



The Narcissists Wallet: The Nexus between Narcissism and Financial Decision-Making among Aspiring Entrepreneurs

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Abstract

This study examines how grandiose narcissism affects the resource acquisition of aspiring entrepreneurs. The study's results help bridge a gap in the literature and provide a better understanding of the nexus between narcissism and entrepreneurial finance. By drawing on previous literature from both fields, we set out to explore the relationship between narcissism and an individual's preference for funding options that introduce no external influence into the business. Through a multinomial logistic regression, data collected among aspiring entrepreneurs in the Swedish educational and start-up systems showed a significant positive correlation between narcissism and a preference for financial sources without external influence. Furthermore, our study found that age and gender do not significantly moderate the relationship between narcissism and financial preferences. These findings suggest a clear role of the individual's personality, particularly the influence of dark traits, in the entrepreneurial choice of finance. This knowledge can assist practitioners and researchers in developing more comprehensive theories and frameworks that include personality traits, such as narcissism, in the study of entrepreneurship and resource acquisition. Policymakers and investors can also utilise this understanding of the influence of narcissistic traits on funding preferences to design more customised support systems and funding options that cater to aspiring entrepreneurs' diverse needs and motivations.

Keywords: *Narcissism; Resource Acquisition; Aspiring Entrepreneurs; Start-Ups*

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1. Introduction

Entrepreneurship is now a well-known concept in the business world, similar to how "professionalism" was widespread in the managerial scene of the 1970s (Stevenson, 2006). Many people aspire to become entrepreneurs because of the promise of freedom, independence, and prosperity that comes along with it. Even larger corporations now adopt a more "entrepreneurial" mindset by observing their smaller competitors' innovative and adaptable qualities, who tend to be more successful (Marion, Dunlap & Friar, 2012). The popularity of entrepreneurship is evident in the various investments made towards university programs, accelerators, and incubators for inspiring individuals to pursue their dreams to change the world (Gupta et al., 2022). Aspiring entrepreneurs, who possess the necessary skills and competencies, have the potential to become successful entrepreneurs (Kyndt & Baert, 2015). It is essential to understand this group to allocate public funds and create a supportive environment to nurture their potential and create economic growth (Harper, 2003; Stevenson, 2006).

Entrepreneurship is not only important from an individual's perspective but also from a policy and societal perspective (Henrekson & Stenkula, 2010). As mentioned, the promise of freedom, independence, and prosperity has attracted many individuals to become entrepreneurs. This has created numerous job opportunities, economic growth, and innovation (Harper, 2003). Additionally, entrepreneurship has become a necessary tool to tackle social and environmental challenges by promoting social entrepreneurship and sustainable business practices; this type of entrepreneurship is becoming increasingly popular (Henrekson & Stenkula, 2010; Lehtimäki et al., 2021). From a policy perspective, entrepreneurship is crucial because it can enhance economic growth and job creation, especially in developing countries (Henrekson & Stenkula, 2010). Governments worldwide have recognised entrepreneurship's importance and implemented policies and initiatives to support it (Campos, Braga & Correia, 2018). These policies include funding for entrepreneurial programs and regulatory frameworks to encourage entrepreneurship. In addition, entrepreneurship is known to have the potential to promote social progress and tackle societal issues (Lehtimäki et al., 2021).

Numerous studies have explored the motivations, characteristics, and intentions of individuals who aspire to become entrepreneurs (Carsrud & Brännback, 2019; Liu et al., 2021; van Gelderen et al., 2008). It is crucial for entrepreneurs to obtain financial resources; therefore,

there has been research done on different financial sources and resources for entrepreneurs to highlight these aspects (Paul, Whittam & Wyper, 2007; Yin, Hughes & Hu, 2021). However, studies on how personality traits, especially dark traits, affect the selection of financing options for aspiring entrepreneurs have been limited. Therefore, this study investigates the nexus between narcissism and the choice of entrepreneurial finance for aspiring entrepreneurs.

Narcissism is a personality trait characterised by grandiosity, self-love, and extravagant self-esteem (Cramer, 2011; Thomaes et al., 2009). Narcissistic individuals display primary behaviours that aim to preserve, restore, or uphold their inflated sense of self (Lowen, 2004); their ego is of utmost importance to them, and they will do anything to protect it. The subject of narcissism has attracted significant attention from both the scientific community and the public at large (Miller 2017). Research on narcissism has shown narcissistic tendencies in various settings, ranging from psychiatric patients to celebrities, CEOs, and even American presidents. Typical narcissistic individuals exhibit intense arrogance, dominance, aggression, and coldness towards others, demanding attention and respect while withholding both. Over the past two decades, significant progress has been made in studying narcissism, however primarily in the workplace (Miller et al., 2021; Smith & Webster, 2018a).

Interestingly, recent studies have highlighted the increasing prevalence of narcissism, particularly among Millennials and Generation Z (Liu et al., 2019a; Schroth, 2019; Stein, 2013). This generation shows a marked increase in narcissistic traits, and projections suggest that by 2030, 75% of the workforce will be comprised of Millennials and Generation Z. This has important implications for the workplace, with narcissism likely to become even more widespread. Furthermore, given that small and medium-sized enterprises (SMEs) account for 60 to 70% of global employment, the popularity of narcissistic traits among millennials is likely to significantly impact the changing workforce, especially in the context of entrepreneurship (Rao et al., 2021).

Despite its relevance to entrepreneurial activity, there is still a shortage of research exploring narcissism among aspiring entrepreneurs. Most of the existing literature stems from organisational research and focuses on various workplace narcissism topics. However, entrepreneurs and non-entrepreneurs have different relationships with narcissism, making it essential to understand it in entrepreneurship (Liu et al., 2021). Therefore, further research is needed to fully comprehend the role of narcissism in the entrepreneurial process, particularly concerning resource acquisition and financial decision-making.

The prevalence of narcissistic traits among Millennials and Generation Z, combined with the growing significance of SMEs in driving economic growth and job creation, underscores the importance of understanding the role of narcissism in the entrepreneurial process. However, despite the considerable interest in narcissism in the workplace and society, the literature on its relationship with financial decision-making in entrepreneurship remains underdeveloped (Liu et al., 2021). While studies have explored the relationship between narcissism and workplace behaviour, such as leadership and job performance, there is a notable gap in research that examines the link between how narcissism influences the choice of financing in entrepreneurship (e.g., Campbell et al., 2011; Judge, LePine & Rich, 2006; Penney & Spector, 2002).

Interestingly, some studies have found a positive relation between narcissistic behaviour and entrepreneurial intention, suggesting that individuals with narcissistic traits may be more likely to start their own businesses, as these individuals find it essential to become their own boss, like the thought of freedom, and want to make their own decisions (Leung et al., 2021). However, other studies have found no relationship between narcissistic traits and entrepreneurial success (Leung et al., 2021). This suggests that while narcissism may play a role in the early stages of entrepreneurship, it may not be a reliable predictor of long-term success (Burger, Kanbach & Kraus, 2023). Despite these mixed findings, little research has investigated the relationship between narcissism, different entrepreneurial processes, and the acquisition of resources (Liu et al., 2021). Adding on to this, Burger, Kanbach and Kraus, (2023) have called for further investigation into the effect of narcissism on venture capital funding, further highlighting the need for more research in this area.

We will conduct a quantitative study consisting of a survey to collect quantitative data on the narcissism levels of aspiring entrepreneurs and their financial decision-making on resource acquisition. This study aims to take a first step towards creating a framework for understanding narcissism in the context of entrepreneurial finance. We will examine how narcissism affects this field, examining external factors. The expected outcome of this study is to find a positive correlation between narcissism and funding options that give entrepreneurs more control, less tolerance for outside influence, and quick gains in the early stages of their start-up. Additionally, we expect to uncover several underlying mechanisms that explain the relationship between narcissism and the financial resource acquisition of aspiring entrepreneurs. Finally, the moderating effects of age and gender on this relationship, which can influence specific financial choices, will be explored.

1.1 Purpose of the Study

Our study aims to investigate how narcissistic trait influences the resource acquisition of aspiring entrepreneurs. Specifically, we look at how the entrepreneurial finance choice of entrepreneurs is influenced by narcissistic tendencies and how this relationship is moderated by age and gender. We aim to answer the following research question:

How does narcissism influence the entrepreneurial finance choice among aspiring entrepreneurs, and how is this relationship impacted by age and gender?

1.2 Narcissism in Entrepreneurship Literature: A Brief Overview

As mentioned before, entrepreneurship has been a popular research topic for several decades, and research on the personality traits of successful entrepreneurs has been a significant focus of this research (Liu et al., 2021). From the 1960s to the early 2010s, literature on entrepreneurial personality was thought to be dominated by traits such as risk-taking, autonomy, and innovation (Milinković, Kovačević Mihailović¹, 2016). However, in 2013, the literature on narcissism in the entrepreneurial context began to emerge, and it has gained significant attention in recent years (Miller et al., 2017).

Research has shown that entrepreneurs exhibit different personality traits than non-entrepreneurs, such as wanting more individual freedom and a higher need for achievements (Salmony & Kanbach, 2022). Still, little research has been conducted on the relationship between narcissism and entrepreneurship (Liu et al., 2021). Previous studies have examined how personality traits, such as the Big Five and proactive personality, influence entrepreneurial intentions and performance (Liu et al., 2021). Despite the growing interest in the relationship between narcissism and entrepreneurship, research has largely ignored its significant impact on entrepreneurial resource processes and activities (Burger, Kanbach & Kraus, 2023).

