LOOKING FOR STRONG LEADERS?
– HOW UNCERTAINTY AFFECTS LEADERSHIP PREFERENCES

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Author: Kaisa Malassu
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Supervisor: Virpi Sorsa

JYVÄSKYLÄN YLIOPISTO
UNIVERSITY OF JYVÄSKYLÄ

ABSTRACT

Author Kaisa Malassu	
Title Looking for strong leaders? – How uncertainty affects leadership preferences	
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Abstract The environment we operate in has changed quite radically in a relatively short time frame. The level of uncertainty has increased and the crises we face both in our societies and within organisations have changed their shape and form, from being isolated incidents to being transboundary by nature and part of global turbulences and movements. The purpose of this study is to explore the concept of uncertainty in the general environment, and how it affects what is expected from leaders. The theoretical background drawn from earlier crisis leadership research and the uncertainty-identity theory (e.g., Hogg, 2007) suggest that uncertainty leads people to heavily rely on their leader (Hogg & Rast, 2016; Rast et al., 2012) and people tend to start preferring strong and directive forms of leadership – even to the extent of preferring autocratic leadership over more democratic forms of leadership (Rast et al., 2013). Based on the theoretical findings, this study hypothesises that uncertainty has a positive relationship with preference of strong leadership. The type or cause of uncertainty should play no role, and the relationship does not disappear when controlled with social group memberships. The data analysed in this study (n= 2,045) is collected for the Finnish Business and Policy Forum (EVA) by Taloustutkimus during fall 2023 as a part of a survey series *EVA Surveys on Finnish Values and Attitudes*. The data is analysed with statistical analysis methods. Different types of uncertainty are defined through explorative factor analysis. The main relationship between uncertainty and preference of strong leadership is then tested with multiple linear regression (MLR). The results of the study suggest that financial uncertainty and uncertainty related to one's physical integrity, i.e., uncertainty from threat of violence, increase the preference of strong leadership. The perceived salience and importance of the cause of uncertainty (Hogg, 2007), and the uncertainty's relation to one's self-concept (Rast, 2015) seemed to affect the low impact of uncertainty from hybrid threats to preference of strong leadership. Further studies on the effects of uncertainty from opinionated and polarised threats and gender are required. Future research directions are suggested.	
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Tiivistelmä

Toimintaympäristömme on muuttunut melko radikaalisti suhteellisen lyhyessä ajassa. Epävarmuus on lisääntynyt ja kriisit, joita kohtaamme sekä yhteiskunnissamme että organisaatioissamme, ovat muuttaneet muotoaan yksittäisistä ja eristetyistä tapahtumista rajat ylittäviksi ja globaaleihin mullistuksiin liittyviksi ilmiöiksi. Tämän tutkimuksen tarkoituksena on tutkia epävarmuutta yleisesti toimintaympäristössämme ja sitä, miten epävarmuus vaikuttaa siihen, mitä johtajilta odotetaan.

Aiemmasta kriisijohtamisen tutkimuksesta ja epävarmuus-identiteettiteoriasta (esim. Hogg, 2007) ammennettu teoreettinen tausta viittaa siihen, että epävarmuus saa ihmiset turvautumaan vahvasti johtajaansa (Hogg &; Rast, 2016; Rast et al., 2012) ja aiheuttaa taipumusta vahvan ja määräävän johtamistyylin suosimiseen – jopa siinä määrin, että autokraattista johtajuutta suositaan demokraattisempien johtamistyylien sijaan (Rast et al., 2013). Teoriakatsauksen perusteella muodostettiin tämän tutkimuksen hypoteesit. Epävarmuudella oletetaan olevan positiivinen yhteys vahvan johtajuuden suosimiseen. Epävarmuuden aiheuttajalla ei pitäisi olla merkitystä, eikä yhteys katoa, kun sitä kontrolloidaan sosiaaliseen ryhmään kuuluvuuden muuttujilla.

Tässä tutkimuksessa analysoitu data (n= 2,045) on kerätty Elinkeinoelämän valtuuskunnalle (EVA) Taloustutkimuksen toimesta syksyn 2023 aikana, osana EVAn Arvo- ja asennetutkimukset -kyselytutkimussarjaa. Aineisto analysoitiin tilastollisin analyysimenetelmin. Erilaisia epävarmuustekijöitä määriteltiin eksploratiivisen faktorianalyysin avulla. Epävarmuuden ja vahvan johtajuuden mieltymysten välistä pääsuhdetta testattiin monimuuttujaisella lineaarisella regressioanalyysilla.

Tutkimuksen tulokset viittaavat siihen, että taloudellinen epävarmuus ja fyysiseen koskemattomuuteen liittyvä epävarmuus eli väkivallan uhan aiheuttama epävarmuus lisäävät vahvan johtajuuden mieltymystä. Epävarmuuden syyn koettu merkitys ja tärkeys (Hogg, 2007) sekä epävarmuuden suhde minäkuvaan (Rast, 2015) näyttivät vaikuttavan hybridiuhkien aiheuttaman epävarmuuden vähäiseen vaikutukseen vahvan johtajuuden suosimiseen. Lisätutkimuksia polarisoituneiden uhkien aiheuttaman epävarmuuden ja sukupuolen vaikutuksista tarvitaan. Tulevaisuuden tutkimussuuntia ehdotetaan.

Asiasanat

epävarmuus, johtajamieltymys, epävarmuus-identiteettiteoria

Säilytyspaikka

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CONTENTS

1   INTRODUCTION

Past few years have been exceptional in a global scale and on many different levels. Our environment has been shaken by a global pandemic that took most governments and the public by surprise, outbursts of terrorism and old conflicts bursting into full scale wars, and the disastrous consequences of climate change and global warming affecting whole nations' lives. At the same time, global economy has faced a financial crisis with increasing inflation and even signs of recession. Crisis after crisis, disaster after disaster, the environment we operate in has changed quite radically in a relatively short time frame. The terrorist attacks of 9/11 are often referred to as the changing point, after which organisations and societies became aware that crises are no longer isolated and limited occurrences. That is, crises in other organisations or on the other side of the world can – and more often than not, will – have an effect on the environment we live and operate in. As a result of this and the recent events all over the world, the level of general uncertainty has increased (see e.g., *World Uncertainty Index*).

While there has never truly been a consensus between scholars on the definition of crisis, it seems safe to argue that the way crises are discussed and studied needs to be revised as the very nature of the crises we face has changed. Whether the research community ends up calling these changed crises fractal crises or transboundary crises (see e.g., Boin, 2009; Topper & Lagadec, 2013) plays little role. From the perspective of organisational studies, the question is if the conventional crisis management and leadership theories can grasp the vast consequences and effects of modern crises. To better understand the entirety of the challenges modern global crises and their effects create for leadership and organisations, it might be valuable to switch the perspective from isolated crisis events to the overall increasing uncertainty that affects our societies globally and quite thoroughly.

1.1 Study aim

Over the decades of crisis management and leadership research, some consensus has been reached on certain phenomena that appears during crises. It is, for example, mostly agreed that during times of crisis, people tend to look for strong leadership. Crisis situations offer fruitful ground for e.g., charismatic leaders to rise and follower perceptions towards leaders tend to become more favourable (see e.g., Bligh et al., 2004; Davis & Gardner, 2012; Hogg & Rast, 2016). Crises are often considered to have different phases, starting from a precrisis phase, and ending in a postcrisis phase (Coombs, 2023); the effects of e.g., charismatic leadership are expected to follow the different phases, increasing in the precrisis and active phases of the crisis and fading away as time passes and follower expectations change (Davis & Gardner, 2012). However, in the current environment, different crises are intertwining and clear lines between phases – or even separate crises – are difficult to draw. In addition to studying leadership in isolated crisis events, research should focus on how the changed environment and growing uncertainty affects leadership.

The aim of this study is to explore the concept of uncertainty in the general environment, and how it affects what is expected from leaders. As e.g., Rast (2015) points out, there are contradicting results between traditional management and organisational research and the social psychology approach and social identity theory of leadership research in relation to people's preferred leadership styles. Whereas traditional organisational research argues that, for example, transformational or democratic leaders are often preferred, the social identity line of research suggests that often in times of uncertainty, people tend to have changed perceptions and preferences to what an ideal leader is like. That is, when feeling uncertainty, people might prefer leadership attributes and types that would conventionally be considered undesirable, such as autocratic leadership.

This study, while touching upon the concept of change, refrains from applying change management frameworks when discussing leadership and uncertainty. The aim is to focus on larger scale changes in the operating environment, often considered crises, rather than internal organisational changes, and leadership as a concept and in general rather than as leadership of a particular organisation. That is not to claim that these internal organisational changes would not as well cause feelings of uncertainty within the stakeholders of the particular organisation, but it is not in the scope of this study to extend the discussion further from the original intended context. On the other hand, it could be argued that organisational changes that are considered radical or extensive are in fact sort of a crisis. While the change itself might be well-planned by leaders of an organisation and therefore miss the traditional definition of a crisis in terms of being unexpected or unanticipated (Hermann, 1963), it might still trigger a crisis within the organisation, outside the stakeholders responsible for planning and implementing the change.

Understanding how the environmental uncertainty might affect the leadership preferences and thus, the way leaders would eventually gain support,

can offer new perspectives for the research of crisis management and leadership. It can also provide insights for practice, and how leaders and leadership should work in times of uncertainty.

1.2   Research objectives

This study aims to integrate the social identity approach to leadership and uncertainty to the line of management and organisational research to answer the question of how the perceived uncertainty in the environment relates to the type of leadership people prefer. Drawing from traditional crisis leadership research and studies on uncertainty and leadership, especially on the uncertainty-identity theory (see e.g., Hogg, 2007; Rast, 2015), a theoretical framework and hypotheses are formed. The empirical part of this study explores the hypotheses set within the theoretical framework by analysing survey data on Finnish values and attitudes collected for the Finnish Policy and Business Forum (EVA) by Taloustutkimus during fall 2023.

The objectives of the current study are formed into research questions as follows:

[RQ1] How does uncertainty relate to leadership preference?

[RQ2] How does the type of uncertainty relate to leadership preference?

[RQ3] How does group identification affect the relationship between uncertainty and leadership preference?

1.3   Structure

The structure of the thesis will be constructed as follows. First, a theoretical background is formed from previously conducted research and established theories. The previous findings are discussed, theoretical framework is set, and hypotheses for the current research are formed. Later, the methodology for the empirical part of the study is presented. The data used is presented and the choice of method for data analysis is argued for. Results of the data analysis are presented and discussed in relation to the hypotheses and theoretical framework. Finally, the results of the theoretical and empirical sections of the study are concluded and discussed. Theoretical and practical implications are made, and the limitations of the current study are discussed. Suggestions for future research are made.

2 THEORETICAL BACKGROUND

This chapter presents the theoretical background of the current study. The reasoning for the study and research objectives presented above are further elaborated on. The chapter starts with first defining the concept of crisis, summarising related previous studies on leadership during crisis times, and shortly describing different conventional crisis leadership types. Then the main theories around uncertainty and leadership are presented and built upon. Finally, the research objectives are revisited and hypotheses for the empirical study are formed.

2.1 Leadership in crisis times

One of the most prominent lines of organisational and leadership studies that revolve around the concept of radical and sudden changes, is the field of crisis management and leadership studies. By definition, a crisis includes a factor of surprise – crises are usually unexpected or unanticipated (Hermann, 1963). Facing a crisis on any level, be it an economic crisis or natural disaster, leads to several societal and organisational challenges and thus, challenges for leadership. A change in the environment often means that a change in leadership might be called for.

