworker drives primarily by car, firstly mentioning the importance of time and agility to move around. However, when discussing the topic further, she mentioned another factor that heavily influenced her decision to drive by car, namely the importance of safety. She stated:

> Because I'm a woman … I have had a lot of situations where weird people are trying to get my attention. And I have found that sometimes it can be dangerous … So in some point, I decided that it's better for me to stay safe in my own car than use public transportation. (Interviewee E)

This shows that many factors impact the travel behavior of participants, many of which compile together with no particular precedence.

Regarding long-distance travel, the results were varied with no noticeable distinctions between in-person workers and teleworkers. Some of the interviewees prioritized the comfort of the trip while others prioritized the costs more; some prioritized the reliability of the airlines and others focused on the efficiency of the travel. These differences are likely to be based on personal preference as they varied widely among and between in-person workers and teleworkers.

Similarly, no significant differences were found between in-person workers and teleworkers regarding their travel-related environmental understanding. The amount in which participants thought about the environmental implications of travel greatly varied, with some thinking about it frequently and others not at all. None of the participants mentioned secondary environmental implications of their work and travel, however, such as at-home or office energy use, suggesting that these employees do not consider these aspects when traveling. On the other hand, the amount in which participants believe their choices make a change in terms of environmental sustainability was unanimously low across all participants. Nearly every interviewee mentioned that the

government must take the situation into their own hands in order for any real change to take place, despite many mentioning the impact that those around them have on one another.

Participants very rarely mentioned the role of work mode in the ways they travel. Interviewee B, a teleworker who visits the office only once every month or so, stated, “I feel like for non-remote people [transportation is] such an integral part of their day-to-day life,” implying that it is not as large of a consideration for remote workers. Interviewees mentioned the impact of other external factors, though, such as the need to share a car with a significant other or to remain safe as a woman. Another interviewee also suggested that income levels may play a role in the decision-making processes of workers, stating that those who are merely trying to stay afloat financially may make less environmentally-friendly decisions because they “are not even in that liberty to think about that” (Interviewee F). Overall, work mode seems to play a role in the travel behavior of participants, along with a number of other elements.

3.4. Discussion

When comparing in-person workers and teleworkers, this once again proves to be quite a complex topic. As previously mentioned, many factors come into consideration when participants decide on the frequency, mode and distance traveled which intertwine with one another. Thus, making distinct comparisons between workers proves challenging. External factors must be considered when analyzing the travel behavior of in-person workers. Understanding these complexities and intertwined thought processes, however, sheds light on the factors that determine the travel behavior of individuals, allowing future policy-makers to take these into consideration.

Overall, the findings of this study show that despite the complicated thought processes behind travel behavior, in-person workers typically prioritize the agility and practical aspects of travel while teleworkers prioritize efficiency related to the time and distance of travel. This coincides with what He and Hu (2015) discussed when they mentioned the possibility of some personal differences between the preferences of teleworkers and non-teleworkers. In line with this, one teleworker mentioned that she avoids traveling during certain hours when traffic levels are high, which is consistent with the findings of Elldér (2020) who argues that teleworkers are less likely to travel during rush hour than their in-person counterparts.

The results also highlight the complexity of this topic, showing that many contextual factors must be taken into consideration before determining the impact of work mode on travel behavior. Although it was clear in the interviews that in-person workers traveled for work more frequently than their teleworking counterparts and that differences were found regarding preferences, many factors played a role such as individual preference, gender and more. For example, interviews show that the role of sharing a car with others at home may also impact travel behavior, suggesting potential differences in travel behavior between single-worker and two-worker households as de Abreu e Silva and Melo (2018b) found when analyzing teleworkers. Additionally, one interviewee mentioned the impact of income levels when considering the environmental sustainability of people's actions, which lines up with the research of He and Hu (2015), who discuss the impact of income on teleworking, showing that low-income workers are less likely to telecommute which may be influenced by the higher likelihood of having location-dependent jobs as well as the impact of gender as higher-income jobs tending to be male-dominated. These same factors may spill into travel behavior and the environmental prioritization of employees.

Along with these travel-related considerations, it is also important to highlight the findings of participants' travel-related environmental understanding. These together make up the framework of employees' travel behavior as a whole as can be seen in Figure 3. This figure was created by the author to demonstrate the connections between the components that make up the interviewees' travel behavior, acting as a visual tool to summarize the findings of this study.