Narcissism is believed to influence each stage of the entrepreneurial process, providing cognitive, motivational, and behavioural explanations for entrepreneurial activities and outcomes, especially in the first stages of the process (Liu et al., 2019b). For example, the Hmieleski and Lerner, (2016) study shows that narcissism is crucial in driving entrepreneurial

intentions and positively associated with creative and uncreative motives. In addition to the recent studies mentioned above, research has looked at the impact of narcissism on crowdfunding outcomes. The findings of Bollaert, Leboeuf and Schwienbacher, (2020) and Butticiè and Rovelli, (2020) suggest that narcissistic entrepreneurs tend to be less successful in acquiring crowdfunding resources. Specifically, the paper of Bollaert, Leboeuf and Schwienbacher, (2020) stated that narcissistic entrepreneurs set lower funding goals and longer campaign durations than their non-narcissistic counterparts, resulting in fewer backers and less funding to protect their egos. Similarly, Butticiè Rovelli, (2020) found a negative correlation between entrepreneurs' narcissism and their crowdfunding success, particularly in the culture and food-related industries.

While previous studies look into how narcissism influences entrepreneurial finance outcomes, there is limited knowledge on how it influences the type of finance entrepreneurs choose and why they choose specific funding options. Hence, this study will examine how narcissism affects the financing choices of entrepreneurs. We will examine whether entrepreneurs with narcissistic traits are likelier to choose internal influence financing options over external ones. This is because internal financing can offer the entrepreneur more control and ownership rights. This research can help aspiring entrepreneurs make better decisions about securing resources to achieve their goals. Nevertheless, it can also significantly impact guiding policymakers and investors in providing aspiring entrepreneurs with the most suitable financing options.

1.3 Context for the Study

Aspiring entrepreneurs are an exciting and relevant group for which to investigate the relationship between narcissism and resource acquisition because of their potential impact on the economy and society. In our sample, aspiring entrepreneurs are in the Millennials and Generation Z age categories.

By analysing the characteristics and driving forces of aspiring entrepreneurs in our research, we can offer policymakers the opportunity to create more effective support programs and initiatives that cater to narcissistic aspiring entrepreneurs' unique needs and financial funding preferences, which will then support advancing entrepreneurship and promote the expansion of small businesses (Mason & Brown, 2014). These initiatives may encompass opportunities for

financing, mentorship programs, and networking opportunities that assist aspiring entrepreneurs in overcoming potential challenges. Secondly, studying aspiring entrepreneurs can help identify potential obstacles to entrepreneurship and strengthen entrepreneurship education (Pruett et al., 2009). For example, a lack of access to funding or support networks can hinder the success of aspiring entrepreneurs (Block et al., 2018). Identifying and addressing these obstacles can help aspiring entrepreneurs overcome challenges and pursue their entrepreneurial goals and dreams. Furthermore, studying aspiring entrepreneurs can also provide valuable insights into the characteristics and qualities that make a successful entrepreneur. By understanding what motivates and drives successful entrepreneurs, including their level of narcissism, policymakers and educators can develop training and support programs that nurture these qualities and help aspiring entrepreneurs achieve their goals (Mason & Brown, 2014; Pruett et al., 2009).

Additionally, our study will discuss two different funding options, “External influence funding options” and “No external influence funding options”. “External influence” includes venture capitalists, business angels, corporate investors, loans, crowdfunding debt, and friends and family loans. While “no external influence” includes founder or personal investment and government grants.

1.4 Disposition of the Study

The thesis is organised into multiple chapters. Chapter 2 will discuss the theoretical framework and hypotheses. Chapter 3 explains our research methodology, including the research design, data collection, and reliability assessments that we used to conduct our investigation. Chapter 4 presents an analysis and summary of the data. The study's findings are discussed in Chapter 5, and in Chapter 6, additional insights, suggestions for future research, and study limitations will be presented. Lastly, Chapter 7 provides a conclusion to the thesis.

2. Related Literature and Conceptual Foundation

2.1 Entrepreneurship

The concept of entrepreneurship is a fascinating and complex phenomenon that has evolved over time (Davidsson, 2016). It involves various activities, from identifying market opportunities to acquiring resources, creating innovative solutions, and taking calculated risks (Baron, 2006). However, this process is marked by uncertainty, ambiguity, and the need to constantly adapt and evolve to the ever-changing business landscape (Davidsson, 2016). Unlike traditional methods that follow a linear path with predetermined steps, studies show that entrepreneurship is a non-linear process often involving multiple iterations, pivots, and feedback loops (Kreiser et al., 2013). Furthermore, this leads to entrepreneurs being constantly vigilant and agile as they navigate the challenges and opportunities that come their way. They must recognise emerging trends, anticipate customer needs, and develop innovative solutions ahead of the curve (Baron, 2006). Entrepreneurs have a clear sense of purpose and strive to create innovative solutions that benefit their communities and beyond. They are often described as risk-takers, visionaries, and problem-solvers unafraid to challenge the norm and push boundaries (Politis & Gabrielsson, 2012). As stated before, entrepreneurship is a dynamic and multifaceted concept that requires a combination of creativity, passion, and determination to succeed (Audet & Couteret, 2012). It is an exciting and rewarding journey that challenges anyone to push themselves beyond their limits and create something truly innovative (Shane & Venkataraman, 2000). This study refers to entrepreneurship as identifying and pursuing opportunities to create innovative solutions, acquiring resources, and taking calculated risks to establish and grow a new venture.

Those who embark on the journey and are driven to start their own businesses are often called aspiring entrepreneurs. People become aspiring entrepreneurs for many reasons, including a desire for freedom, a passion for a particular idea or industry, or a need for control (De Vries, 1977). It is important to note that not all aspiring entrepreneurs become successful entrepreneurs. As mentioned before, the process of starting and running a business is complex and challenging, with many unpredictable and non-linear stages like opportunity recognition, resource acquisition, business planning, and execution. Hence, success in entrepreneurship requires a combination of skills, knowledge, and mindset. Aspiring entrepreneurs may

encounter obstacles that hinder their ability to establish or expand their businesses (Pruett et al., 2009). These barriers can be either external or internal. External barriers encompass a shortage of funding, regulatory restrictions, and market rivalry, whereas internal barriers include self-doubt, fear of failure, and insufficient support (Stamboulis & Barlas, 2014). Thus, aspiring entrepreneurs seek convenience-based support as they do not yet have a history of performing their new business ideas (O'Toole & Ciuchta, 2019). Starting a business can be challenging and uncertain, offering excitement and apprehension for individuals seeking to pursue it. Unlike traditional careers, there is no predefined path to success. It involves navigating different stages and feedback loops, requiring flexibility and adaptability (Cha & Bae, 2010). Consequently, Aspiring entrepreneurs must be ready to confront uncertainty and ambiguity and be willing to adjust their strategies and change the course of their journey based on feedback and new information (Cha & Bae, 2010).

Additionally, self-awareness and identifying personal strengths and weaknesses are crucial for long-term success. Aspiring entrepreneurs can utilise these strengths and work on improving their weaknesses. Success in entrepreneurship may require multiple rounds of opportunity recognition, resource acquisition, and business model refining. It involves seizing opportunities as they arise while managing limited resources effectively (Baron, 2006). Therefore, aspiring entrepreneurs must think creatively and strategically to maximise the available resources and may seek simplicity for easy funding (Adams, 2005; Klyver & Schenkel, 2013). However, it is essential to remember that persistence, resilience, and a willingness to learn from failure are essential traits for aspiring entrepreneurs (Corner, Singh & Pavlovich, 2017). Experiencing failure is a natural aspect of being an entrepreneur, but it can also provide opportunities for personal development and education (Sheperd, 2003). Determined entrepreneurs can overcome setbacks and persist through difficult times to achieve their goals (Kyndt & Baert, 2015).

Although aspiring entrepreneurs have many benefits and opportunities to look forward to, they also have significant obstacles; one of the biggest challenges is securing the necessary funding to launch and grow their ventures, which sets them apart from existing and experienced entrepreneurs (Ebbers & Wijnberg, 2012; Pruett et al., 2009). Without access to funding, mentorship, and other forms of support, many aspiring entrepreneurs find it challenging to get their ideas off the ground. Aspiring entrepreneurs can attempt to access different sources of investment capital, ranging from family members to venture capitalists (VCs); however, this is difficult due to a lack of performance experience (Klyver & Schenkel, 2013; Pruett et al., 2009). Entrepreneurs must impress potential investors favourably to find external financing for their

nascent venture. This suggests that entrepreneurs will seek internal financing options as a quicker route (Ebbers & Wijnberg, 2012; Klyver & Schenkel, 2013). Addressing this issue and ensuring aspiring entrepreneurs access the necessary resources is crucial for creating a thriving entrepreneurial ecosystem (O'Toole & Ciuchta, 2019) and therefore addressed in our study.

2.2 Narcissism

Individuals who exhibit narcissistic traits have a constant need for admiration. They usually try to prove their superiority over others and have grandiose fantasies of achieving fame and power. (Mathieu & St-Jean, 2013; Raskin, Novacek & Hogan, 1991). They tend to hold an inflated self-image and perceive themselves as more intelligent and attractive than others (Mathieu & St-Jean, 2013). The psychological study of narcissism has a small yet rich heritage history (Foster, Campbell & Twenge, 2003). During the last two decades, research has demonstrated that narcissism can be examined hierarchically and has at least two distinct dimensions, as seen in figure 2.1: The hierarchical structure of Narcissism (Miller et al., 2021).

Arrogance, entitlement, increased self-esteem, sociability, aggressiveness, popularity, risk-taking, and a zero-sum interpersonal approach where there can only be one winner, are all characteristics of grandiose narcissism and therefore considered in our paper as narcissistic tendencies (Morf & Rhodewalt, 2009). On the other hand, vulnerable narcissism is tied to egocentrism, poor and changeable self-esteem, suspicion of others, widespread and long-lasting negative affectivity, and social isolation (Krizan & Herlache, 2018; Miller et al., 2017).