2.1.1 Crisis defined

There are several definitions of crisis applied in the field of crisis management studies depending on the perspective of the study, and there seems to be no consensus on one accepted definition within the scholars. There are, however, similarities between the definitions and all tend to include same key characteristics and hold some key assumptions when defining a crisis. One of the classic definitions of a crisis is made by Hermann (1963), who identified three different characteristics each crisis has. First, a crisis always threats high-priority values. Second, the response to the crisis needs to be made in a restricted amount

of time. And third, the crisis situation is unexpected or unanticipated. In later research, and especially in organisational studies, these characteristics are often referred to as crises being unexpected, highly salient, and potentially disruptive (see e.g., Wu et al., 2021).

Crises are often divided into two subcategories, namely disasters and organisational crises. To add to this conventional categorisation, Coombs (2023) has recently suggested an addition of public health crisis as one form of crises. These public health crises are managed by government actors and non-governmental organisations, but as recent years have shown in a large scale, the public health crises do also pose potential risks for organisations. Crises can also be categorised, for example, based on intentionality (Ulmer et al., 2007) or whether they have an operational or symbolic focus (Coombs, 2019).

Disasters as a type of crisis could be defined as sudden events or phenomena that seriously disrupts systems, requires actions, and poses danger to values and social goals (Quarantelli, 2005). Some scholars refer to similar crises as disasters as societal crisis. These societal crises could be defined as something causing disruptions that affect large crowds, e.g., individuals, groups, and organisations. Societal crises also somehow damage the infrastructure, and economic and social structures. Societal crises can be caused by events like natural disasters or terrorist attacks. (Vos et al., 2017).

Organisational crises could be considered as "the perceived violation of salient stakeholder expectations that can create negative outcomes for stakeholders and/or the organisation" (Coombs, 2023: 4). These stakeholder expectations can relate to health, safety, environmental, and economic issues. The violations can seriously impact an organisation's performance while generating negative outcomes. (Coombs, 2023). Other definitions of organisational crises are rather similar to the one presented above, with focus on different aspects of the organisational crisis. For example, Ulmer et al. (2007) define organisational crises as a specific, unexpected, and non-routine event, which create high levels of uncertainty and possess both opportunities and threats to high priority goals.

Coombs (2023) further separates organisational crises as operational crises and paracrises. Operational crises are at the heart of crisis management in a traditional point of view, as it reflects the situation where there is actual or potential disruption to the organisation's operations. Paracrises, on the other hand, do not usually require crisis management per se, as they do not pose a threat or disrupt the operational functions of an organisation. Paracrises represent the reputational side of crises, where organisation's reputation and related assets are threatened. If neglected or mismanaged, paracrises can evolve into operational crises.

Regardless of the type of a crisis, crisis management scholars often divide crises into different phases. One of the most used frameworks is the three-stage model. The first stage is called precrisis, which includes three substages of detection, prevention, and preparation. The second stage, crisis event, consists of two stages: crisis recognition and crisis containment. The third stage, postcrisis, includes the actions occurring after the active stage of the crisis, aiming to be better prepared for the future, leaving good stakeholder impressions of the crisis management, and ensuring the crisis is truly over. (Coombs, 2023). Crises rarely

follow a linear line. Hence, there is often no clear beginning or ending for a crisis event. The different phases can overlap and happen simultaneously. (Vos et al., 2017).

The definition of a crisis presented here follows the traditional understanding of what a crisis is. While e.g., Coombs (2023) has updated his definitions and categorisations of crises to match the challenges and unique characteristics of modern crises, some scholars have presented reformative frameworks on how we should understand crises and crisis management in the modern world. Ideas presented e.g., by Topper and Lagadec (2013) or Boin (2009) are based on a view, where crises are no longer isolated incidents but are essentially a part of global turbulences and movements that have complex and deep effects on our society. These mega crises or transboundary crises cause uncertainty on global level and on all parts of the issue, with regard to all the outcomes of any action.

The underlying assumption with e.g., the fractal crisis framework (Topper & Lagadec, 2013) or the concept of transboundary crises (Boin, 2009) is, that the conventional crisis management research is outdated or unsuitable for the present day crises, and scholars should therefore aim to make a theoretical leap to further examine the new approaches to crisis management. While it is not in the scope of this thesis to redefine the concept of crisis, the key presumption of this study is that the individual crisis event is irrelevant when discussing leadership in environments with high uncertainty. The presumption does not take a stand on the aptitude of the unconventional crisis management frameworks but accepts the idea that to some extent the effects of modern crises go beyond what conventional crisis management theories can grasp. Therefore, while still applying knowledge from existing crisis leadership studies, this thesis discusses the effects of uncertainty in general rather than the effects of a particular crisis event.

2.1.2 Crisis leadership

While extensive studies have been made in the past in the field of crisis leadership studies, the field remains rather fragmented (Wu et al., 2021). Crises have been studied from many perspectives, some of which have been recognised by research reviews from Wu et al. (2021) and Collins et al. (2023).

Wu et al. (2021) conducted an extensive research review on crisis leadership studies, where they used mixed bibliometric methods, that is, co-citation analysis, bibliographic coupling, and co-word analysis to create understanding on how crisis leadership has been studied throughout the years. For example, in the co-citation analysis Wu et al. (2021) recognised four clusters. The first cluster includes theoretical perspectives on cognitive processes of the leaders during a crisis, such as the sensemaking theories, decision making models, and situational crisis communication theory. The second cluster includes strategic management perspectives, such as the threat rigidity hypothesis, agency theory, and expected utility theory. These perspectives are adopted to understand organisational decision making and includes e.g., the issue of how leadership styles are linked to crisis management. The third cluster focuses on gender and role theories,

mainly the leadership attributes that affect the likelihood of the leader to be chosen in a leadership position. The fourth cluster includes the psychological leadership theories, such as research on charismatic leadership and self-concept theory. Based on the bibliometric analysis, Wu et al. (2021) defined three meta-clusters of crisis leadership studies. The first cluster includes leader psychological and behavioural responses in crisis, the second strategic leadership in crisis, and the third cluster included gender in crisis leadership.

Collins et al. (2023) separate research conventions of crisis leadership to four categories within the dimensions of external-internal and intentional-unintentional crises. In external-unintentional crisis leadership studies leaders are pictured as shepherds who protect and guide the organisation through the crisis. Leaders take a role in making sense of the crisis to their followers, and often take command in decision making to make the process faster. External-intentional crisis leadership studies focus on leaders as saints, the beacons of empowerment through the crisis. This line of research highlights the role of charismatic leaders in crisis leadership. From the internal crisis dimension, the internal-unintentional leadership type considers leaders as spokesperson, whose task is to apologise after a crisis event. The internal-unintentional line of research highlights the importance of organisational reputation and crisis communication in crisis management. The last dimension, internal-intentional crisis leaders are seen as sinners, who need to atone for their sins. The focus on this line of research is in the mitigation of the damage caused by the crisis.

As the reviews from Wu et al. (2021) and Collins et al. (2023) describe, the research field of crisis leadership spreads across various topics and perspectives. Within each of the clusters recognised in these reviews, the relationship between leaders and followers has been studied. Some scholars have directly asked the question of what do we want from our leaders during a crisis (see e.g., Haddon et al., 2015), but most research on the preferred leadership types and styles in crisis times within organisational research focus on defining the different types of leadership rather than studying the causes for the preferences. However, in order to understand the relationship between the cause and the leadership preference, it must first be understood what types of preferences the earlier research has found. Thus, charismatic crisis leadership and some other crisis leadership approaches are discussed.

2.1.2.1   Charismatic crisis leadership

There seems to be consensus within crisis leadership scholars, that charismatic leadership tends to emerge during crises (e.g., Bligh et al., 2004; Hunt et al., 1999; Stam et al., 2018). The factor of crisis is also include in the initial definition of charisma and a charismatic leader made by Weber (1947). Weber claimed that the emergence of charismatic leadership requires (1) a person with extraordinary gifts, (2) a crisis or a time of distress, (3) a solution to the crisis that could be considered revolutionary, (4) followers who believe in the person and their extraordinary qualities, and (5) validation through repeated successes.

The Weberian definition of charisma has been incorporated in most studies on charismatic leadership. For example, Steyrer (1998) builds upon the ideas of

Weber to create a charisma model. The archetypes of charismatic leadership that Steyrer suggests are based on the idea of an extraordinary individual and highlights the internal and innate capabilities of the leader that make them charismatic. While the Weberian view on charisma is widely accepted, it has been contested by some scholars. Research especially on presidential leadership has shown, that within crisis context, leaders might be perceived as charismatic by followers based on their response to the situation or the rhetoric they use (e.g., Hunt et al. 1999, Bligh et al. 2004). Hence, charisma might not be fully dependent on the innate attributes of a person but emerge in an uncertain or chaotic situation as the leader reacts and responds to the situation.

Hunt et al. (1999) suggest that there are two types of charisma: visionary and crisis-responsive charisma. Visionary charisma is similar to the Weberian view of charisma, related to having a vision, offering creative solutions to issues, and aiming to break away of the status quo. Crisis-responsive charisma appears in the context of a crisis and the leader's response to a crisis. Crisis alone does not create charisma, but the existence of a crisis and response together does. The existence of crisis-responsive charisma is also recognised by Bligh et al. (2004), who suggest that people become more susceptible to the leader's vision due to the distress caused by a crisis and the psychological effect of needing to believe in the efficacy of the leader. Crises cause distress and are by nature unpredictable, creating a need for people to have a leader to make sense of the crisis. The perceived charisma of the leader during a crisis might not be an innate attribute of the leader, but the result of how they make sense of the crisis and communicate this to the public. (Crayne & Medeiros, 2021). The rhetoric used by leaders tends to be more charismatic during a crisis (Bligh et al., 2004), hence, it might be that crisis-responsive charisma is essentially communicative and rhetoric type of charisma.

While crisis-responsive charisma can be perceived as charismatic as visionary charisma (Hunt et al., 1999), and therefore fulfil the need for sensemaking in crisis, there are some limitations to the effects of crisis-responsive charisma. Studies have shown a ceiling effect on charismatic rhetoric; a basic level of charismatic rhetoric is required to produce perceptions of charisma in followers, but after the ceiling is met the effect of charismatic rhetoric on followers will not increase. If the leader lacks visionary charisma, the effect of crisis-responsive charisma will disappear over time. Especially in a prolonged crisis, the needs of the followers change and the effect of charismatic rhetoric fades. (Davis & Gardner, 2012). The charismatic rhetoric might become unproductive, as it no longer leads to action within followers, or the followers might become numb to the effects of the rhetoric. The perceived salience of the crisis might also decrease, and without visionary charisma it becomes increasingly difficult for the leader to align people to drive towards the same vision. The decrease in the effect of charismatic rhetoric might also be due to a disconnection between the rhetoric, the vision, and the actual progress in fulfilling the vision. (Bligh et al., 2004; Davis & Gardner, 2012; Hunt et al., 1999).

The efficiency of charismatic leadership in resolving a crisis might also be dependent on the type of the crisis. Research has shown that other leadership styles, e.g., pragmatic leadership, have eventually proven to be more successful

in the sensemaking of crises such as the COVID-19 pandemic than charismatic leadership style (Crayne & Medeiros, 2021). On the other hand, charismatic leadership and rhetoric has proven to be rather successful in the aftermath of terrorist attacks such as 9/11. (Bligh et al., 2004; Davis & Gardner, 2012). The results of these studies could imply that to be efficient in resolving a crisis, charismatic leaders need to be able to create a common vision that all people can align with, and the vision would generally have to lead to defeating a common enemy or obstacle. If these conditions are not met, either visionary or crisis-responsive type of charismatic leadership might not succeed.