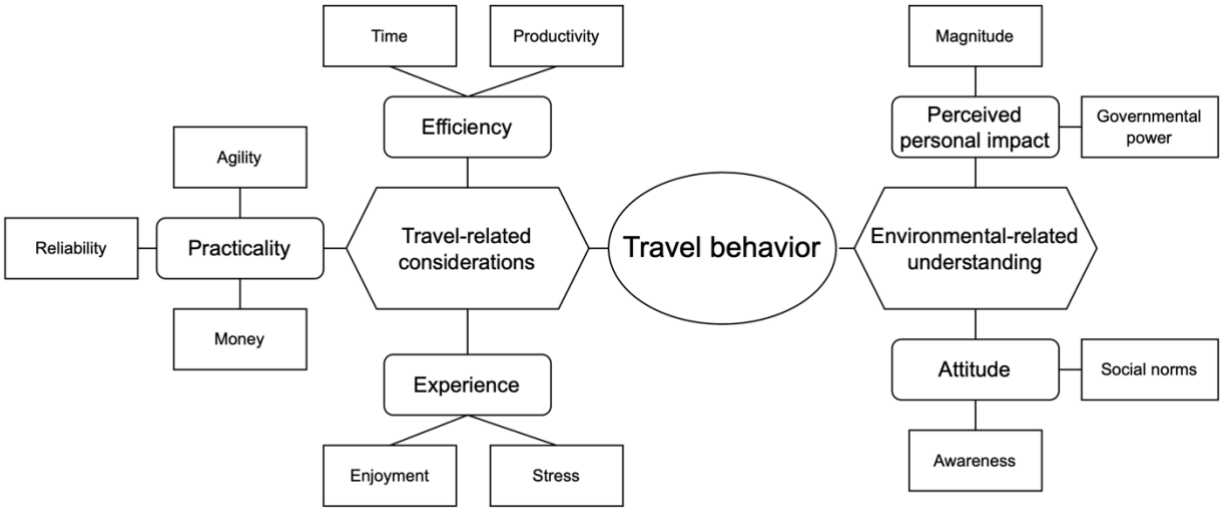

Figure 3. Travel behavior framework
Source: Prepared by the author

Interviewees felt that the magnitude of their personal impact was relatively low, often emphasizing that the government must implement policies or make modifications to the infrastructure in order for significant environmental change to take place. This coincides with the research framework of expected future behavior in Figure 1 of this thesis. That framework highlights the role of experienced impact and government on the preferences and behavior of individuals, which can also be seen in Figure 3 of this research and influenced participants' environmental-based understanding of travel. Furthermore, the results of this research support the theory of planned behavior shown in Figure 2 of this thesis. This theory highlights the importance of the attitudes of individuals towards a certain behavior, the subjective norm as well as the perceived behavioral control of said behavior. All three aspects were seen in the results of this research, with participants highlighting their attitudes toward travel-related environmental issues as well as the role of others around them and their personal impact on the situation.

To summarize, participants highlighted the importance of efficiency, practicality and experience when considering travel, while emphasizing their personal attitudes and perceived personal impact of the environmental side of this issue. Differences between in-person workers and teleworkers were found regarding travel-related considerations and the understanding of the environmental impacts of travel greatly varied among participants, but the causality of these differences is unclear. Other external factors may contribute to these differences such as gender, income levels and single- versus multi-person households, all of which must be taken into consideration when determining the overall impact of work mode on travel and its environmental impacts.

Understanding the complexity of employees' thought processes and external factors surrounding such topics will allow for the implementation of effective and sustainable transportation options within cities as well as allow employers to implement effective corporate social responsibility initiatives within their operations. Real-time accurate information will allow for the creation of public transportation systems that fulfill the needs of travelers and operate more smoothly, benefiting both governments and employees (Kuo et al., 2023). Policy-makers, both within companies and governments, must be made informed of the travel behavior of workers in order to implement appropriate incentive programs and regulatory measures to accommodate new changes and promote sustainability (Zhu & Wang, 2024). This would also boost the reputation of companies as they promote corporate social responsibility, which is known to improve the reputation, financial performance, market value and more of companies and is a very important

aspect for organizations to implement (Barauskaite & Streimikiene, 2021). Thus, this information benefits governments, employers and employees.