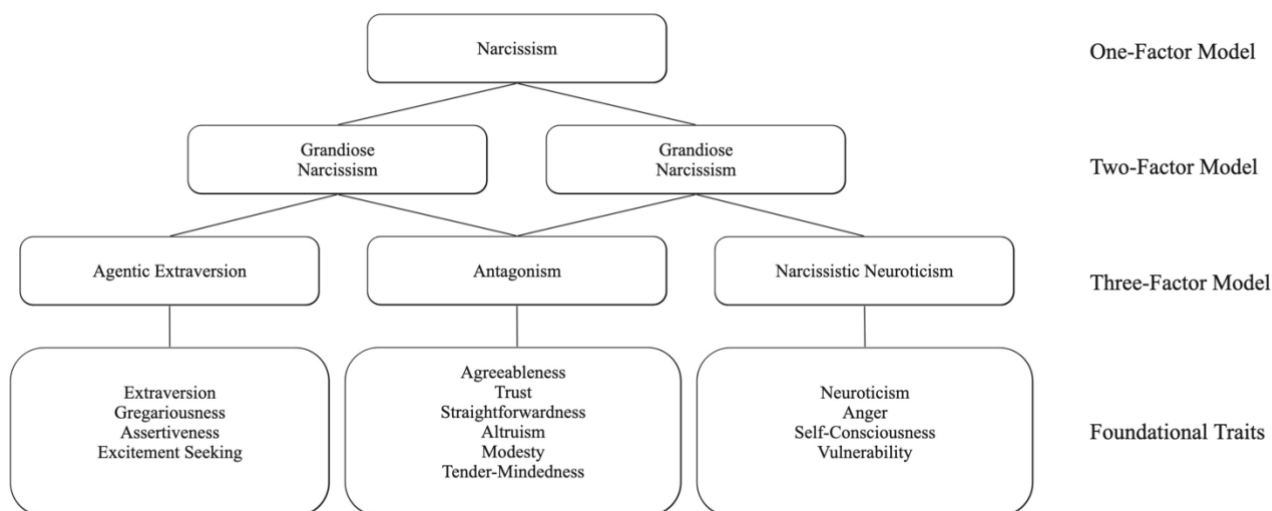


Figure 2.1: The hierarchical structure of Narcissism (Miller et al., 2021)

In this paper, we will primarily focus on grandiose narcissism and its implications on aspiring entrepreneurs' financial decisions, as grandiose narcissism has received more attention and investigation compared to other forms of narcissism in the context of social personality literature (Zajenkowski et al., 2020). Additionally, studies have concluded that grandiose narcissism can lead to innovation and is essential to research social consequences. In contrast, other forms of narcissism might harm innovation (Smith & Webster, 2018b). Therefore, grandiose narcissism is the most prominent to investigate (Zajenkowski et al., 2020). Adding to that is the fact that, with grandiose narcissism, we assume that aspiring entrepreneurs tend to exhibit traits associated with the Big Five personality model, particularly traits related to the grandiose subtype of narcissism. Psychology and personality social studies have given considerable attention to the personality trait approach to narcissism. The narcissistic personality trait can be viewed through larger models, such as the Big Five model (Hodson, Hogg & MacInnis, 2009; Zajenkowski & Szymaniak, 2021). This subtype is characterised by an exaggerated sense of self-importance, a desire for admiration, and a lack of empathy, which are common qualities among entrepreneurs (Miller et al., 2017). The Big Five model includes five broad dimensions of personality: openness, conscientiousness, extraversion, agreeableness, and neuroticism, and it has been widely accepted as a framework for understanding personality

traits (Gurven et al., 2013; Zhao & Seibert, 2006). Recent studies have shown that grandiose narcissists, who are characterised by their massive norm of self-importance and entitlement, are often perceived as "disagreeable extraverts" based on the most common diagnosis of narcissism (Miller et al., 2011, 2017). In fact, according to the Big Five model, narcissism is primarily distinguished by high extraversion and low agreeableness (Campbell et al., 2011; Miller et al., 2017). These findings suggest that narcissists tend to possess outgoing and sociable personalities and actively seek attention. However, they may lack empathy and compassion towards others when it comes to agreeing on some issues (Campbell et al., 2011).

By measuring personality traits that have been extensively studied and validated, we can increase the likelihood that the study's results are accurate and meaningful (Gurven et al., 2013). The combination of the grandiose subtype of narcissism and the Big Five personality model provides a valuable framework for understanding the personality traits of aspiring entrepreneurs associated with narcissism and how they relate to their preferred finance choice.

Moreover, narcissists are known for their impulsive behaviour and preference for immediate rewards over long-term goals (Vazire & Funder, 2006). This tendency can significantly impact their decision-making processes, including their financial decisions (Tamborski & Brown, 2011). As such, we assume narcissistic individuals may tend to engage in financial behavioural opportunities that rank short-term gains over long-term stability (Vazire & Funder, 2006). It should be noted that researchers have been interested in the link between grandiose narcissism and personality traits, with studies establishing a positive correlation between grandiose narcissism and assertiveness, intellect, and industriousness (Zajenkowski & Szymaniak, 2021). Research suggests that grandiose narcissists overestimate their cognitive abilities and value hard work due to its assertive qualities and potential for social status (Zajenkowski & Szymaniak, 2021). Yet, the study also indicated a potential adverse effect of grandiose narcissism, with grandiose narcissists having lower politeness. This might be related to their inflated self-esteem and feelings of superiority over others, leading them to more violent responses when their aims are obstructed (Zajenkowski et al., 2020; Zajenkowski & Szymaniak, 2021).

Additionally, this paper will focus on subclinical or "normal" narcissism, which can be distinguished from Narcissistic Personality Disorder (NPD). While NPD is a clinical diagnosis recognised by the American Psychiatric Association (2000), subclinical narcissism can exist as a personality trait without reaching the level of a disorder (Cramer, 2011). The characteristics associated with NPD can also be present in individuals with subclinical narcissism, but to a

lesser extent. Studies have demonstrated that narcissism has both positive and negative impacts on subjective well-being (Hmieleski & Lerner, 2016; Rhodewalt & Morf, 1995; Žemojtel-Piotrowska, Piotrowski & Maltby, 2017). The beneficial effect is self-esteem, which increases life pleasure. The negative consequence is a psychological entitlement, which puts a grey cloud on life's happiness. Thus, high narcissistic adoration and self-esteem may lead to greater harmony and happiness (Hmieleski & Lerner, 2016; Rhodewalt & Morf, 1995; Žemojtel-Piotrowska, Piotrowski & Maltby, 2017). Still, it is worth noting that narcissistic rivalry might hinder self-compassion, life harmony, and life satisfaction (Demirci, Eksi & Eksi, 2019).

When looking at narcissism with respect to age and gender, there are specific trends to be observed. Research has determined that individuals often exhibit narcissistic tendencies more frequently during their teenage years and early adulthood. However, as they gain more experiences in life and mature, these traits tend to decrease (Tracy et al., 2009; Wilson & Sibley, 2011). As people age, they tend to become more self-aware and develop a more balanced sense of self-worth, resulting in a decline in narcissistic tendencies. These changes in self-perception and self-esteem may help explain differences in narcissism across different age groups. Additionally, research suggests that societal expectations and gender roles can also play a role in manifesting narcissistic traits. Specifically, men tend to exhibit higher levels of narcissism than women, which may be influenced by cultural norms that encourage assertiveness, competitiveness, and self-promotion in men (Leonelli, 2021; Philipson, 1985; Wood, Borja & Hoke, 2021).

2.3 Narcissism in Entrepreneurship

The entrepreneur is a highly complex individual, unlike many economists might want us to believe (De Vries, 1977), and often described as someone with a high need for achievement (nAch), independence, and willingness to take risks (Brockhaus, 1982). Schmitt-Rodermund (2004) found that entrepreneurs generally fit the big five personality model's E+, C+, O+, N-, and A- pattern. These findings indicate a high openness to experience, high conscientiousness, and low neuroticism (Salmony & Kanbach, 2022), with entrepreneurs scoring significantly lower on agreeableness and significantly higher on extraversion than general managers (Zhao & Seibert, 2006). As mentioned before, many of these traits, such as low agreeableness and high extraversion, are also commonly found in people with high narcissistic tendencies (Miller

et al., 2011). This hints at a correlation between entrepreneurs and narcissism, which is confirmed by direct studies including these two variables. Mathieu and St-Jean (2013) measured the NPI scores in entrepreneurial students and found that they scored significantly higher than students in other vocational groups.

In line with these findings, many studies have linked narcissism to entrepreneurial intention (e.g. Al-Ghazali & Afsar, 2021; Baldegger, Schroeder & Furtner, 2017; Gao & Huang, 2022), which is defined as the drive to start one's own business. They find that individuals with more narcissistic tendencies display higher entrepreneurial intention levels. Existing research offers multiple explanations for this correlation. On the one hand, entrepreneurship allows narcissists to experience short-term gains and admiration from others while also attracting greater social attention (Hmieleski & Lerner, 2016; Vazire & Funder, 2006), allowing them to get a sense of admiration and superiority (Liu et al., 2021). In line with these findings, Baldegger, Schroeder and Furtner (2017) found that narcissistic admiration is positively related to entrepreneurial intention through self-realisation and authority, as narcissists strive to be recognised and favourably perceived by others. Simultaneously, a narcissistic rivalry was found to be negatively related to entrepreneurial intention through self-realisation and challenging career motives (Baldegger, Schroeder & Furtner, 2017).