2.1.2.2   Other approaches to crisis leadership

In addition to the crisis leadership styles presented above, some scholars have presented other approaches to crisis leadership. These more unconventional perspectives on leadership during crisis times might be contested in many ways and it is not in the scope of this thesis to further dive into the discussion. However, two different approaches to crisis leadership are shortly presented – the "Think Crisis – Think Female" approach and the emotional intelligence paradigm of crisis leadership.

Majority of crisis management research is conducted from a rather masculine perspective, although gender is one of the most discussed leadership attributes in crisis leadership research (Wu et al., 2021). However, the "Think Manager – Think Male" stereotype has been contested by some scholars, claiming that in many cases crisis leadership in crises would benefit from traits of the female stereotype. Ryan and colleagues (2011) argue that "Think Crisis – Think Female" association highlights the context dependency of the preferred leadership type. While the association of female leaders to crisis leadership and unsuccessful companies might pose a risk for further gender discrimination, as criticism or failure is attributed to the leader belonging to a minority group, it underlines the change in expectations and desired leadership traits depending on the context. (Ryan et al., 2011). Also, Wu et al. (2021) noted in their research review that gender and other physical attributes might have a significant effect on leadership preferences during crisis times.

Organisational crisis situations evoke feelings and emotional reactions among employees. Often the emotional reactions are negative, such as fear, stress, anxiety, and grief. The level of leader's emotional intelligence is suggested to moderate the effects of the emotional reactions of employees in terms of work outcomes. Leaders with high emotional intelligence seem to be better at regulating their followers' emotions during crisis times than leaders with low emotional intelligence. (Meisler et al., 2013). Similar to gender and other physical attributes, Wu et al. (2021) also suggest that empathetic concern and tendency and willingness to take care of others might be prioritised as characteristics when people choose for a leader during crisis times.

2.2 Leadership and uncertainty

Revisiting the definition of a crisis, a crisis situation is by nature somewhat unpredictable and entails uncertainty in many aspects. In essence, crisis leadership consists of managing this uncertainty and making sense of situations that include multiple unknown and uncertain factors. However, uncertainty does not only emerge in crisis situations. From an organisational perspective, uncertainty can extend well past the individual crisis situations and relate to the turbulence in societies on global scale. These uncertainties might affect the core functions, or even the purpose of an organisation, not relating to a particular crisis event. From an individual's perspective, the uncertainties of a changing world might shake e.g., the core beliefs and the sense of identity of a person. While the scale and type of crises we face changes, it is essential to look past management of particular crises and extend the understanding of how the general uncertainty is managed in societies and organisations.

2.2.1 Uncertainty in organisational studies

The feeling of uncertainty, when related to the concept of self, is mostly studied within the field of social psychology. Some studies have aimed to integrate the concept of uncertainty to the context of organisational studies and leadership. In most cases, the effects of uncertainty are discussed in the context of e.g., crisis or change management, rather than as a single attribute affecting leadership behaviours or preferences.

In the context of change management, uncertainty has been discussed for example through the emotional effects of change and its implications on leadership. For example, Jarrett and Vince (2023) discuss the role of strategic leadership in mitigating the anxiety caused by organisational changes. They bring up the concept of 'oneness' and the ideal of a heroic, omnipotent leader as the type of leadership group members tend to look for during change. On the other hand, similar to charismatic crisis leadership studies and the results of e.g., Davis and Gardner (2012), Jarret and Vince (2023) note that the support for a such leader fades over time and the type of leadership becomes insufficient as the situation evolves. They suggest strategic leadership groups, i.e., a pluralistic or collective approach to leadership, could be a factor in successful outcomes of radical organisational change. Thus, the outcomes of said changes does not rest on the individual leader, in most cases the CEO of an organisation, but on larger groups.

Besides crisis and change management, uncertainty has been discussed also within organisational crisis communication research. Liu et al. (2016) point out that while risk and crisis communication has been extensively studied, less attention has been paid to the uncertainty inherent in various crisis situations. They identify a research gap in how uncertainty should be communicated about, as the current crisis communication studies mostly discuss about acknowledging the existence of uncertainty in the communicative environment. More recently, e.g., Lee et al. (2021) have integrated the concept of uncertainty in crisis

communication research, through the concept of uncertainty management in crisis communication.

2.2.2 Uncertainty-identity theory

As discussed above, the concept of uncertainty is studied mainly in the field of social psychology, but some scholars have argued that the concept should be further integrated into the field of organisational studies. One of the theories presented that aims for this incorporation is the uncertainty-identity theory.

Hogg (2007) presented uncertainty-identity theory as a tool to understand how individuals aim to reduce the uncertainty they feel. The uncertainty-identity theory is based on the presupposition that uncertainty is an uncomfortable feeling, and if the particular context of the uncertainty matters or the cause of the uncertainty is considered important, the aim of an individual is to resolve the uncertainty they are experiencing. However, as Hogg points out, not all uncertainties are considered worthwhile to solve. Thus, the considered importance or relevance of said uncertainty is partly what motivates people to solve the uncertainty.

In the context of the uncertainty-identity theory, the feeling of uncertainty can be wide ranging and diffuse or specific and focused, and the degree to which it reflects on or relates to self-conception in a particular context varies (Hogg 2007; 77). Rast (2015) argues, that the source of uncertainty, be it e.g., self-uncertainty in comparison to economic uncertainty, is less important than if the uncertainty relates to one's self-concept.

The key to uncertainty-identity theory is the way of how uncertainty is resolved. Hogg (2007) claims, supported by e.g., Rast (2015), that the most effective way to do this is by identifying or joining to a social group. The presumption is that by identifying to a group, an individual goes through a process of self-categorisation. Groups in this context are social categories that we represent as prototypes. These prototypes comprise from traits and attributes that define and distinguish the social category. Through a social group, individuals get a sense of social identity and a model to which beliefs, attitudes, values, opinions, feelings, and behaviours can be conformed to. (Hogg, 2007; Rast, 2015; Hogg & Rast, 2016).

The members of social groups are viewed through the aforementioned prototypes. Related attributes are assigned to each member at least on some degree, thus making the member seem less like an individual and more like a prototypical group member. (Hogg, 2007; Rast, 2015). Within the group, prototypicality can have different levels. Prototypically central members have more certainty in their role and involvement within the group, whereas prototypically marginal members are more uncertain about their membership status and even the prototypical attributes related to the group. (Hogg, 2007).

Whether an individual is a prototypically central or marginal member of a social group, might affect how the individual behaves as a member of that group. Prototypically marginal members that feel uncertain about their status might tend to engage in behaviours that promote their identification. Prototypically central members that are confident in their status and membership in the group

engage in more identification-protecting behaviour. In the context of the social group, certainty brings power and thus those prototypically central members that feel strong confidence in their social identity are also often the leaders of the group. (Hogg, 2007).

Group prototypical leaders receive stronger support and trust than less prototypical leaders (Rast et al., 2013). When given a choice between two potential leadership candidates, one of which is a prototypical group leader and one a non-prototypical group leader, uncertain group members tend to prefer the prototypical leader. However, the preferential support of the prototypical leader fades when uncertainty is high and there is a lack of prospective leader options. That is, uncertain group members are more likely to support a prospective non-prototypical leader than less uncertain members, suggesting that there is a need for leadership during times of uncertainty, be it a prototypical or non-prototypical leader. (Rast et al., 2012).

Uncertainty leads people to heavily rely on their leader and people tend to start preferring strong and directive forms of leadership. Rast et al. (2013) found in their research that uncertainty increases support for autocratic type of leadership, while weakening the support for a non-autocratic leader. They argue that uncertainty also affects the evaluation of prototypicality of a leader, that is, the leaders adopting relatively autocratic and directive style of leadership are considered to be more group prototypical, thus providing a clear prototype, than those with less autocratic, more consultative, and inclusive leadership styles.

Uncertainty-identity theory explains how uncertainty turns into totalism in a social group, when social identity and categorisation are taken to its most extreme form. Totalistic groups are often rather homogenous and have strong consensus on e.g., values and beliefs, i.e., they are considered high entitativity groups. These groups provide individuals comfort and clear sense of self and are thus often considered more effective in managing and resolving uncertainty than groups with low entitativity, where the groups are defined vaguely, and boundaries are unclear. (Hogg, 2007; Rast, 2015).

2.2.3 Leadership implications of uncertainty

Throughout this literature review, different perspectives on leadership during crisis times or times of uncertainty in previous research have been presented and discussed. While the field of research is quite fragmented and the focus varies between the organisational studies and social psychology approach, there are certain similarities when it comes to the relationship between crises and uncertainty, and leadership preferences. Based on these similarities and findings from previous research in both fields, hypotheses for the current study are formed.

Uncertainty as a feeling is aversive and people look for ways to reduce this feeling (Hogg, 2007). Uncertainty calls for leadership. People look for their leaders to provide direction and vision during times of crisis or when experiencing uncertainty (Hogg & Rast, 2016). During these periods, leaders are often held responsible for reducing their followers' or group members' feelings of uncertainty (Rast et al., 2013). In crisis leadership research, the preferred crisis

leaders are often capable of uniting people in support of a common vision and making sense of the crisis in a way that appeals to the majority. Similarly, the uncertainty-identity theory suggests that one of the most efficient ways of reducing and resolving uncertainty is by identifying to a social group. The groups give uncertain individuals a clear vision, and this vision is supported and strengthened by group prototypical leaders, who are often very confident and certain about their belonging to the group and thus, the beliefs, values, and attitudes the group holds.

Rast and colleagues (2012) found, that during times of uncertainty, followers have a need for leadership per se. When given a choice between two potential leadership candidates, one of which is a prototypical group leader and one a non-prototypical group leader, uncertain group members tend to prefer the prototypical leader. However, the preferential support of the prototypical leader fades when uncertainty is high and there is a lack of prospective leader options. That is, uncertain group members are more likely to support a prospective non-prototypical leader than less uncertain members. (Rast et al., 2012). On the other hand, leaders who have autocratic leadership styles receive increased support and trust when feelings of uncertainty occur. Crisis situations also call for more formal and centralised power in organisational settings (Mulder et al., 1986). Similarly, leaders with non-autocratic leadership style face weakened support and trust during times of uncertainty. The support for strong autocratic leaders increases the higher the uncertainty but decreases under low uncertainty. (Rast et al., 2013).

Based on these findings from previous research, the first hypothesis of this study assumes that those who are experiencing high uncertainty are more likely to prefer strong leadership than those who experience low uncertainty. Thus, the first hypothesis is formed as follows:

[H1a]: High uncertainty positively relates to the preference of strong leadership.

[H1b]: Low uncertainty negatively relates to the preference of strong leadership.

Rast (2015) reasons, that in terms of the uncertainty-identity theory, the source of uncertainty, be it e.g., self-uncertainty in comparison to economic uncertainty, seems to be less important than if the uncertainty relates to one's self-concept. On the other hand, Rast highlights that feelings of uncertainty do not occur isolated in a vacuum but can overlap. Thus, e.g., economic uncertainty can cause feelings of uncertainty related to one's self-concept, like capability of providing financially for a family or losing one's job. However, Rast points out that there is a lack of empirical research on the effects of the type of experienced uncertainty. While the scope of this thesis is limited, the current study cannot dig deep in the concept of uncertainty related to the self-concept or take the perspective of social psychology. On the other hand, it is significant in itself to study the uncertainties of the general environment and how they affect the leadership preferences. As some of the crisis management scholars (see e.g., Boin, 2009; Coombs, 2023; Topper & Lagadec, 2013) have suggested, the modern crises are different in nature than what the conventional crisis leadership studies have

based their research on. Hence, it could be argued for that the theories and assumptions of conventional crisis leadership studies should be tested and discussed in a wider context – in this case, in relation to the concept of uncertainties. Therefore, the current study explores the effects of the source of uncertainty in the environment on the leadership preferences and hypothesises based on Rast's reasoning that,

[H2a]: High financial uncertainty positively relates to the preference of strong leadership.