CONCLUSION

The aim of this research was to explore the influencing factors between teleworkers' and in-person workers' travel behavior and their resultant environmental impact. To do so, it addressed three main research questions:

1. What factors influence employees' travel behavior?
2. How do employees understand their environmental impact in relation to travel?
3. Do these factors vary between teleworkers and in-person workers? If so, how?

Regarding the first research question, three main factors arose from the interviews that both in-person workers and teleworkers take into consideration before traveling, namely the efficiency, practicality and experience of the travel. The efficiency aspect relates primarily to the duration and productivity of the trip. Important aspects were mentioned by participants relating to the practicality of travel as well. Firstly, the importance of freedom and the ability to move around without dependency on external factors proved important to interviewees as well as other factors such as the costs, availability and ease of use of the transportation modes. Finally, the experience of the travel itself proved important as participants often choose their transportation modes based on the way they feel, typically preferring modes that give them more comfort and satisfaction. They also try to minimize the stress of the journey as much as possible.

Relating to the understanding of employees' travel-related environmental impacts, interviews revealed that the awareness of environmental impacts varied considerably between individuals. Some participants think about the environmental consequences of their travel on a frequent basis while others do not think about it at all. This spectrum of results shows that this is most likely due to individual differences rather than the interviewees' mode of work. Additionally, the results show that participants nearly unanimously consider their personal impact relating to travel-related environmental issues to be quite low. Overall, participants strongly emphasized that most of the power lies in the government's hands.

In response to the third research question, when comparing in-person workers and teleworkers, slight differentiations can be seen. The interviews show that the factors previously mentioned are not prioritized on a clear scale for participants, with many individuals considering several factors at a time, weighing the pros and cons of each travel method. Thus, direct comparisons between work modes are difficult to make, with only slight differences to be seen. Interviews show that one of the first aspects in-person workers consider is the freedom and agility provided by the transportation mode. They prefer independence and the ability to move from one location to another at any time. On the other hand, teleworkers mentioned more the importance of efficiency, emphasizing that the duration and productivity of the travel are of great importance. However, many different aspects were brought up during their decision-making process, highlighting the importance of gender, income levels, personal preference and more. Relating to the environmental understanding of participants, these showed no significant differences between in-person workers and teleworkers. As previously mentioned, interviews revealed a wide spectrum of results pertaining to the attitudes towards travel-related environmental issues and a low perception of personal impact.

These findings contribute to the literature as they provide an in-depth understanding of employees' travel behavior. Topics related to the behavior of individuals are often very complex, containing many layers of thought processes and beliefs. Understanding the ways that these impact the decisions employees make, as well as the ways in which they understand the environmental implications of their actions, allows future employers and governments to integrate this information for more effective policy-making.

With these findings, a number of limitations must be acknowledged. Firstly, purposeful sampling was used to gather participants which may bias the findings. This method allows the researcher to choose candidates who are most suited for this research but may not adequately represent the greater population. In line with this, the limited number of interviews limited the ability to thoroughly compare the differences between in-person workers' and teleworkers' travel behaviors and environmental understandings. Additionally, the ambiguous definition of telework posed another limitation to this research. As current literature surrounding this term is inconclusive regarding the distinct features teleworkers must possess as well as the number of visits they must undertake to the office on a regular basis, interviewees ranged in this regard which may potentially alter the results.

Future qualitative research should be conducted in order to determine the factors that impact employees' travel behavior and their environmental understanding in different contexts. This study focuses on residents of Estonia and their travel behavior while living there; however, results may vary in different locations or between different demographics depending on the country's size and infrastructure as well as individuals' gender, income levels and more. Additionally, further studies should consider the variability between teleworkers' weekly office visits and determine whether differences exist between different types of teleworkers. Finally, quantitative data should be collected to further support the findings of this research in order to determine the extent to which these factors impact employees' travel behavior.

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APPENDICES

Appendix 1. Sample list of interview questions

Question 1	Can you describe an average workday for you?
Question 2	Can you describe the non-work-related travel you undertake on a regular basis?
Question 3	Can you describe the work-related travel you undertake on a regular basis?
Question 4	What factors do you consider before deciding to travel?
Question 5	What influences your choice of transportation for travel?
Question 6	What do you think causes the longest trips? (Specific locations, transportation modes, etc.)
Question 7	Does the environmental impact of your travel impact your decisions? If so, how?
Question 8	Could you describe any environmental issues you feel strongly about?

Appendix 2. Interview transcripts

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