On the other hand, high self-efficacy and a positive self-attitude have been found to result in higher levels of entrepreneurial intention (Al-Ghazali & Afsar, 2021) as these traits, often found in narcissists, may lead them to believe they have the necessary skills to start a business while in fact, they have not (Mathieu & St-Jean, 2013). However, these findings might be susceptible to the environmental context, as (Wu et al., 2020) found that self-efficacy is negatively related to entrepreneurial intention in highly complex environments.

While the link between narcissism and entrepreneurial intention has been established in academic research, the same cannot be said about the connection between narcissism and entrepreneurial opportunity recognition (Liu et al., 2021). Previous research reasons that narcissists consider themselves superior to others and, as a result, do not listen to others if it does not support their own view (Tucker, Lowman & Marino, 2016). Moreover, their resistance to criticism prevents them from considering information that would be valuable in the opportunity refinement process (Tucker, Lowman & Marino, 2016). Because of these reasons, they might not use the human capital available, which could negatively impact the opportunity recognition process (Liu et al., 2021).

Narcissism can also influence entrepreneurial decision-making and decision-making in teams (Campbell et al., 2011). Related to their inflated self-esteem and overconfidence is their behaviour to claim knowledge of events and information that they do not have or do not even exist (Paulhus et al., 2003), which can lead to decisions based on false information. Additionally, narcissism also acts as a predictor for impulsivity (Vazire & Funder, 2006), which can be beneficial if decisions have to be made quickly but destructive if the decisions are flawed (Campbell et al., 2011) or do not align with the values or preferences of the team. Others have found that narcissists are likely to display more counter-productive work behaviour (CWB) as a result of higher anger traits (Penney & Spector, 2002) and that they tend to sacrifice long-term relationships for the sake of short-term gains (Judge, LePine & Rich, 2006).

Having said that, entrepreneurship is inherently risky and tends to attract narcissists. Their inflated self-esteem causes them to underestimate the challenges and problems they might face while overestimating their skills and capabilities (Navis & Ozbek, 2016). Moreover, their strive for admiration, power, and superiority causes them to adopt higher risk tolerance (Yu et al., 2020).

Learning from failure has often been found to enhance the quality of decision-making (Lant & Montgomery, 1987). In the entrepreneurial context, (Liu et al., 2019b) found that narcissism is negatively related to learning from failure, particularly with high perceived social costs from failure. The article reasons that social costs decrease the reported learning among narcissists as it damages their ego (Liu et al., 2019b). Moreover, since narcissists want to maintain their inflated self-view and perceived superiority, they tend to select the information confirming their original views (Navis & Ozbek, 2016). In addition, since they do not view information from others as valuable, they might fail to understand the causes of their failure and consequently fail to learn from them (Liu et al., 2021).

Even though narcissists' levels of entrepreneurial intentions are higher, they are not more successful when it comes to founding and running a company (Hechavarría, Matthews & Reynolds, 2016; Leung et al., 2021). Narcissistic tendencies might be beneficial in the early stages of a start-up; however, they have proven to be more detrimental in later stages (Burger, Kanbach & Kraus, 2023). For instance, narcissistic entrepreneurs display a higher willingness to take risks (Liu et al., 2021), which is thought to be a result of their inflated self-esteem and self-evaluation (Campbell et al., 2011), which leads them to overestimate their own abilities and underestimate the issues and challenges they may face (Navis & Ozbek, 2016). Furthermore, narcissism and leadership are often naturally linked, and narcissists' excellent

social skills and charisma positively influence leadership skills (Campbell et al., 2011). However, narcissistic leaders tend to establish lower-quality relationships, behave in unethical manners or take shortcuts, and exploit others in an attempt to establish their own goals (Campbell et al., 2011). Consequently, Ewens and Marx (2018) propose that it can be beneficial for investors to replace the founder with an external manager during the growth stages of the start-up (Campbell et al., 2011).

When facing a potential threat or an uncertain situation, such as a shortage of resources, people tend to adopt a fast life strategy (Liu et al., 2021; McDonald, Donnellan & Navarrete, 2012). This means they prefer smaller, immediate rewards, engage in high-risk behaviours, make short-term investments, fulfil immediate needs, and focus on building short-term relationships. And since individuals with high levels of narcissism perceive themselves as superior and seek admiration and attention from others (Al-Ghazali & Afsar, 2021). They are also attracted to power and willing to take risks to achieve success (Hmieleski & Lerner, 2016). For these individuals, entrepreneurship may be a way to meet these motivational needs. As a result, they tend to adopt fast life strategies to regulate themselves (Liu et al., 2021).

In summary, the entrepreneurial personality is often associated with high intention and low agreeableness, which is also often found in people with narcissistic tendencies (Miller et al., 2011). Not surprisingly, research has shown a relationship between narcissism and entrepreneurial intention (Baldegger, Schroeder & Furtner, 2017) and several other aspects of entrepreneurship. In the next section, this paper will further explore another aspect of the entrepreneurial journey that is influenced by narcissism: entrepreneurial resource acquisition.

2.4 Entrepreneurial Resource Acquisition and Narcissism

During their entrepreneurial journey, entrepreneurs encounter many important decisions (Neubert, 2022). One crucial aspect that all entrepreneurs face at some point is related to resource acquisition. In the early stages, entrepreneurs must decide whom to approach for financial resources and how to utilise the invested funds to foster the development and expansion of their ventures (Neubert, 2022). Fundraising is vital for start-ups, and early decisions in the fundraising process can have enormous consequences for the future of the business.

The pecking order hypothesis (POH), first proposed by Myers (1984), describes that firms generally prefer to use internal financing, followed by debt financing, and only as a last option, resort to equity financing. When acquiring new equity with external influence, the company will have to pay the investors a premium due to the adverse selection problem caused by information asymmetry between the company and the investor (Paul, Whittam & Wyper, 2007). Consequently, firms are often better off meeting financial needs internally or, if needed, resorting to debt financing. This same pattern would, theoretically, also fit start-ups for two reasons. First, the value of start-ups is most often contained in intangible assets or knowledge-based (Hsu, 2004). This, combined with the lack of a track record or historical performance data, leads to a considerable information gap between entrepreneurs and potential investors (Gompers & Lerner, 2001). Second, entrepreneurs are often motivated by the desire to become their own boss (Caird, 1991). Giving up equity might therefore be even less appealing, as it would dilute their control over the company (Tucker & Lean, 2003), whereas internal financing would not. However, Paul, Whittam and Wyper (2007b) provide evidence that the POH might not hold in entrepreneurial ventures, as new owners might contribute to the firm in other ways than just financing, and debt capital often requires the entrepreneur to put up personal guarantees, making it riskier. The POH model cannot be easily transferred from established firms to start-ups due to personal preferences, such as attitudes towards risk can play an influential role in the preferred choice of financing (Xiao et al., 2001). Chittenden, Hall and Hutchinson (1996) found that entrepreneurs try to minimise debt in their financial structure since debt is positively correlated with collateral, not coincidentally one of the reasons for not using debt financing identified by (Paul, Whittam & Wyper, 2007), and not correlated with profitability. Nonetheless, the choice of debt financing can have enormous consequences on the future development of a firm (Bhaird, 2010), with trade-off theory further complicating the decision for entrepreneurs, as it suggests a trade-off has to be made between the tax advantages of debt and the risk of financial distress. Third, when it comes to financing a start-up, it is essential to balance external influence funding with retained ownership (Chittenden, Michaelas & Poutziouris, 1998). The more external funding an entrepreneur receives, the less ownership an entrepreneur will have. On the other hand, relying on debt or internal funds can keep ownership in the hands of the start-up founders, potentially reducing any moral hazard risks associated with agency costs (Hechavarría, Matthews & Reynolds, 2016). As per the pecking order theory, entrepreneurs and investors face an information imbalance, leading to external financing being more expensive than internal funds and equity, particularly debt (Myers, 1984). This is because external financing requires entrepreneurs to explain the details of their start-ups

to outside investors, making them more vulnerable to investor monitoring. Due to this information, many scholars argue that entrepreneurs prefer internal funds because then they hold no adverse selection risk and minimal moral hazard risk (Fourati & Affes, 2013). However, in situations where it is not possible to access internal funds, taking on debt is a better option than seeking external equity financing (Myers, 1984). Unsurprisingly, research has consistently found that aspiring entrepreneurs have a pecking order preference when it comes to financing their start-ups (Vaznyte & Andries, 2019). As start-ups are new and small, some financing options may be unavailable, complex, and time-consuming to secure. This makes founders alert and responsive to any reasonable line of funding, and they often turn to the easiest and fastest forms of capital to raise first (Hechavarría, Matthews & Reynolds, 2016).

Entrepreneurs typically have a strong drive to launch their businesses but also strive to minimise their start-up costs (Waleczek, Zehren & Flatten, 2018). Frid, (2015) supports this by showing that most start-up founders rely on their personal funds as the primary source of financing in the initial stages. This indicates that start-ups may not have a well-planned capital structure, as founders tend to take the path of least resistance.

When a start-up relies heavily on external financing as a source of capital, it faces significant challenges related to information sensitivity and adverse selection costs (Thaddeus, 2011). This can result in the business surrendering control and experiencing higher agency costs associated with equity. Additionally, it is often significantly challenging to secure external financing. It can be a time-consuming process that involves considerable costs. Furthermore, obtaining funding for early-stage ventures is highly competitive and selective, so new ventures tend to pursue it as a last resort.

2.4.1 Effect of Narcissistic Traits on Resource Acquisition

Current research argues that narcissists leverage their social connections and create power through social status (Brunell et al., 2008). Combined with their charisma, this makes them very skilled at resource acquisition from their environment, a skill vital to the venture creation process (Jones & Figueredo, 2013). In line with this, narcissists are more successful in obtaining early stakeholders, such as team members, due to these positive characteristics (Campbell et al., 2011; Hmieleski & Lerner, 2016; Liu et al., 2021). Additionally, research has found that narcissists succeed more in initial resource acquisition and fundraising due to their charisma and ability to convey trust and security to others by turning uncertainty into an opportunity (Liu

et al., 2021). Moreover, their extrovert behavioural patterns cause them to generally make an excellent first impression (Carlson, Vazire & Oltmanns, 2011), further adding to their success in resource acquisition.