[H2b]: Low financial uncertainty negatively relates to the preference of strong leadership.

[H3a]: High uncertainty caused by external threats positively relates to the preference of strong leadership.

[H3b]: Low uncertainty caused by external threats negatively relates to the preference of strong leadership.

The hypothesised relationships between the uncertainty variables and the dependent variable of leadership preference are visualised in Figure 1.

FIGURE 1 Conceptual Model
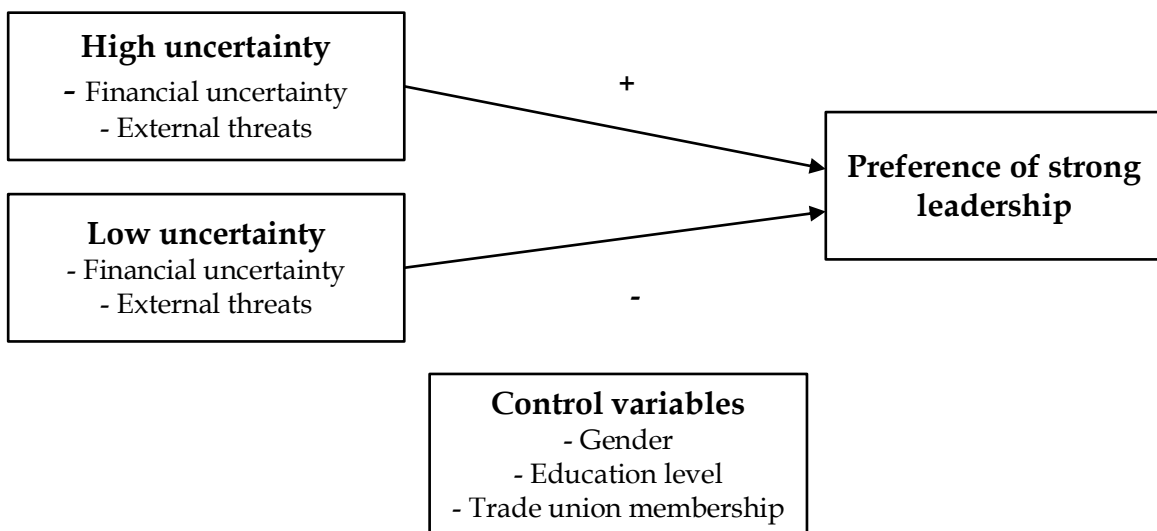
While it is not in the scope of this thesis to study the effects of social groups to uncertainty and its effects on leadership preferences in detail nor does the data analysed for this study enable that, the study explores the dimension of group effect on the relationship. The uncertainty-identity theory assumes that the most efficient way of reducing uncertainty is by identifying to a social group. Social groups have different levels of entitavity, and those groups that are high in

entitavity provide individuals comfort and clear sense of self and are thus often considered more effective in managing and resolving uncertainty than groups with low entitativity (Hogg, 2007; Rast, 2015). Thus, it is reasonable to assume that belonging to a social group has an effect on the level of uncertainty people experience. However, as hypothesised earlier, high uncertainty is expected to increase the preference of strong leadership. Therefore, the relationship between uncertainty and leadership preference is controlled with social group identification. As the data at hand only includes certain background and sociodemographic variables, the relationship is controlled with gender, education level, and trade union membership.

[H4a]: The relationship between uncertainty and preference of strong leadership does not disappear when controlled with gender.

[H4b]: The relationship between uncertainty and preference of strong leadership does not disappear when controlled with education level.

[H4c]: The relationship between uncertainty and preference of strong leadership does not disappear when controlled with trade union membership.

While no further assumptions of the relationship between the control variables and the dependent and independent variables are made, the analysis of the results will include discussion on the particular role of the control variables. Further studying these relationships is not in the scope of the current study, but suggestions for future research can be made based on the results.

The hypotheses set in this section are tested through analysing the chosen data with methods of statistical analysis. Results are then reflected back to the set hypotheses and conclusions are made.

3 METHODOLOGY

The current chapter first presents the chosen research approach and the data used. The choice of method for statistical analysis of the data is argued for. Further, the chosen method for analysis is described and the framework for the analysis is set. Main variables used in the study are described and argued for.

3.1 Research approach

In order to understand the context of the current study and to be able to make relevant conclusions on the results and the analysis, it is essential to pay attention to the features of the environment in which the study has been conducted.

3.1.1 Context of the study

While there is earlier research on the relationship between uncertainty, social group memberships, and leadership, hence assumptions and hypotheses on the relationship can be set also for this study, it is essential to note that the current study has been conducted in a different setting, context, and environment as most of the previous studies. To be able to draw meaningful and reasonable conclusions, understanding this difference in context is important.

The current study aims to explore uncertainty caused by the operational environment on the general level, rather than individual causes of uncertainty related to one's self-concept. Thus, the aim of the study is not to find all the causes of uncertainty that might affect leadership preferences, but to create a general idea of the larger scale causes for uncertainty that might lead people to prefer more autocratic type of leadership. On the other hand, the aim is to explore whether the type of uncertainty affects the relationship between uncertainty and leadership. Therefore, it is not in the scope of the study to create deep understanding on different types of causes for uncertainty, rather than to outline different potential groups for causes of uncertainty.

As the current study is explorative in nature and based on a theory that has not yet been extensively studied, it is especially important to note the context and individual features of the environment in which the study has been conducted. Studies by e.g., Rast et al. (2012, 2013) are conducted mostly as surveys or experiments within the societal context of the United Kingdom. As the dataset analysed for this study is conducted on political, more precisely presidential, leadership and on a societal context of Finland, it is important to also understand the implications this might have to the findings. The study is conducted on a survey collected in Finland, which is in many ways different than the UK in terms of the political and societal system (see e.g., Hallin & Mancini, 2004), thus possibly affecting the results of the survey in comparison to the earlier research done in relation to the uncertainty-identity theory and leadership preference. The survey data analysed measures the attitudes of the public, and the context of the society and e.g., political and media atmosphere tends to have an effect on how people perceive the issues and political leadership. Therefore, the context is essential for understanding the results of the analysis and also in making conclusions based on this study.

3.1.2 Dataset

The data analysed in this study is collected for the (Finnish Business and Policy Forum (EVA), 2023) by a Finnish market research company Taloustutkimus. The dataset, *EVA Survey on Finnish Values and Attitudes, fall 2023*, is part of a survey series *EVA Surveys on Finnish Values and Attitudes* that has been gathered regularly since 1984. The fall 2023 survey has been collected between 15th and 27th of September 2023. The dataset has been accessed through the Finnish Social Sciences Data Archive, and it is available to use for research, teaching, and study.

The survey is a repeated cross-sectional survey conducted with a structured, self-administered questionnaire, where participants are gathered through an internet panel of Taloustutkimus. The stratified random sample (n=2,045), randomly drawn from the population registry of Finland, consists of individuals between ages 18 to 79. Participation in the panel and survey are voluntary, and individual respondents cannot be identified from the responses.

The data consists of 286 variables, including questions about the values and attitudes towards international relations, politics, presidential leadership, presidential powers, racism, labour market, threats, and foreign policy. The dataset contains a weight variable with which the data can be weighed to be representative of the Finnish population ages 18 to 79, with respect to age, gender, region of residence, education, occupation, occupational sector, and political party preference. However, this study uses unweighted data since the focus of the study is on individuals rather than the population at large and to avoid any issues in interpreting the results.

3.2 Data analysis

The current section argues for the choice of method and describes the regression analysis model used for the statistical analysis of the chosen dataset. The statistical analysis is conducted using the IBM SPSS Statistics version 29.0.2.0.

3.2.1 Method

The statistical analysis methods for the current study are chosen based on the assumption that the size of the dataset and number of respondents (n= 2,045) allows the use of parametric tests, although many of the used variables are measured on ordinal or nominal scale. Additionally, index variables are computed based on correlations and reliability tests, such as Cronbach's Alpha, and results of explorative factor analysis, thus giving the variables more interval scale like attributes. (Karjaluoto, 2007).

First, an explorative factor analysis is conducted on one of the question batteries of the survey regarding experienced threats, to determine possible causes of uncertainty in the general environment. As with the basic assumptions of explorative factor analysis, the analysis aims to reducing the data and finding common attributes from a certain battery of questions related to perceived external threats. (Metsämuuronen, 2011). The factor analysis is done as explorative rather than confirmatory since the earlier studies and theories do not clearly define the possible different causes of uncertainty in the general environment. Hence, while the study aim is to explore the relationship between uncertainty and leadership preferences, the study simultaneously explores the possible causes of uncertainty. On the other hand, some assumptions on causes of uncertainty are made based on reasoning of earlier research, for example in terms of financial uncertainty.

After the causes of uncertainty for the analysis are defined, the relationship between these uncertainties and leadership preference is described and studied through simple correlation tests and running bivariate regressions between the dependent and each of the independent variables. Based on the preliminary testing and the fit for the model, the independent variables for the final analysis are chosen. A multiple linear regression model is run on the chosen variables, and after, the suitability of the model is tested through multicollinearity and the residual distribution. (Metsämuuronen, 2011).

3.2.2 Regression model

This study uses multiple linear regression (MLR) to analyse the relationships between the set dependent and independent variables. Regression analysis is one of the most commonly used statistical analysis methods, when the aim is to model the reality and the relationships between variables. Multiple regression is the multiple variable version of the most common regression analysis method. (Metsämuuronen, 2011). Multiple linear regression assumes the relationship between variables is linear.

The independent and control variables have been entered to the regression model with the enter method or as Metsämuuronen (2011) calls it, the forcing or standard multiple regression method. That is, the independent and control variables have been forced to the model based on theoretical reasoning without removing any of the variables. This could also be referred to as confirmatory regression method, where assumptions about the relationship between variables is already made.

Based on the conceptual framework set earlier, a multiple linear regression model is run. The model constructs of the dependent variable of leadership preference and the independent variables of financial uncertainty, and variables related to external threats, in this case threat of violence, and polarised threats. The relationship between the dependent and independent variables is controlled with third variables of gender, education level, and membership in trade union. The control variables are added into the model in three steps and in the respective order.

3.3 Key variables

This section describes the key variables used in the statistical analysis of this study and how they have been measured in the survey. The preparations done for the variables, e.g., the forming of index variables, is discussed and the choice of variables is argued for.

3.3.1 Leadership preference

The dependent variable of the statistical analysis is the leadership preference. Based on the literature review, the hypothesis is that people tend to prefer stronger, autocratic, and centralised type of leadership when feeling uncertainty. Thus, the leadership preference in this study is measured through the amount of power rights an individual would like to place on one leader. The questionnaire includes a battery of questions regarding the power rights of a president within the topic "How much power do you think the president should have over the following issues or sets of issues?". The 17 individual questions range from domestic to international politics, and from education, research and culture to economic policy and national defence. The full list of questions can be found in Appendix 1. The answers are measured on a Likert scale ranging from 1= "All the power" to 7= "No power at all". To add clarity during the interpretation of the results, the scale has been reversed so that 1= "No power at all" and 7= "All the power".

For the purpose of the analysis, an index variable is formed as the dependent variable. The 17 questions used to form the index variable are tested for correlation with both Pearson's r test, due to the large sample size, and Spearman's rho correlation test, due to the ordinal scale used to measure the data. Both tests give positive and significant ($p<.001$) correlation between all the variables in the battery of questions. The reliability of the scale is tested with

Cronbach's Alpha, the result (α=.941) suggesting that the scale is high in consistency and thus, an index variable could be created. Deleting any of the questions from the battery does not significantly increase or decrease the Alpha value, and therefore, all the questions are included in the created index variable.

After forming the index variable of leadership preference, the mean of the variable is M= 3.876 with a standard deviation of SE= 1.040. When testing the distribution of the variable with a Kolmogorov-Smirnov test, the result is as expected ($p<.001$), meaning that the variable is not normally distributed. However, as noted by e.g., Karjaluoto (2007), items measuring attitudes on 5- or 7-point Likert scales are very rarely normally distributed.

3.3.2 Uncertainty

The independent variables of the statistical analysis are the measures used for uncertainty. As there are numerous causes for uncertainty, the analysis is based on different aspects of uncertainty measured with several questions in the dataset.

The first measurement of uncertainty is considered in this analysis as the *financial uncertainty*. As the feeling of uncertainty is subjective and financial uncertainty might be perceived differently between people, i.e., same income for some might provide financial security and for some be insufficient, instead of measuring the household income the financial uncertainty is measured through a question "How would you describe your household's income/current financial means?". The response scale is from 1 to 4, where 1= "Income is more than sufficient", 2= "Income is quite sufficient", 3= "Income is sufficient, if used carefully", and 4= "Income is insufficient". Options "Cannot say" and "Do not want to say/assess" have been marked as missing for the sake of the analysis. For analysis purposes, the original variable is recoded into three dichotomous dummy variables, using the category of 1= "Income is more than sufficient" as the control group.

The second measurement of uncertainty is the experienced *threats*. Attitudes towards different threats are measured in the questionnaire with a battery of questions on "How serious do you consider the following threats to Finland in general or personally to yourself/your loved ones?". The 21 questions regarding the severity of threats range from violence to discrimination to global crises or threats. The original response scale is from 1 to 5, where 1= "Very high threat" and 5= "A non-existent threat". To add clarity during the interpretation of the results, the scale has been reversed so that 1= "A non-existent threat" and 5= "Very high threat". Since the range of different threats is wide and there is no single common attribute on all of them, an explorative factor analysis is run on the battery of questions to identify underlying types of threats and to create better variables for testing. The results of the explorative factor analysis are presented later under the section 4.1.1.

3.3.3 Control variables

The relationship between the dependent variable, leadership preference, and the independent variables measuring uncertainty are controlled with variables of gender, education level, and trade union membership. These control variables are used to rule out the total spuriousness of the relationship between the dependent and independent variables.

The gender variable is recoded into a dichotomous dummy variable for the purpose of the analysis, 0 equalling to male and 1 to female. Recoding the variable leaves 32 observations, i.e., 1.6% of the total sample out from the analysis, as these respondents have chosen the option "Other" in the survey. The distribution of the respondents is quite equal between male and female, with 49.9% male (N= 1,021) and 48.5% female (N= 992).

Education level is measured on a six-point scale, divided to categories of 1= "No vocational education" (N= 206), 2= "Vocational course, other short vocational training"(N= 95), 3= "Upper secondary level vocational education" (N= 460), 4= "College level vocational education (post-secondary)" (N= 472), 5= "Polytechnic/university of applied sciences education"(N= 305), and 6= "University education" (N= 507). For the purpose of the analysis, the education variable is recoded into five dichotomous dummy variables, where the category "1= No vocational education" is used as a control group.

The membership in a trade union is measured on a dichotomous scale, which has been recoded into a dummy variable for the purpose of this study, where 0= "No" and 1= "Yes". The distribution is a bit more uneven in comparison to the other dichotomous variable of gender, with 59.4 % of non-members (N= 1,214) and 40.6 % of members in trade unions (N= 831).

4 RESULTS

In this chapter, the results of the statistical analysis conducted on the previously introduced dataset with the chosen methodology are presented. First, the preparations done for the data and the results of the explorative factor analysis are presented. Then, the results of the statistical analysis are presented and analysed. Lastly, the results are discussed and reflected back to set hypotheses. Hypotheses are either supported or rejected.

4.1 Data preparation

This section presents the results of the preliminary analysis conducted for the data before running the multiple linear regression. First, the results of the explorative factor analysis are presented, and based on the analysis of the results, index variables for the regression analysis are formed. The descriptive statistics of the index variables are presented. Second, the results of the preliminary testing for the relationship between the independent and dependent variables, i.e., the correlations and bivariate linear regression, are presented. Results are discussed, in terms of the data fitting the model.

4.1.1 Explorative factor analysis

To better understand how different experienced threats and the uncertainty caused by them affects the leadership preference, an explorative factor analysis is run on the question battery with the title "How serious do you consider the following threats to Finland in general or personally to yourself/your loved ones?". The reliability of the scale is tested with Cronbach's Alpha, and the result (α=.844) suggests good consistency within the scale. Deleting any of the items does not significantly improve the Alpha value, thus all of the 21 items are included in the initial factor analysis.

The results of the Kaiser-Meyer-Olkin (KMO) and Bartlett's test (Table 1) give good premise for running the explorative factor analysis on the chosen

items. The factor analysis was run for three rounds and in total six items were removed from the final factor analysis, in order for all of the items to receive the communality value of >.3, which is often considered the limit for an item to be suitable for the factor analysis. (Karjaluoto, 2007; Metsämuuronen, 2011).

TABLE 1 KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy	.842
Bartlett's Test of Sphericity	
Approx. Chi-Square	12406.663
df	105
Sig.	<.001

The explorative factor analysis was conducted with both Varimax and Promax rotation method. Karjaluoto (2007) generally suggests the use of Varimax rotation for simplified results, but use of Promax could be preferred with large datasets. On the other hand, e.g., Finch (2006) notes that when the primary aim of the explorative factor analysis is to determine the number of dimensions in the data and the items associated with each factor, both rotation methods should provide adequate results. Both Varimax and Promax rotation methods provided similar results in terms of the number of the factors and the items related to each factor. Since the aim of the factor analysis is to determine the items used for generating index variables, the results from the Varimax rotation are reported in Table 2.

The factor analysis returned in total three factors which received the initial Eigenvalues of >1, thus considered significant factors. After rotation, the first factor explains 25.1% of the variance within the items, the second factor explains 13.2 % of the variance, and the third factor explains 11.3% of the variance. In total, the three factors explain 49.6% of the variance within the 15 items included in the factor analysis. On the other hand, it is notable that 50.4% of information is lost as a result of the factor analysis. Therefore, the results should be interpreted with some caution.

To be able to benefit from the results of the factor analysis, the results must be interpreted. Since the factor analysis was conducted as explorative factor analysis, the previous research does not offer theoretical background for interpreting the results. Thus, the interpretation is up to the researcher and might therefore be biased.

The first factor consists of questions relating to the threat of violence from the external environment. The threats mentioned in the questions range from restless demonstrations to robbery and terrorist attacks. The threat of violence factor does not include items related to war or the use of nuclear weapons, as these were removed from the factor analysis during the iteration rounds. Thus, the external threats of violence refer particularly to the threats that are mostly internal. That is, while there is an item of e.g., uncontrolled wave of migrants, the threats are not related to the particular relations between countries, as threat of war would be.

TABLE 2 Rotated Factor Matrix

Item	Factor		
	1	2	3
[Q9_17] Gang violence	**.782**	-.118	.195
[Q9_13] Robbery of a home or other property	**.764**	.127	-.066
[Q9_12] Becoming a victim of violence	**.744**	.180	-.066
[Q9_5] Gang wars, riots, arsons	**.714**	-.156	.285
[Q9_18] Restless or out-of-control demonstrations	**.645**	.022	.113
[Q9_21] Increase in brutal violence among young people	**.598**	-.045	.163
[Q9_11] An uncontrolled wave of migrants to Europe	**.512**	-.225	.304
[Q9_3] Terrorist attack in Finland	**.481**	.053	.337
[Q9_19] Increase in racism against individuals or groups	-.092	**.782**	.003
[Q9_9] Violence by political extremists	.167	**.633**	.156
[Q9_7] Global warming	-.285	**.627**	.172
[Q9_10] Pandemics and contagious diseases	.084	**.540**	.212
[Q9_2] Hybrid influencing, destabilising Finnish society by various means	.057	.131	**.761**
[Q9_6] Influencing elections from outside our country's borders	.117	.246	**.589**
[Q9_14] Cyber-attacks in Finland, crippling of information networks	.319	.238	**.550**

Notes. Extraction Method: Principal Axis Factoring. Rotation Method: Varimax with Kaiser Normalisation. Rotation converged in 6 iterations. Loadings larger than .400 are bolded.

The second factor includes questions related to racism, political extremism, global warming, and health related threats like pandemics and contagious diseases. While the second factor does not relate to one certain subject as clearly as the other two factors, all the questions loading for this factor have some attributes in common. First, the items of the second factor are questions that have often been debated in public discussion. That is, the topics are ideologically and politically loaded and often divide the opinions of people. On the other hand, the topics can be considered as global issues and threats, that have surfaced in public discussion during the past decades. For the sake of the analysis, these threats are called polarised threats, due to the dividing nature of the items included. However, it is important to note that the label polarised threats is based only on the interpretation of the writer. Thus, the label includes no claim that there would be a polarisation visible in the data between respondents choosing how high they perceive the threat from these items to be. It is not the aim of this thesis to take a stand on the issues at hand or to further discuss the relationship between the items loading for the second factor, but to merely acknowledge the existence of a group of threats which the respondents have in a statistically significant way connected to each other and responded accordingly.

The third factor consists of items related to hybrid threats. These include hybrid influencing, influencing political elections, and cyber-attacks. The hybrid threats include the expectation of a third-party meddling with the infrastructure or internal systems of the society. While the other two factors include items that could be considered as causing uncertainty also in self and are more personally threating to an individual, the hybrid threats are clearly more societal threats that can affect people's everyday lives, but often do not pose a direct physical or emotional threat.

Based on the explorative factor analysis presented here, index variables are formed for each factor from the items loading to that particular factor. The three index variables, named here as threat of violence, polarised threats, and hybrid threats, all include observations from all respondents in the survey (n= 2,045). The threat of violence variable has a mean of M= 3.3719, and standard deviation of SE= .764. The polarised threats variable has a mean of M= 3.517 and standard deviation of SE= .877. The hybrid threats variable has a mean of M= 3.771 and standard deviation of SE= .786. As could be expected, when testing the distribution of the variables with Kolmogorov-Smirnov test, all three variables receive a significance level of <.001. Thus, the null hypothesis of the variables being normally distributed has to be rejected on all three index variables.

4.1.2   Fit for model

Before running the multiple linear regression analysis, relationships between the independent variables and the dependent variable are tested through Pearson's r correlation test (Table 3) and by running simple bivariate regression models between the variables (Table 4).

TABLE 3 Means, standard deviations and Pearson's r between DV and IVs

Variable	M	SE	1	2	3	4	5
1. Leadership preference	3.88	1.04	-				
2. Financial uncertainty	2.70	.81	.182**	-			
3. Threat of violence	3.37	.76	.349**	.152**	-		
4. Polarised threats	3.52	.88	-.050*	-.008	-.031	-	
5. Hybrid threats	3.77	.79	.036	.006	.339**	.323**	-

Notes. *p<0.05. **p<0.01.