However, the positive impact of narcissism on fundraising and resource acquisition is often short-lived. Over time, the positive aspects of narcissism will be taken over by the negative aspects, such as selfishness, exploitation, and the tendency to manipulate others (Liu et al., 2021), which are harmful to the long-term sustainability of relationships and, therefore resources (Hmieleski & Lerner, 2016). In particular, this tendency to manipulate others, combined with self-interest and short-term decision-making strategies that promote personal gain, tends to result in poor personnel management, mismanagement of critical resources, and frictionless leadership (Hogan & Kaiser, 2005).

These findings on the positive and negative consequences of narcissistic traits align with previous findings on the relation between narcissism, entrepreneurial intention (Al-Ghazali & Afsar, 2021), and entrepreneurial success (Leung et al., 2021). Initial success in resource acquisition might serve as an additional motivator for entrepreneurs with narcissistic traits to pursue their ideas. Yet, when the positive narcissistic traits get taken over by the negative traits, they do not necessarily enjoy more success in the later stages of the entrepreneurial process; this highlights the tendency for narcissists to achieve short-term success and rely on internal funding options.

Although extremely limited, studies relating narcissism to entrepreneurial resource acquisition are already present in the current literature. For example, Bollaert, Leboeuf and Schwienbacher (2020) and Buttice and Rovelli (2020) related narcissism to crowdfunding performance. They found that narcissistic founders set lower crowdfunding goals, as narcissistic founders want to protect their ego and try to avoid not meeting the goal (Bollaert, Leboeuf & Schwienbacher, 2020). Despite the lower goal, Bollaert, Leboeuf and Schwienbacher (2020) found that narcissistic founders are less likely to achieve the crowdfunding target, providing convincing evidence for the effect of narcissism on start-ups in doing so.

According to Miller (2015), being an entrepreneur requires having a strong sense of self-confidence and a desire to achieve and be independent and in control. Additionally, a study conducted by Burger, Kanbach and Kraus (2023) discovered that narcissistic founders perceive their companies as fulfilling their need for status, dominance, prestige, success, power, and money, all protecting their ego. This suggests that entrepreneurs aim to manage their enterprises

and finances independently and prioritise funding options without any external influences. Internal financing is a well-known concept in entrepreneurship that emphasises acquiring resources from within the organisation. It involves utilising techniques to meet resource requirements through self-effort, with little to no external support.

Yet, research on narcissism related to entrepreneurial resource acquisition is limited (Liu et al., 2021). Current studies have solely focused on a single source of financing, in particular, crowdfunding (Bollaert, Leboeuf & Schwienbacher, 2020; Butticiè & Rovelli, 2020), while all other studies linking narcissism to entrepreneurial resource acquisition are primarily speculative and lack the necessary evidence. We suspect this research gap is present due to a lack of foundation for the subject. Therefore, in the hypothesis's development section, we will further explore potential relationships between narcissism and financial sources available to aspiring entrepreneurs.

2.5 Hypothesis Development

In this section, we draw on a diverse body of literature to uncover the relationship between narcissism and the entrepreneurial finance preference of aspiring entrepreneurs and the factors that moderate this relationship.

2.5.1 Narcissism and Entrepreneurial Finance Preference

In the process of developing hypotheses, three mechanisms will be taken into account, namely short-term vision, control, and the big ego, all of which have been explored through literature. First, research indicates that during the early phases of their enterprises, entrepreneurs often rely on their personal finances as the primary source of funding (Frid, 2015). Later, they may turn to external debt and equity sources as required. The majority of entrepreneurs use their own resources initially, driven by their desire to become their own boss and the feeling of control (Baluku, Kikooma & Kibanja, 2016; Caird, 1991; Miller, 2015; Tucker & Lean, 2003). This reliance on personal funding can be attributed to the complex character of aspiring entrepreneurs, which influences their business decisions and behaviours, ultimately impacting the performance of their ventures (Baluku, Kikooma & Kibanja, 2016; De Vries, 1977). Second, the literature suggests that entrepreneurs tend to score lower on agreeableness and higher on extraversion compared to general managers (Zhao & Seibert, 2006). These traits align with characteristics commonly associated with individuals who exhibit narcissistic tendencies (Miller et al., 2011). While the entrepreneurial intention is higher among people with narcissistic traits, it does not necessarily imply that entrepreneurs with narcissistic tendencies are more successful than those without such traits (Leung et al., 2021). However, research has shown that narcissistic individuals often excel in initial resource acquisition and fundraising due to their charisma and ability to instil trust and confidence in others (Sundermeier, Gersch & Freiling, 2020). Despite the initial advantages, the positive impact of narcissism on fundraising and internal entrepreneurial finance tends to diminish in the long run due to negative characteristics associated with narcissistic individuals, such as selfishness, exploitation, and manipulative tendencies (Liu et al., 2021). As a result, narcissistic aspiring entrepreneurs often prioritise short-term funding options to stay in control at all times (Al-Ghazali & Afsar, 2021).

Third, narcissistic entrepreneurs may be more inclined to seek internal funding sources that allow them to maintain greater control over their ventures without sharing ownership with external parties (Chittenden, Michaelas & Poutziouris, 1998). This approach aligns with their desire for control and helps them mitigate the potential risks associated with investor monitoring and interference (Hechavarría, Matthews & Reynolds, 2016). Giving up equity might therefore be even less appealing, as it would dilute their control over the company (Asad & Sadler-Smith, 2020; Tucker & Lean, 2003).

Finally, individuals with higher narcissistic tendencies often engage in ego-defence behaviours (Zeigler-Hill & Jordan, 2011). A previous study by and Bollaert, Leboeuf & Schwienbacher (2020) found that hypothesised that narcissistic individuals who display ego-defence behaviours set lower funding goals and longer campaign duration yet are less likely to achieve these goals. Similarly, we expect narcissistic individuals to display ego-defence behaviour by preferring financial sources that cannot or are less likely to damage their ego, such as internal financing.

Overall, the mechanisms associated with narcissism, such as a desire for control, protecting their own ego, preference for short-term gains, and risk of investor influence, influence aspiring entrepreneurs' decisions. Consequently, we believe they will seek funding options that do not involve having any external influence. Therefore, the following hypotheses are proposed:

H1a: Aspiring entrepreneurs with higher levels of narcissistic traits are likelier to choose funding options with no external influence.

H1b: Aspiring entrepreneurs with lower levels of narcissistic traits are likelier to choose funding options with external influence.

2.5.2 Moderators of Age and Gender

We expect that the impact of narcissistic characteristics on financial preferences will differ depending on demographic parameters. In this section, we argue that age and gender moderate the relationship between narcissism and the choice of finance.

2.5.2.1 Age

When it comes to choosing a finance option for starting a company, age plays a role. Recent studies have explored the complex connection between age and narcissism (Sheldon & Bryant, 2016; Trzesniewski, Donnellan & Robins, 2008). Some studies suggest that younger generations exhibit higher levels of narcissism than older generations (Wetzel et al., 2020). Studies have generally shown that levels of narcissistic traits tend to increase during teenage youth and adulthood and then decline during middle age (Tracy et al., 2009; Wilson & Sibley, 2011). Additionally, in the context of the Big Five model, individuals tend to mature as they get older, exhibiting increased levels of agreeableness, conscientiousness, and emotional stability (Andrews et al., 2022). However, the degree of narcissism can vary significantly among young individuals, influenced by their experiences and personal development (Hill & Roberts, 2012). As individuals age, they often become more self-reflective, leading to a decline in narcissistic tendencies, as the inflated sense of self-worth and ego-driven behaviour becomes less beneficial in navigating social and work institutions in later life stages (Chopik & Grimm, 2019).

Regarding the choice of finance, studies on small business finance indicate that older entrepreneurs are often cautious about investing more of their own money into their companies (Romano, Tanewski & Smyrniotis, 2001). Research by van der Wijst, (2012) reveals that older entrepreneurs are less likely to take on internal debt and more prepared to seek outside investment compared to their younger counterparts resulting in lower ownership. These studies suggest that older entrepreneurs are more likely than younger people to prefer financial sources that do introduce external influence into their business. That being said, older entrepreneurs naturally have more money to invest in their start-ups than younger people. Therefore, the opposite correlation can be expected as well. Nonetheless, studies have shown that older people are more decisive (Neice & Bradley, 1979), hypothesised to result from older people relying more on past experiences (Eberhardt, Bruine de Bruin & Strough, 2019). Therefore, we assume

that age has a similar effect on the choice of finance, such that older people are more likely to have a decisive preference for either financial options that do or do not introduce an external influence on the business.

Based on the research provided, we have identified several mechanisms that influence age and the relationship between narcissism and choice of finance. Studies by Bois-Reymond, (1998) and Walker & Webster, (2007) suggest that younger individuals have a strong desire to become their own bosses. They are motivated by the prospect of maintaining control and independence over their own businesses and the financial rewards that come with it (Bois-Reymond, 1998). However, younger individuals face challenges in securing external funding because they lack internal cash flows and collaterals, and may encounter agency problems (Block et al., 2018). Due to the limited resources and life experience, they face more significant barriers than older entrepreneurs (Stamboulis & Barlas, 2014).

Lastly, younger entrepreneurs tend to focus more on short-term goals (Henderson & Robertson, 1999). This is because they often face difficulties securing funding, which leads to focusing on immediate financial needs rather than long-term investments. Additionally, their lack of experience in business management and finance can cause them to concentrate on short-term objectives and immediate necessities rather than considering long-term financial planning. The world of business is constantly changing, and this can cause uncertainty for new entrepreneurs. As a result, they may focus on making quick profits to manage risks and adapt to the market's fast-paced nature. Entrepreneurs who are older tend to focus more on long-term goals and strategies. This is because they have experienced more failures and mistakes in the past (Politis, 2008). These experiences have taught them to be more realistic and humbler about their own knowledge, which makes them better suited for long-term vision planning.

Overall, age plays a significant role in shaping the financial preferences of aspiring entrepreneurs. Younger individuals, driven by limited resources and relatively inexperienced, tend to have short-term orientations in their financial decision-making. They often face challenges in obtaining external funding due to a lack of established cash flows, collateral, and entrepreneurial performance. Recent studies also suggest that young entrepreneurs may exhibit higher levels of narcissism, leading them to prioritise short-term gains over long-term goals and rely on self-funding. However, as individuals mature, these tendencies typically diminish. As a result, we believe the influence of narcissism on preferred financial sources has more influence

among younger aspiring entrepreneurs than older aspiring entrepreneurs. Therefore, we formulate the following hypotheses:

H2a: Younger aspiring entrepreneurs with high levels of narcissistic traits are likelier to choose funding options with no external influence compared to older aspiring entrepreneurs.

H2b: Younger aspiring entrepreneurs with high levels of narcissistic traits are likelier to choose funding options with external influence compared to older aspiring entrepreneurs.

2.5.2.2 Gender

Regarding gender, grandiose narcissistic traits have been found to be more common in men than in women (Leonelli, 2021; Philipson, 1985; Wood, Borja & Hoke, 2021). Philipson, (1985) states that gender differences in narcissism tendencies can be explained by the fact that men are more likely to have grandiose narcissistic traits, such as intense self-centeredness and a desire for others' praise. First, A study by Harms, Patel and Carnevale, (2020) indicates that narcissistic males are more likely to be self-employed and desire to become their own boss than narcissistic females. This suggests that self-employment is a greater motivator for men than women (Harms, Patel & Carnevale, 2020; Gupta et al., 2009).

Regarding the choice of finance, studies have shown mixed results regarding the influence of gender. While the study by (Scherr et al., 1993) suggests that gender impacts borrowed capital, other studies have found no significant influence on borrowed capital in relation to gender. This suggests that the influence of gender on the choice of finance options may be context-dependent and not universally applicable.

Research suggests that men are more likely to engage in short-term gains, which may impact their financial decision-making (Powell & Ansic, 1997). A man with high narcissistic tendencies may be more likely than a woman with high narcissistic tendencies to prioritise short-term gains and immediate financial needs instead of long-term strategic financial planning. Internal funding options can provide them with faster access to funding and allow them to maintain a higher degree of control, which aligns with their desire for short-term gains and independence. Therefore, it is likely that men with narcissistic traits will lean more towards internal funding options.

According to (Narayanasamy et al. (2011), it has been found that female entrepreneurs need less initial capital compared to their male counterparts while initiating their businesses. It is

often assumed that women face more difficulties in obtaining outside venture funding due to insufficient contacts in the industry. (Narayanasamy et al. (2011) state that female entrepreneurs require less initial capital than their male counterparts when starting their businesses. There is a common assumption that women have a more challenging time securing venture funding due to a lack of contacts in the industry (Narayanasamy, Rasiah & Jacobs, 2011). As a result, women are expected to opt for external funding sources to support their business ventures.

Finally, research on financial decision-making has revealed that women tend to have less confidence in their ability to make decisions and in the outcome of those decisions compared to men (Powell & Ansic, 1997). Additionally, women tend to have a lower risk tolerance and higher levels of financial anxiety compared to men, and they often tend to express a greater interest in seeking advice from financial advisors for long-term success (Powell & Ansic, 1997). Female entrepreneurs with narcissistic tendencies tend to engage in less risky activities, such as limiting their Research & Development spending, while also being more likely to patent their ideas and think long-term than their male counterparts with similar tendencies (Huq, Tan & Venugopal, 2020; Leonelli, 2021).

Overall, men have a higher desire to become their own boss due to traits outside of the domain of narcissism. Additionally, women exhibit more cautious and risk-averse behaviour than men and prioritise long-term gains over short-term ones. On top of that, women are more likely to seek advice from others. As a result, we believe that the influence of narcissism on preferred financial sources has more influence among men than women. Therefore, we formulate the following hypotheses:

H3a: Male aspiring entrepreneurs with high levels of narcissistic traits are likelier to choose funding options with no external influence compared to female entrepreneurs.

H3b: Male aspiring entrepreneurs with high levels of narcissistic traits are likelier to choose funding options with external influence compared to female entrepreneurs.

2.6 Framework

Figure 2.2 displays the six hypotheses developed in this chapter graphically. Hypothesis 1a and 1b show the relation between narcissism and preference for either external or no external influence, while hypotheses 2a, 2b, 3a, and 3b encompass the moderating effect of age and gender on this relationship.

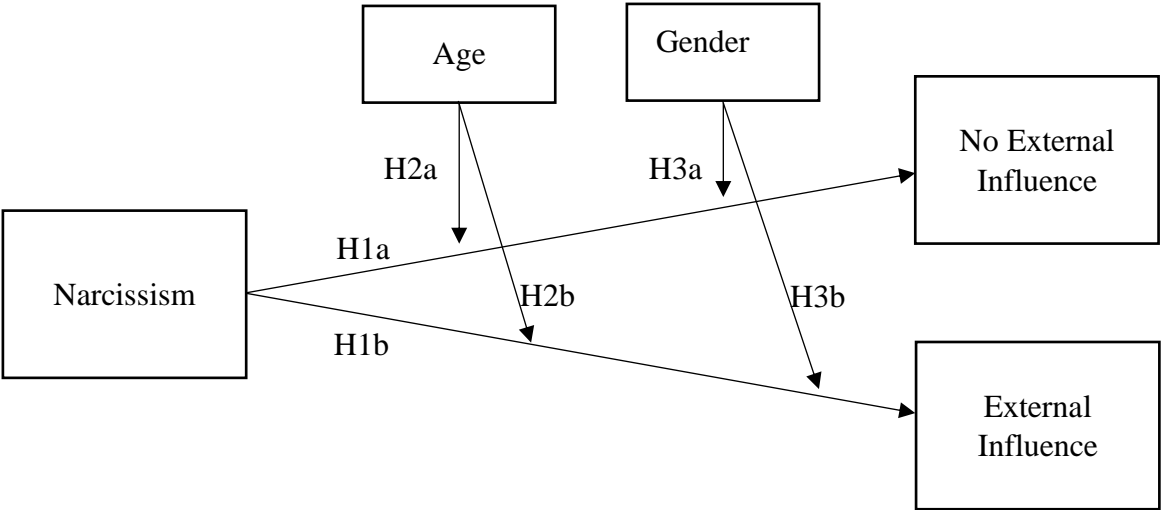


Figure 2.2: Empirical Model

3. Methodology

3.1 Research Design

The purpose of this methodology is to explain the process of data collection using survey data. Our study utilises a positivist approach, using deductive reasoning and quantitative research methods, specifically a cross-sectional analysis.

Data was collected through an online questionnaire. The questions are organised and easy to complete using an online form; this implies that the data-gathering approach was planned to be efficient and cost-effective. Internet surveys are a popular data collection approach because they have various benefits, including reaching an extensive and varied sample, allowing us to collect easy data administration and analysis, and eliminating the possibility of interviewer bias (Regmi et al., 2016). They are also a low-cost data-collecting approach since they do not require in-person interviews or postal questionnaires and can be swiftly and readily sent to a selected set of respondents.

The data for this study were collected during March and April 2023. The survey was distributed using multiple channels to ensure a diverse and representative sample. We utilised direct messaging and the professional networking platform LinkedIn to reach out to potential participants. Our efforts were supported by leveraging our personal networks, including classmates and alumni, and collaborating with various contacts within Lund University School of Economics and Management (LUSEM) to expand the survey to Uppsala Business School. Additionally, we extended the survey to several other universities and business schools in Sweden and The Netherlands. It is worth noting that including multiple institutions from different regions ensures a broader range of perspectives and experiences.

A critical consideration in our sampling strategy is that we focused on schools and institutions with a similar cultural backgrounds. By targeting universities in Sweden and The Netherlands, we aimed to minimise the potential influence of nationality as a moderator variable. This approach allows us to focus more closely on the relationships between narcissism, financial preferences, and other relevant factors without the confounding effects of cultural differences related to nationality.

3.2 Research Strategy

The survey questions were designed to gather information on individuals' demographics, business ownership, start-up experience, and financial preferences. The survey also includes a series of paired statements to measure respondents' levels of narcissistic tendencies, confidence, and assertiveness, as well as their attitudes toward risk-taking and investing. A comprehensive outline of the survey can be found in Appendix 1.

The survey begins by collecting basic demographic information such as age, gender, and country of origin. This information will help us to understand how certain factors might impact respondents' business and financial decisions. The survey also asks respondents whether they own or co-own a company and if they have been involved in start-up activity before. This information helps to determine the level of experience respondents have with entrepreneurship and whether this impacts their financial preferences.

The survey then asks respondents whether they plan to found their own company in the future and what industry they would prefer to work in. This can provide valuable insights into the types of businesses respondents might be interested in starting and the types of industries most attractive to aspiring entrepreneurs. Additionally, it helps us assess the stage of the entrepreneurial intent of the respondent.