The Pearson's r test shows significant correlation between the dependent variable of leadership preference and the independent variables of financial uncertainty (r= .182, p<.001), threat of violence (r= .349, p<.001), and dividing threats (r= -.050, p<.05). It is notable that while all other correlation relationships between the independent variables and the dependent variable are positive by nature, the polarised threats variable has a negative relationship with all other variables except the hybrid threats (r= .323, p<.01). On the other hand, the hybrid threats variable is only significantly correlated with the polarised threats and threat of violence (r= .339, p<.01) variables. The correlation between the

dependent variable of leadership preference and hybrid threats is minimal and statistically insignificant (r= .036, p=.107).

Table 4 presents the results from the bivariate regression run between the dependent variable of leadership preference and the independent variables. The measure for financial uncertainty has been coded into three dichotomous dummy variables, and the category of "Income is more than sufficient" is used as a reference category. The financial uncertainty variable seems to explain 3.3 % of the variance in the leadership preference (adj. R^2=.033), and the data fits the model on significance level <.001. Thus, the financial uncertainty variable explains leadership preference a little, but on a statistically significant level.

The effect of financial uncertainty on strong leadership preference, in comparison to those who do not feel financially uncertain seems to be quite clear. The difference between those who feel their income is quite sufficient in comparison to those who feel their income is more than sufficient is .166 units (p= .071), when measured on the 7-point scale of preference for strong leadership. In comparison to the respondents who feel their income is more than sufficient, those who feel their income is sufficient, if used carefully prefer strong leadership by .478 units (p<.001) and those who feel their income is insufficient prefer strong leadership by .623 units (p<.001). That is, the higher the financial uncertainty, the higher people seem to rate on the scale of preference for strong leadership, thus supporting the hypothesis that there is a positive relationship between financial uncertainty and preference for strong leadership.

TABLE 4 Bivariate regression of uncertainty's effect on leadership preference

Variable	1			2			3			4		
	B	β	SE	B	β	SE	B	β	SE	B	β	SE
Intercept	3.500		.081	2.273**		.098	4.085		.095	3.698		.113
Financial uncertainty												
- Income is quite sufficient	.166	.072	.092									
- Income is sufficient, if used carefully	.478**	.229	.087									
- Income is insufficient	.623**	.210	.101									
Threat of violence				.475**	.349	.028						
Polarised threats							-.059*	-.050	.026			
Hybrid threats										.047	.036	.029
Adjusted R²	.033			.122			.002			.001		
F	24.092**			283.736**			5.149*			2.596		
N	2,019			2,045			2,045			2,045		

Notes. *p<0.05. **p<0.01.

The perceived threat of violence alone explains 12,2 % (adj. R^2=.122) of the preference of strong leadership, on a significance level of .001. The relationship between perceived threat of violence and leadership preference is positive (B=.475) and significant (p<.001), indicating that when the respondents feel high uncertainty regarding the threat of external violence, they tend to opt for stronger leadership, and vice versa. That is, when the perceived threat of external violence is rated one point higher on the 5-point Likert scale, the preference of strong leadership increases by .475 units.

The perceived threat from the polarised threats variable gets a rather low explanation rate of .2 % (adj. R^2=.002). However, both the results from the F-test and t-test (t= -2.269, p<.05) suggest that the data fits the model on significance level <.05 there is a statistically significant relationship between the dividing threats and the leadership preference. As was expected from the Pearson's r correlation test, the relationship between the dependent and independent variable is negative, i.e., when the perceived uncertainty caused by polarised threats is rated one point higher on the 5-point Likert scale, the preference for strong leadership decreases by .059 units on the 7-point Likert scale. The found negative relationship suggests that the hypothesis on the positive relationship between the perceived external threats on leadership preferences should be rejected in regards of the polarised threats.

The linearity of the bivariate regressions was measured by analysing the residual distributions of the regression models. The residuals in all of the bivariate regression models seem to be normally distributed, which is one of the assumptions if the relationship between variables is considered linear (Metsämuuronen, 2011).

The hybrid threats index variable that was formed based on the explorative factor analysis does not significantly correlate with the leadership preference (r=.036). When a linear regression analysis is conducted, the results of the F-test show no significance, indicating that the model does not fit to the data. The regression coefficient is also low (B=.047) and insignificant, suggesting that the hypothesis on the effects of the perceived external threats on leadership preferences should be rejected in the case of hybrid threats.

The suitability of the control variables for the regression model is tested through simple Pearson's r correlation test. All control variables correlate significantly on level .01 with the dependent and independent variables, with the exception of hybrid threats and gender (p= .455) and trade union membership (p= .272), and threat of violence and gender (p= .543).

4.2 Regression analysis

In this section, the results from the multiple regression analysis conducted with the dependent, independent, and control variables are presented. The regression model is then evaluated based on multicollinearity and residual distribution.

4.2.1 Multiple linear regression

Based on the preliminary analysis, a multiple linear regression model is run. The model constructs of the dependent variable of leadership preference and the independent variables of financial uncertainty, threat of violence, and polarised threats. As argues above, the independent variable of hybrid threats is excluded from further analysis. The relationship between the dependent and independent variables is controlled with third variables of gender, education level, and membership in trade union. The control variables are added into the model in three steps and in the respective order. The results of the multiple linear regression are presented in Table 5.

In the first step, only the dependent and independent variables are included in the model. The model with all of the included independent variables explains in total 13.9% of the variance in the leadership preference variable (adj. R^2= .139). In terms of financial uncertainty, the preference of strong leadership increases whenever the respondent rates their financial certainty lower, and when the other variables are constant. In comparison to the reference group of "Income is more than sufficient", the preference of strong leadership increases with all the categories of "Income is quite sufficient" (B= .152, p=.079), "Income is sufficient, if used carefully" (B= .379, p<.001), and "Income is insufficient" (B= .460, p<.001).

When the perceived threat of violence increases by one unit, the preference of strong leadership increases by .446 points (p<.001) on the 7-point Likert scale when other variables are constant. If we accept the standardised beta value for comparison, the threat of violence seems to also have the strongest effect (β= .327) on the preference of strong leadership from the independent variables. On the other hand, the perceived uncertainty from polarised threats has a negative impact on the preference of strong leadership. When other variables in the model are accounted for, one point increase in the perceived polarised threats causes the preference for strong leadership to decrease by -.047 points (p= .054). The result is statistically insignificant, however, very close to the significance level of .05.

In the second step, the control variable of gender is included in the regression model. The model with one control variable explains in total 16.4% (adj. R^2= .164) of the variance in the preference of strong leadership. Gender seems to have a relatively strong and significant effect on the preference of strong leadership on its own, where women prefer strong leadership to men by .377 (p<.001) units on the 7-point Likert scale. The control variable of gender has a slight decreasing effect on the relationship between the dependent and independent variables. Noteworthy is, that as the effect is decreasing, it increases the strength of the effect of polarised threats on leadership preference (B= -.102, p<.001, β= -.087), and makes the effect of polarised threats statistically significant.

TABLE 5 Multiple linear regression

Variable	1			2			3			4		
	B	β	SE	B	β	SE	B	β	SE	B	β	SE
Intercept	2.239**		.149	2.322**		.147	2.311**		.159	2.337**		.159
Financial uncertainty												
- Income is quite sufficient	.152	.066	.087	.149	.065	.085	.098	.042	.084	.096	.042	.084
- Income is sufficient, if used carefully	.379**	.182	.083	.355**	.171	.081	.261**	.126	.081	.258**	.125	.081
- Income is insufficient	.460**	.155	.096	.425**	.142	.095	.304**	.102	.095	.296**	.099	.095
Threat of violence	.446**	.327	.029	.431**	.317	.028	.396**	.291	.028	.392**	.288	.028
Polarised threats	-.047	-.040	.025	-.102**	-.087	.025	-.080**	-.067	.025	-.074**	-.062	.025
Gender (0=male)				.377**	.182	.044	.400**	.193	.044	.395**	.191	.044
Educational level												
- Vocational course							.302**	.062	.117	.311**	.064	.117
- Upper secondary level vocational education							.302**	.122	.081	.310**	.125	.081
- College level vocational education							.258**	.105	.081	.268**	.110	.081
- Polytechnic/university of applied sciences education							.103	.036	.087	.108	.037	.087
- University education							-.169*	-.070	.081	-.151	-.063	.081
Trade union (0=No)										-.092*	-.044	.043
Adjusted R²	.139			.164			.192			.194		
F	66.305**			65.732**			44.002**			40.780**		
N	2,019			1,987			1,987			1,987		

Notes. *p<0.05. **p<0.01.

The third step brings in the control variable of education level. With both gender and education level brought to the model, the model explains 19.2% in the variance of the preference of strong leadership (adj. R^2= .192). In comparison to the model with only gender as a control variable, the effect of the independent variables decreases even more, except with the polarised threats, where the negative impact on leadership preference weakens, hence there is a slight increase. In terms of the level of education, the reference group being "No vocational education", it seems that to some extent the higher level of vocational education increases the preference of strong leadership. However, the higher the education, there is a decrease in the preference of strong leadership. When those who have responded to have vocational course or other short training, upper secondary level vocational education, or college level vocational education seem to rate higher in preference of strong leadership than the reference group (B= .302; .302; .258 respectively), the effect starts to change after the polytechnic/university of applied sciences level (B= .103, p=236) and there is a change in direction when the respondent has reported to have university education (B= -.169, p<.05). That is, in comparison to those who have no vocational education, those who have university level education rate .169 units lower on the preference of strong leadership.

In the fourth and final step, the control variable of trade union membership is added to the model. With all the independent and control variables included, the model explains 19.4% of the change in the dependent variable (adj. R^2= .194). Thus, adding the trade union variable does not increase the explanatory power of the model in a significant manner. The addition of the control variable does not seem to affect the relationship between the dependent, independent, and control variables either. On the other hand, trade union membership has a significant relationship (p<.05) with the dependent variable when all the other variables are accounted for. The reference group being those who are not members in a trade union, those who are members of a trade union rate lower on the preference of strong leadership (B= -.092, p<.05).

4.2.2 Model evaluation

The regression model can be evaluated based on few factors, such as multicollinearity and residual distribution. For the purpose of the analysis on multicollinearity, the variance inflation factor (VIF) and tolerance are used. The analysis of the residual distribution confirms the linear relationships between the dependent and independent variables. (Metsämuuronen, 2011).

In terms of multicollinearity, high tolerance and low VIF-value suggest a good fit of the variables, i.e., no multicollinearity. Correspondingly, low tolerance and high VIF-value would indicate possible multicollinearity between variables. (Metsämuuronen, 2011). In the case of this study and the multiple regression model, both the VIF and tolerance values remain close to one in all the steps of the model. That is, the VIF is comparatively low, and tolerance is high. When measured on the dichotomous dummy variables of the model, the VIF values remain relatively low at under four, but still higher than with other variables. The tolerance is also rather low, which would in case of regular variables indicate

possible multicollinearity. However, with dummy variables, the possible multicollinearity in this case is not an issue for the goodness of the variables or the regression model.

Analysing the residual distribution confirms the assumption of the regression model, that the relationship between the dependent and independent variables is linear. With the current regression model, the residuals in each step of the model seem to follow normal distribution on the histogram. The residuals were also tested for each bivariate regression in the preliminary tests, and they all seemed to follow normal distribution. This indicates that the relationship between the variables is linear and suggests that the variables are suitable for the intended regression model.