The financial preferences section of the survey includes a list of potential funding sources for business ventures, such as bank loans, crowdfunding, and venture capital. Respondents are asked to select all of the options that apply to them; this will then provide information on the types of funding that are most popular among potential entrepreneurs. This approach allows us to better understand the preferred funding options and does not limit our respondent's thought process to whether or not they prefer external influence. Additionally, it would allow us to conclude that the preference for external influence plays a significant role in the decision-making process. Accordingly, each of the eight options was either deemed to introduce an external influence or no external influence, depending on whether or not it introduces new stakeholders into the business. People who chose an equal number of options with or without external influence were deemed to have no preference.

The paired statements in the survey are designed to measure respondents' levels of narcissistic traits and risk-taking behaviour. We will gain insights into how these characteristics might

impact individuals' entrepreneurship and business ownership decisions by asking respondents to choose between two statements. By far, standardised self-report measures are the most frequent method of measuring narcissism. The Narcissistic Personality Inventory (NPI), which evaluates grandiose characteristics of narcissism, is the most extensively used assessment of the narcissistic personality and is a validated scale item. It has 40 forced-choice questions, and the NPI can be divided into many subscales, with seven subscales being the most prevalent. The seven domains are authority, exhibitionism, superiority, entitlement, exploitativeness, self-sufficiency and vanity (Briganti & Linkowski, 2019). Because the NPI and other measures of overt narcissism are lengthy, researchers created the NPI-16 by picking 16 of the most face-valid questions from the NPI-40's several categories. Apart from length, the primary distinction is that the NPI-16 is simplistic, whereas the NPI-40 comprises many subscales (Konrath, Meier & Bushman, 2014).

The sample size for the study was limited to aspiring entrepreneurs. This choice was made because the research aims to understand the factors that influence the success of start-ups. Aspiring entrepreneurs represent the group that is actively seeking to establish a business and, therefore, have a more detailed understanding of start-ups' challenges (Blass, 2018; Hatthakijphonng & Ting, 2019). This survey's sample size comprises aspiring entrepreneurs, which is relevant since it gives insight into the attitudes and actions of people who want to establish their own ventures. These people will likely have a unique viewpoint on entrepreneurship and a solid drive to succeed within the company. Therefore, the sample size of aspiring entrepreneurs is relevant and valuable for the research aims of the study.

As a result, the survey questions are tailored to investigate topics relevant to aspiring entrepreneurs, such as their plans for starting a business, industry preferences, and financial choices for starting and growing their new and existing businesses. In addition, questions regarding risk-taking and attitudes toward authority are included in the survey, which might give significant insight into the personality qualities that may lead to entrepreneurial success and certain financial choices. Because the study focuses on aspiring entrepreneurs, it can offer insight into the obstacles and possibilities that this group of people may experience while beginning and building their own companies. The obtained data may be utilised to discover trends and patterns in aspiring entrepreneurs' attitudes and actions and to understand better the aspects that may contribute to their success.

We used a non-probability sampling method, in specific convenience/purposive sampling, to select participants for the study (Acharya et al., 2013). We chose convenience sampling, as the

survey targets a specific group of individuals (aspiring entrepreneurs) who are easily accessible and willing to participate in the survey; this increases the cost-effectiveness of the study. Non-probability sampling does not ensure that every member of the population has an equal chance of being selected for the sample (Parfitt, 1997). Instead, it relies on alternative techniques of participant selection (Parfitt, 1997; Wolf et al., 2016). So, in terms of generalisability and minimising sample bias, non-probability sampling techniques has certain limitations to the research; this will be discussed in more detail later in this paper. Non-probability sampling, however, can be helpful in circumstances when probability sampling is neither practical nor suitable, such as in our case as we are targeting a specific group (aspiring entrepreneurs) for our study (Acharya et al., 2013; Wolf et al., 2016).

Out of the total 229 survey participants, 103 fully completed the survey. Giving us a response rate of 44.98%.

3.3 Ethical Considerations

Ethical considerations are critical in the research process and must be addressed carefully in any research study (Bell, Bryman & Harley, 2019). At all times in our research, we ensure that participants are safe from harm and protected from unnecessary stress (Saunders, Lewis & Thornhill, 2009). Moreover, ethical considerations help preserve the dignity and privacy of our research participants and ensure that the research is conducted fairly and transparently. According to Bell, Bryman and Harley (2019), there are ten critical principles related to ethical considerations. We will discuss four of these principles in greater detail.

One of the most important ethical considerations is the principle of voluntary participation. Research participants should have the right to decide whether to participate in a study and be able to withdraw from the study at any time without any negative consequences (Bell, Bryman & Harley, 2019). At the beginning of our survey, we explained the survey process and guaranteed complete anonymity for all participants. The participants could cancel the survey anytime, leaving them full control of their participation.

Another important principle is informed consent (Crow et al., 2006). This means that participants should be fully informed about the nature of the study and clearly understand what their participation will entail. They should also be notified of any potential risks or benefits of

their participation. In our research, we have provided participants with an explanation of doing a behavioural study. Every participant could withdraw at any time without any negative consequences.

Researchers must also ensure that their language and questions are free from discrimination or any form of offensive language. Using discriminatory language can undermine the research's validity and negatively impact the participant's (Bell, Bryman & Harley, 2019). We have carefully reviewed the questions and language in our study to ensure that they are free from any discriminatory or offensive language. Furthermore, we have employed a pre-existing measurement tool, the NPI question set, which has been extensively used in research dissertations and minimises the likelihood of disrespectful or offending language.

Privacy and anonymity are paramount in research (Bell, Bryman & Harley, 2019). We have taken necessary measures to protect all participants' privacy and keep their identities anonymous. Through Unipark as a questionnaire editor, any personally identifying information is automatically removed from the research data to protect the participants' privacy.

3.4 Variables

3.4.1 Independent Variable

Narcissism. Narcissism was tested with the NPI-16 scale developed by Ames, Rose and Anderson (2006). The 16 items from this scale are drawn from dimensions of the 40-item scale (Raskin & Terry, 1988). The NPI-16 was chosen to counter the issues commonly seen in the NPI-40 scale, particularly respondent fatigue, given the limited time and specific target audience we are targeting. Despite the fewer questions, research has shown that the NPI-16 is reliable (Ames, Rose & Anderson, 2006; Gentile et al., 2013).

The NPI-16 consists of sixteen sets of statements. Each item presents two statements, and the participant must choose the one that describes them best. For example, the participant had to choose between the following two statements: “*I really like to be the centre of attention*” and “*It makes me uncomfortable to be the centre of attention*”. For each of the sixteen pairs, one statement will indicate narcissism (1), the first statement in the example above, while the other

does not (0), the second statement in the example above. The mean of all sixteen pairs will be taken so that higher scores, ranging between 0 and 1, indicate higher levels of grandiose narcissism.

3.4.2 Moderating Variables

Gender. This moderating variable indicates whether the respondent identifies as female, male, or other. Because of a lack of survey entries indicating “other”, this option, including the collected data points, has been taken out of the analysis. This allows us to incorporate this variable as a dummy (0=female, 1=male), which has been proven successful in previous literature on the effect of narcissism on aspects of entrepreneurship (e.g., Liu et al., 2019b)).

Age. This moderating variable indicates the respondent's age and is measured using an open question. Age will be treated as a continuous variable as this will most accurately reflect any effect on the relationship between the independent and dependent variables.

3.4.3 Dependent Variable

Choice of finance. Two questions were used to test the dependent variable that measures the choice of finance. Depending on whether or not the respondent (co-) owns a start-up, they either saw the question “Which choice of finance do you prefer?” or “Which choice of finance have you pursued?”. The respondent was given eight financing options, as well as an open response option, and was able to choose multiple options. These eight options were mostly identified by Wright (2017), with the exception of VC, which was excluded by Wright (2017), since obtaining VC is extremely rare. However, it is included as an option since it is commonly pursued.

Next, the options were divided into whether or not they introduce an external influence into the start-up. This allows for an ordinal variable to be created that distinguishes between participants who do not have a preference as to whether or not the financial source introduces external influence (0), participants who prefer financial options that do not introduce an external

influence (1), and participants who prefer financial options that do introduce an external influence (2).

For no external influence (1), we identified founder or personal investment and government grants. And for external influence (2), we identified venture capitalists, business angels, corporate investors, loans, crowdfunding debt, and friends and family loans.

3.3.4 Control Variables

Risk. The study controls for risk tolerance since individuals with higher risk tolerance are likelier to start a business (Hvide & Panos, 2014). Risk tolerance is measured with four questions, as proposed by Keng and Liu (1997), on a Likert scale from “strongly disagree” to “strongly agree”.

3.5. Descriptive Statistics

Table 3.1 shows the mean, minima, maxima, standard deviation, variance, and correlation matrix of all variables included in the analysis. No unexpected correlations were detected.

Table 3.1: Descriptive Statistics

<i>Variable</i>		<i>N</i>	<i>Min</i>	<i>Max</i>	<i>Mean</i>	<i>Std. Deviation</i>	<i>Variance</i>	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>
<i>1</i>	<i>Control</i>	75	0	2	1.01	0.846	0.716	1.000				
<i>2</i>	<i>NPI-16</i>	75	0	0.625	0.278	0.179	0.032	-0.137	1.000			
<i>3</i>	<i>Age</i>	75	16	47	25.76	5.417	29.347	0.239*	-0.052	1.000		
<i>4</i>	<i>Gender</i>	75	1	2	1.49	0.503	0.253	-0.238*	0.237*	-0.015	1.000	
<i>5</i>	<i>Risk</i>	75	2	5	3.86	0.574	0.330	-0.260*	0.216	0.061	0.394**	1.000

Notes: Pearson correlation coefficient denotes significance at 5% () and 1% (**).*

3.6 Reliability Tests

3.6.1 Internal Consistency

For the logistic regression, two indexes are used to capture data on a specific subject. The NPI-16 is a measure of narcissism and a risk tolerance measurement as proposed by Keng and Liu (1997). A reliability test is executed to test the internal consistency of these measurement tools.