4.3   Discussion

The previous sections have presented the results from preliminary analysis done on the data through explorative factor analysis and linear regression models. Based on the results from these preliminary tests, a multiple linear regression model was run. The results from the multiple linear regression were presented and analysed. This section further discusses the results and reflects back to the hypotheses set for this study.

4.3.1   Hypothesis 1

The first hypothesis set for this study set assumptions on the relationship and the direction of the relationship between uncertainty and preference of strong leadership. The first hypothesis reasons that [a] high uncertainty positively relates to the preference of strong leadership, and similarly, [b] low uncertainty negatively relates to the preference of strong leadership. Uncertainty is measured in this study with different items, that have been named for the sake of analysis as financial uncertainty, threat of violence, polarised threats, and hybrid threats. As there is no one general variable measuring uncertainty, and the items measuring uncertainty in this study are partly measured on different scales, the individual uncertainty variables are used to reason for the conclusion. Strong leadership preference is measured through the opinion of how much power should a president have throughout domestic and international politics.

When measured through bivariate regressions, each of the uncertainty variables seemed to have a relationship with leadership preference. All except for the variable of hybrid threats had a statistically significant relationship to leadership preference, and all except the variable of polarised threats had a positive relationship with leadership preference. The evaluation of the bivariate regressions supports the assumption of linearity in the relationship between the uncertainty variables and the dependent variable of leadership preference.

The results of the study suggest that uncertainty has a linear, mainly positive relationship with leadership preference. That is, increase in uncertainty increases the preference of strong leadership, and the lower the uncertainty, the

less power people prefer the leader to have. On the other hand, the direction is significantly different with uncertainty caused by polarised threats, where the increase in uncertainty decreases the preference of strong leadership and vice versa. Further examination suggested, however, that the change in direction of the relationship might be related to other factors and the effect might be moderated by other related variables. Thus, H1a and H1b can be supported with some caution.

4.3.2   Hypothesis 2

The second hypothesis theorised that [a] high financial uncertainty positively relates to the preference of strong leadership, and [b] low financial uncertainty negatively relates to the preference of strong leadership. Financial uncertainty is measured in this study with a question "How would you describe your household's income/current financial means?". The response scale ranges from one to four, with options "Income is more than sufficient", "Income is quite sufficient", "Income is sufficient, if used carefully", and "Income is insufficient". The higher the score, the higher the financial uncertainty. The analysis is conducted with dichotomous dummy variables, where "Income is more than sufficient" is used as a reference category.

The change between those who report more than sufficient income and those who report quite sufficient income is not statistically significant in any of the steps of the regression model, both in the bivariate and multiple regressions. The difference to those who report "Income is sufficient, if used carefully" and "Income is insufficient" is statistically significant in all cases, both in the bivariate and multiple linear regression models. This probably suggests that the measure of the financial uncertainty, when uncertainty is low, fails to make a difference with the two categories. That is, there seems to be no statistically significant difference between the categories of income is more than sufficient and income is quite sufficient, although there is difference in the regression coefficients.

The results support the assumption that higher financial uncertainty positively relates to strong leadership preference. That is, the higher the financial uncertainty, the more likely the respondent is to prefer strong leadership. Based on the analysis the relationship is linear, thus, both H2a and H2b receive support.

4.3.3   Hypothesis 3

The third hypothesis suggested that [a] high uncertainty caused by external threats positively relates to the preference of strong leadership, while [b] low uncertainty caused by external threats negatively relates to the preference of strong leadership. The external threat variables are formed as index variables based on the results of an explorative factor analysis. These variables are called threat of violence, polarised threats, and hybrid threats.

Threat of violence has a positive and statistically significant relationship with the preference of strong leadership in both the bivariate and multiple regression model. Based on the analysis of the distribution of residuals, the relationship seems to be linear. That is, when uncertainty from threat of violence

is high, the preference of strong leadership increases. Thus, the results around the threat of violence are supporting the hypothesis.

Based on the results of the analysis, polarised threats seem to have a negative relationship with the preference of strong leadership. When measured with bivariate regression, the relationship is negative and significant on level .05, but when put into the multiple regression model with the other uncertainty variables, there is a slight drop in the statistical significance (p= .054). When controlled with gender, the effect of the negative relationship seems to strengthen, meaning that when gender is considered, the effect of high uncertainty on preference of less strong leadership increases. When education level and trade union membership are controlled the effects to the relationship between uncertainty caused by polarised threats are minimal. In case of the polarised threats, the hypotheses should be rejected since the relationship is negative.

Hybrid threats have a positive relationship with the preference of strong leadership, but not on a significant level. Thus, the hypotheses receive some support, but with caution, as the existence of the relationship could be dependent on some other factors that have not been included in the current study. Furthermore, tt seems that the relationship with leadership preference does not apply to uncertainty caused by hybrid threats to the same extent as it does to other external threats. That is, there remains a reasonable question about if and in what way does the amount in which the perceived threat causing uncertainty relates to one's self-concept affect the effects on leadership preference. Hybrid threats were also not included in further analysis, as the preliminary test results suggested the variable did not fit the intended model in a statistically significant way.

Based on the reasoning presented above, H3a and H3b need to be rejected. While positive and linear relationship existed between the uncertainty variables of threat of violence and hybrid threats, and leadership preference, the results were only significant in the case of threat of violence. Polarised threats, on the other hand, seemed to have a negative relationship with leadership preference. Therefore, no support for the assumption that uncertainty from external threats would positively relate to preference of strong leadership.

4.3.4   Hypothesis 4

The fourth and final hypothesis reasoned that the relationship between uncertainty and preference of strong leadership does not disappear when controlled with identification in a social group, i.e., [a] gender, [b] education level, and [c] trade union membership. Gender and trade union membership are measured on dichotomous scales, and education level as the degree of vocational education with six levels from no vocational education to university education.

Gender seems to have a strong and significant relationship with leadership preference, where women are more likely than men to prefer strong leadership when all uncertainty factors are considered as part of the model. When taken as part of the model, there is a slight decrease in the effects of the uncertainty variables. However, at the same time, adding gender to the model makes the

relationship between polarised threats and leadership preference statistically significant. In terms of the hypothesis set, H4a receives support.

Education level is measured with dichotomous dummy variables, where no vocational education is used as a reference group. The results suggest that education level increases the effect of gender on leadership preference when all other variables are held constant. Education also decreases the effect of all of the uncertainty variables, including the polarised threats variable where the effect is negative. In terms of the education level, higher education seems to increase the preference of strong leadership in comparison to the group with no vocational education, up to a certain point. Those who have a university degree prefer strong leadership less than those with no vocational education. Hence, those with university education have the least preference for strong leadership when all the uncertainty factors and gender are accounted for. Since the education level does not cause the relationship between the uncertainty variables and leadership preference to disappear, H4b is supported.

Trade union membership has a statistically significant, yet rather small effect on the relationship between the uncertainty variables and leadership preference. Those who are not members in a trade union prefer strong leadership more than those who are members in a trade union. While the addition of trade union membership into the regression model does not remarkably improve the explanatory power of the model, the relationship between uncertainty variables and leadership preference does not disappear, hence, H4c is supported.

Since the fourth hypothesis did not entail any other assumption except that when controlled with the three variables, the relationship between uncertainty and preference for strong leadership does not disappear, the hypotheses H4a, H4b, and H4c are accepted.

It is important to note that the analysis on the relationship between the control variables and independent and dependent variables in the current thesis only touched the surface of what could be further studied. All of the control variables correlate both between the dependent variable of leadership preference and the independent variables describing the level of uncertainty, mostly on statistically significant level. When the multiple linear regression model was run, none of the control variables removed the relationship between uncertainty and leadership preference. Thus, the results could suggest that the control variables might work as moderators of the relationship. However, as the relationship was studied further outside the assumptions of this thesis and interaction variables were created from gender and threat of violence, and gender and polarised threats, the interaction term seemed to have no statistically significant effect in the regression model, which included same dependent and independent variables but as standardised variables than the original regression model. That is, further research on bringing variables of social group identification would need to be conducted to make conclusions of the type and direction of the relationships between uncertainty, social group identification, and leadership preferences.

5 CONCLUSIONS

This chapter discusses the results of the literature review and empirical analysis conducted in the light of the research objectives and hypotheses presented at the beginning of this thesis. Theoretical and practical implications are discussed together with the limitations of the current study. Suggestions for future research are made.

5.1 Conclusions

The level of uncertainty in our environment has increased and the crises we face both in our societies and within organisations have changed their shape and form, from being isolated incidents to being transboundary by nature and a part of global turbulences and movements. The aim of this study was to explore the concept of uncertainty in the general environment, and how it affects what is expected from leaders. Drawing from earlier research within the field of crisis management and leadership, and the uncertainty-identity theory, the current thesis builds upon the idea of a theoretical leap from conventional crisis management research to applying a broader concept of uncertainty.

The core of the study was to answer the question of how uncertainty relates to leadership preference. The theoretical findings suggest that uncertainty leads people to heavily rely on their leader (Hogg & Rast, 2016; Rast et al., 2012) and people tend to start preferring strong and directive forms of leadership – even to the extent of preferring autocratic leadership over more democratic forms of leadership (Rast et al., 2013). The results of the empirical analysis supported the findings and assumptions set in the previous research. When experiencing high levels of uncertainty, people become more favourable towards leaders who have the capability and power necessary to make quick decisions, and who can make sense of the situation in a manner that reduces the feelings of uncertainty.

Another question revolved around the type and the cause of uncertainty and how it relates to the preference of strong leadership. The theoretical framework built upon the assumption that there should be no significant

differences in the preference of strong leadership between the different causes of uncertainty. The preference for strong leadership should exist be it financial uncertainty or uncertainty caused by external threats. The empirical analysis provided somewhat contradicting results to this basic assumption. Financial uncertainty did positively relate to preference of strong leadership, but the external threats, in this study the threat of violence, polarised threats, and hybrid threats all had different effects. The results should therefore be further discussed.

While the current study was conducted in the context of political leadership, the theoretical framework supports the idea that the phenomenon applies also to organisational context. It is, however, essential to note when making generalisations of the results that there seems to be a difference in attitudes when the experienced uncertainty relates to general safety and when it relates to e.g., values, as could be argued with the factor of polarised threats in the current study.

The results suggest that uncertainty caused by threat of violence positively relates to strong leadership preference. On the other hand, uncertainty caused by the polarised threats negatively relates to the preference of strong leadership. These two causes for uncertainty are inherently different, as the other one possesses threat to the physical being of a person and the other one is rather a threat to the values, here questions related to racism, climate change, pandemics, and political extremism. In the context of political leadership, in this case presidential leadership, it is somewhat natural to prefer strong leadership if one feels their physical integrity might be threatened. Hence, a strong, directive, and autocratic leader could bring security to the situation and thus reduce the feeling of uncertainty. However, when the perceived threat is in regards of one's values and perhaps even political beliefs, the support for an autocratic leader would likely be dependent on the considered group prototypicality of the leader. That is, whether or not the leader holds the same values and beliefs as the individual. (Hogg, 2007; Hogg & Rast, 2016; Rast, 2015; Rast et al., 2013).

In the context of organisational leadership, there rarely is a situation where the physical integrity of individuals would be threatened. On the other hand, the global COVID-19 pandemic proved, that the physical limits of individuals within organisations can be threatened, not necessarily by violence, but by rules and regulations relating to e.g., vaccinations. If conclusions were drawn directly from the results of the current study, that could imply that actually in cases such as pandemics where regulations are needed, and the rights of individuals could be somehow limited, strong leadership could be less preferred. However, similarly if the uncertainty was related to the financial situation of the individual, strong leadership could be preferred as to avoid e.g., the potential loss of a job. Nevertheless, further studies on the causes of uncertainty should be conducted to draw meaningful conclusions for organisational contexts.

From the factors found in the explorative factor analysis, the hybrid threats factor was excluded from further analysis based on the relationship between the hybrid threats and preference of strong leadership being statistically insignificant and barely existing. It could also be argued, based on also Rast's (2015) reasoning, that the perceived uncertainty to one's self-concept in case of hybrid threats is rather insignificant. Thus, while the threat is acknowledged, it does not affect the self-concept to the same extent as for example, the threat of violence would.

Therefore, the effect of the perceived hybrid threats hence uncertainty related to the hybrid threats to the preference of strong leadership would be less significant. Or, as Hogg (2007) argued in the very foundation of the uncertainty-identity theory, not all uncertainties are considered worthwhile to solve. That is, the considered importance or relevance of the uncertainty is what motivates people to solve the uncertainty. Thus, the uncertainty cause hybrid threats might not be considered an uncertainty worthwhile to solve.

The last research objective related to the role of social group identification in the relationship between uncertainty and preference of strong leadership. While the possibilities of the current study to analyse the relationship between the group identification measures and the main variables of uncertainty and leadership preferences, the results offer interesting theoretical and practical implications. Gender seems to play a significant role in the way uncertainty affects the preference of strong leadership. The results of this study suggest that women would be more likely to lean towards strong leadership than men when feeling uncertain. While the "Think Crisis – Think Female" paradigm (e.g., Ryan et al., 2011) suggests female leaders might be preferred during times of crisis, the gender aspect brings contradicting perspectives to the discussion. If we consider female leaders to be more empathetic or prone and willing to take care of others (Mulder et al., 1986; Wu et al., 2021), but women would also prefer strong and directive leadership over men, there could be interesting perspectives for future research to discuss and analyse. As has already been in the field of crisis leadership studies (Wu et al., 2021), gender remains an important attribute to study in the context of uncertainty and crisis leadership.

5.2   Limitations and considerations

While the results of this thesis can and should be considered significant in nature, this study has its limitations. First, the scope of the study is limited from the theoretical background and the type of a data used. While the research question and hypotheses have been narrowed down and the current study does not claim to answer questions beyond its scope, it would be fruitful for further discussion to have further elaborated on the concept of uncertainty and its implications. However, this leaves room for future examination from perspectives outside this thesis.

In regards of the dataset analysed, the data being cross-sectional limits the possibilities of this study to make claims on causality but is enough to test the set hypotheses. It is important to note that as the data has been collected for other uses than the current study, the validity and reliability of the data for the use of this study can be questioned. However, as the previous research on the subject has been conducted mainly through experiments and customised surveys, it could be argued that the use of unconnected data further proves the existence of the phenomenon outside manipulated environments. On the other hand, it could be argued that the ability of the chosen data and the current study to reproduce the phenomenon in a large scale is significant itself.

In terms of the ethical considerations for collecting and processing the data, the survey-based dataset used in this study has been collected from voluntary participants between ages 18 to 79, with no minors participating in the survey. The dataset has been collected by a professional research organisation Taloustutkimus, and therefore it is reasonable to assume the data has been collected and processed in a responsible way and ethical considerations in mind. The data is available for research, teaching, and study, thus free to use for the purposes of the current thesis. The data is handled with care and the results are presented in a way that does not allow the identification of individual respondents.

As with any research, the current study is limited due to the researcher's bias. Especially the use of explorative factor analysis in forming some of the uncertainty variables, leaves a lot of room for interpretation of the results. The possible bias in the results and the analysis have been considered while making conclusions based on the study. Hence, the study does not aim to make generalised claims on the phenomenon rather than answer the research questions and hypotheses set in the current thesis.

Within the limitations of the study, it should also be noted that no tools taking advantage of artificial intelligence, such as ChatGPT, were used in the writing of this thesis. Thus, the search of research articles and other sources for the study does not and cannot cover the research field as extensively as could have been done with the help of certain artificial intelligence tools. The choice was made based on the writer's personal beliefs and due to the nature of this study as a master's thesis.

5.3 Future research

The current study and previous research on uncertainty and the uncertainty-identity theory, and the extensive studies done on leadership types seem to offer strong proof of the relationship between uncertainty and leadership preference. While the existence of the relationship has been acknowledged, there is still a need for further research about the topic and its theoretical and practical implications.

As was the starting point of this study, there is a lack of empirical research on many parts of the uncertainty-identity theory and the relationship between uncertainty, social group memberships, and leadership. While this study has made a contribution to the discussion, the different causes for uncertainty and their effects should be further studied and contributions made from e.g., the perspective of social psychology. As Rast (2015) has reasoned and the results from the current study suggest, the importance of the relation of the cause of uncertainty with the self-concept seems to be essential to the overall relationship between uncertainty and its consequences for human behaviour.

The aspect of social group identification in the relationship between uncertainty and leadership should be further examined. As the results from the current study suggest, the identification in a social group might play a role in

how uncertainty relates to leadership preference. While the uncertainty-identity theory stems from the assumption that identifying to a group is a key to reducing uncertainty (Hogg, 2007), the current research lacks the capability of further explaining the true nature of the relationship. Thus, future research should focus on analysing the relationship further.

Further studying the effects of uncertainty remains an important task for the research community. Understanding how the changes and growing uncertainty affect individuals, organisations, and societies in general offer new theoretical and practical perspectives on how we view and study leadership.

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APPENDIX

APPENDIX 1: Survey questions, original language

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4. Miten luonnehtisit kotitaloutesi tuloja/nykyistä taloudellista toimeentuloa?

- ○ Tuloilla tulee erinomaisesti toimeen
- ○ Tuloilla elää melko mukavasti
- ○ Tuloilla pärjää, kun käyttää harkiten
- ○ Vaikeuksia tulla toimeen
- ○ En osaa sanoa
- ○ En halua sanoa/arvioida

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9. Turvallisuus ja erilaisiin uhkiin varautuminen on ollut julkisuudessa paljon esillä viime aikoina. Kuinka suurina sinä pidät seuraavia uhkakuvia yleisemmin Suomen tai henkilökohtaisesti itsesi/läheistesi kohdalla? Kerro oma arviosi tilanteesta.

	Hyvin suuri uhka	Melko suuri uhka	Vaikea sanoa	Melko pieni uhka	Olematon uhka
Sotilaallinen hyökkäys Suomeen	❑	❑	❑	❑	❑
Hybridivaikuttaminen, suomalaisen yhteiskunnan horjuttaminen eri keinoin	❑	❑	❑	❑	❑
Terrori-isku Suomessa	❑	❑	❑	❑	❑
Uusi laajamittainen talouskriisi maailmalla	❑	❑	❑	❑	❑
Jengisodat, mellakat, tuhotyöt	❑	❑	❑	❑	❑
Vaaleihin vaikuttaminen maamme rajojen ulkopuolelta	❑	❑	❑	❑	❑
Ilmaston lämpeneminen	❑	❑	❑	❑	❑
Tietovarkauden kohteeksi joutuminen	❑	❑	❑	❑	❑
Poliittisten ääriryhmien väkivalta	❑	❑	❑	❑	❑
Pandemiat ja tarttuvat taudit	❑	❑	❑	❑	❑
Hallitsematon siirtolaisaalto Eurooppaan	❑	❑	❑	❑	❑
Väkivallan kohteeksi joutuminen	❑	❑	❑	❑	❑
Kotiin tai muuhun omaisuuteen kohdistuva ryöstö	❑	❑	❑	❑	❑
Kyberiskut Suomeen, tietoverkkojen lamauttaminen	❑	❑	❑	❑	❑
Työn ja toimeentulon menettäminen	❑	❑	❑	❑	❑
Ydinaseiden käyttö kansainvälisessä kriisitilanteessa	❑	❑	❑	❑	❑
Jengiväkivalta	❑	❑	❑	❑	❑
Rauhattomat tai hallinnasta riistäytyvät mielenosoitukset	❑	❑	❑	❑	❑
Yksilöihin tai ryhmiin kohdistuvan rasismin lisääntyminen	❑	❑	❑	❑	❑
Terveydenhuollon kantokyvyn romahtaminen	❑	❑	❑	❑	❑
Raa'an väkivallan lisääntyminen nuorten keskuudessa	❑	❑	❑	❑	❑

10. Maallemme valitaan piakkoin tasavallan presidentti seuraavalle kuusivuotiskaudelle. Mitä mieltä olet presidentin valtaoikeuksista: Kuinka paljon valtaa presidentillä pitäisi sinun mielestäsi olla seuraavissa asioissa tai asiakokonaisuuksissa? Kerro oma mielipiteesi riippumatta siitä, mitkä presidentin valtaoikeudet ovat tällä hetkellä.

	Kaikki valta	Erittäin paljon valtaa	Melko paljon valtaa	Vaikea sanoa	Melko vähän valtaa	Erittäin vähän valtaa	Ei lainkaan valtaa
Ulko- ja turvallisuuspolitiikka	❑	❑	❑	❑	❑	❑	❑
Hallituksen muodostajan valitseminen	❑	❑	❑	❑	❑	❑	❑
Eduskunnan hajottaminen ja ennenaikaisten vaalien määrääminen	❑	❑	❑	❑	❑	❑	❑
Työmarkkina-asiat	❑	❑	❑	❑	❑	❑	❑
Aluepolitiikka	❑	❑	❑	❑	❑	❑	❑
Koulutus ja tutkimus	❑	❑	❑	❑	❑	❑	❑
Elinkeinopolitiikka (mm. kilpailu, yritysten sääntely, omistajaohjaus)	❑	❑	❑	❑	❑	❑	❑
Talouspolitiikka (mm. verotus ja julkisen talouden hoito)	❑	❑	❑	❑	❑	❑	❑
Ympäristöasiat (mm. luonnonsuojelu, ilmastonmuutoksen ja luontokadon torjunta)	❑	❑	❑	❑	❑	❑	❑
Maahanmuuttopolitiikka	❑	❑	❑	❑	❑	❑	❑
Sosiaali- ja terveyspolitiikka	❑	❑	❑	❑	❑	❑	❑
EU-asiat	❑	❑	❑	❑	❑	❑	❑
Maanpuolustus	❑	❑	❑	❑	❑	❑	❑
Eduskunnan lainsäädäntötyö yleensä (esim. lakialoitteet, lakien vahvistaminen)	❑	❑	❑	❑	❑	❑	❑
Puolustusvoimien ylipäällikkyys	❑	❑	❑	❑	❑	❑	❑
Rikollisten armahtaminen	❑	❑	❑	❑	❑	❑	❑
Keskeiset valtion virkanimitykset	❑	❑	❑	❑	❑	❑	❑

Kysymme vielä joitakin taustatietojasi tulosten tilastollista ryhmittelyä varten.Sukupuoli

- ○ Mies
- ○ Nainen
- ○ Muu

Millainen ammatillinen koulutus Sinulla on?

- ○ Ei ammatillista koulutusta
- ○ Ammattikurssi, muu lyhyt ammattikoulutus
- ○ Ammattikoulu
- ○ Opistotasoinen ammattikoulutus
- ○ Ammattikorkeakoulututkinto
- ○ Yliopisto- tai korkeakoulututkinto

Kuulutko johonkin ammatilliseen keskusjärjestöön?

- ○ En kuulu
- ○ Kyllä