The NPI-16 is a commonly used measurement developed by Ames, Rose and Anderson (2006) and is well regarded as a sufficient measure of grandiose narcissism. Still, given our limited sample size, we deemed it essential to test the internal consistency of the measure among our sample. For the same reason, we test the internal consistency of our adopted risk tolerance measure.

The Cronbach's alpha of the NPI-16 was found to be acceptable ($\alpha > 0.6$). The Cronbach's alpha of the risk tolerance measurement was below 0.6. However, since the value is close to 0.6 (0.591) and the measurement is used to test a control variable, the measurement tool is adopted. Having said that, this result should be carefully considered while interpreting the results. The results are summarised in table 3.2 and can be found in Appendix 2.

Table 3.2: Cronbach's Alpha values

<i>Factor</i>	<i>Cronbach's Alpha</i>	<i>N of items</i>
<i>NPI-16</i>	<i>0.678</i>	<i>16</i>
<i>Risk Tolerance</i>	<i>0.591</i>	<i>4</i>

3.6.2 Common Method Bias

Common method bias is a significant problem in survey research. It occurs when both the independent and dependent variables are measured in the same survey, leading to a possibility of high-consistency answers (Podsakoff et al., 2003). In survey design bias, the proximity of items can be problematic if items are too similar or too close together (Podsakoff, MacKenzie & Podsakoff, 2012). This can lead to confusion for respondents and inaccurate responses. Researchers can mitigate this bias by spacing items apart and using different response scales for different constructs. In our case, the respondents might have had difficulty differentiating the NPI-related questions as they must pick one of the two statements that best describe them. To minimise the impact of common method bias, we added questions that use different response formats for some questions, such as Likert scales and open-ended responses. Additionally, only the independent variable is cognitive, the dependent variable is a recorded fact, which reduces the probability of common method bias (Harrison, McLaughlin & Coalter, 1996)

The survey length can also contribute to bias if respondents become tired or bored and drop out before completing the survey (Podsakoff et al., 2003). This can affect the response rate and the accuracy of data. Therefore, we have kept the survey short and straightforward. The survey takes about 7 minutes.

Another method to measure common method bias is to use Harman's Single Factor-Test (Podsakoff, MacKenzie & Podsakoff, 2012). If the variance explained is higher than 50%, it suggests that the survey may be subject to common method bias. For our data, Harman's test indicates a 9.317 percentage of variance, which is far below the threshold of 50%. Consequently, we assume no common method bias in our data. The results can be found in Appendix 2.

4. Analysis Strategy and Diagnostics

In this section, we discuss our analysis and diagnostics strategy - the multinomial logistic regression, chosen specifically for its compatibility with our hypotheses and data structure. Multinomial logistic regression is a statistical analysis technique that is frequently employed in entrepreneurial literature to test the relationship between dependent and independent variables, as well as the effect of moderating variables (Bhandari, 2006; İlhan Ertuna & Gurel, 2011; Noguera, Alvarez & Urbano, 2013). It is commonly utilised to assess a set of predictors and a nominal response, especially in instances where the nominal response does not possess a defined order. This method holds a distinct advantage over binominal logistic regression due to its capacity to handle a categorical dependent variable. Further, given that the categories in our dependent variable lack meaningful order, performing an ordinal logistic regression is unfeasible. Thus, in this study, multinomial logistic regression is implemented to evaluate a continuous independent variable, two nominal moderating variables, and a nominal dependent variable.

The design of the multinomial logistic regression permits the examination of moderating variables by introducing them as interaction variables within our model. Control variables can be incorporated in a similar fashion, and in both cases, they are deemed independent variables. The Statistical Product and Service Solutions (SPSS) software was employed to analyse the data and execute the regression for this study. However, it is important to note that the reliability of multinomial logistic regression results hinges on meeting specific assumptions (Schreiber-Gregory & Bader, 2018). These conditions are integral to the precision and validity of the test. In the ensuing section, we outline and test the five prerequisites necessary for performing a multinomial logistic regression analysis. An overview of the test results can be found in Appendix 3.

A. Assumption of appropriate outcome structure

A multinomial logistic regression requires the categories of data to be binomial in nature. This assumption is satisfied since the dependent variable, choice of finance, consists of three categories, each giving a binominal result. For example, if a respondent has no preference for external influence in financial sources, this category gets labelled (1), while the other two

categories get labelled (0). It should be noted that the open-answer option given in the survey has to be disregarded in the analysis if the answer does not fall into one of the three categories.

B. Assumption of the absence of autocorrelation

The absence of autocorrelation means that error terms of data points are not related. It is important to test since autocorrelation inflates significant results of coefficients by underestimating their standard error (Schreiber-Gregory & Bader, 2018). Autocorrelation was tested using the Durbin-Watson (DW) test. A DW result between 1.5 and 2.5 indicates the absence of autocorrelation. The test scores were all within this range, so the absence of autocorrelation in the data is concluded.

C. Assumption of multicollinearity

Multicollinearity indicates that the independent variables in the model are correlated. It is tested to ensure a good fit of the model. Multicollinearity is tested using Pearson's Bivariate correlation matrix and a variance inflation factor (VIF) test. To ensure no multicollinearity occurs in the model, the correlation coefficients among all independent variables in the Pearson's Bivariate correlation matrix should be below 0.8 (Schreiber-Gregory & Bader, 2018). For this test, the results are satisfactory; none of the Pearson correlation values is above 0.8 or below -0.8, indicating there is no multicollinearity in the model. VIF values were all between 1 and 5, which is deemed to be satisfactory. So, again, the absence of multicollinearity in the model was confirmed.

D. Assumption of linearity of independent variables and log odds

Multinomial logistic regression requires linearity between the independent variables and their log odds (Schreiber-Gregory & Bader, 2018). This means that the relationship between the dependent and independent variable does not have to be linear, only that the independent variable is linearly related to log odds. A Box-Tidwell test analyses the linearity between the independent variables and their logit. This test can be performed by adding log-transformed interaction terms between the independent variable and their corresponding natural log in the model (Mat Roni, Merga & Morris, 2020). Linearity is present when the p-value of the

interaction term is not statistically significant. The test showed no significant logit interaction variables, indicating no violation of the linearity assumption. A visual check was performed to confirm, which also showed no obvious violation of linearity.

E. Assumption of appropriate sample size

Multinomial logistic regression requires a certain sample size. This sample size is commonly estimated as having a minimum of 10 data points for the least frequent outcome of each independent variable in the model (Schreiber-Gregory & Bader, 2018). Since we have four independent variables across all four hypotheses, and we estimate the least frequent outcome to have a probability of 0.3, we need at least 134 data points. However, after excluding all data points that did not meet the requirements and outliers, a final sample size of 75 was reached. Consequently, any results should be interpreted with caution as a small sample size can cause an overestimation of log odds in the logistic regression (Nemes et al., 2009).

5. Results

The logistic regression analysis consisted of three steps. First, the effect of the control variable (risk) on the independent variable was calculated in Model 1. Second, the impact of the independent variables (narcissism, age, gender) on the dependent variable (choice of finance) were calculated in Model 2. Finally, the two interaction variables were added to the equation, and their effect on the relationship between the independent variable (narcissism) and the dependent variable (choice of finance) was calculated in Model 3.

Throughout this analysis, no preference for whether or not the financial source brings external influence has been taken as the baseline category. Meaning that any significant findings will indicate a preference for either “external influence” or “no external influence”.

5.1 Assumptions

Model 1 shows that the control variable risk is significantly related to an aspiring entrepreneur’s preference for financial sources. Contrary to our assumption, aspiring entrepreneurs who prefer financial sources with external influence display a lower willingness to take risk ($B = -1.185$, $p = .031$), while aspiring entrepreneurs who prefer financial sources with no external influence display no significantly different willingness to take risk than aspiring entrepreneurs with no preference ($B = -.046$, $p = .932$). The results are summarised in table 5.1.

Model 2 adds the independent variables narcissism, age, and gender to the equation. We assumed no relationship between gender and preference for financial options with or without external influence. Additionally, we assumed a positive relationship between age and preference for financial options with or without external influence such that older people are more likely to have a decisive preference for either one or the other. For aspiring entrepreneurs preferring no external influence, both the assumption for age ($B = .241$, $p = .018$) and gender ($B = -.404$, $p = .589$) were confirmed. Likewise, for aspiring entrepreneurs preferring external influence, both the assumption for age ($B = .237$, $p = .019$) and gender ($B = .741$, $p = .266$) were confirmed. The results are summarised in table 5.1.

5.2 Narcissism on Influence Preference

Hypotheses 1a and 1b expressed a relationship between narcissism and a preference for financial sources without external influence or with external influence. We found a statistically significant and positive relationship between narcissism and a preference for financial sources without external influence ($B = 7.401$, $p = .002$). Additionally, we found no statistically significant relationship between narcissism and a preference for financial sources with external influence ($B = -0.009$, $p = .996$). These results support hypothesis 1a, but not hypothesis 1b. It should be noted that our result for hypothesis 1a should be interpreted with caution because of the high B-value most likely caused by the small sample size. The results are summarised in table 5.1.

5.2.1 Moderating Effects

Model 3 adds the interaction terms to the equation. Hypotheses 2a and 2b express a moderating effect of age on the relationship between narcissism and preference for financial sources without or with external influence, such that younger aspiring entrepreneurs are expected to prefer financial sources without external influence and older aspiring entrepreneurs' financial sources with external influence. We found no statistically significant moderating effect of age on the relationship between narcissism and preference for financial sources without ($B = -0.214$, $p = .450$) or with ($B = -.135$, $p = .600$) external influence. The results are graphically displayed in figure 5.1 and summarised in table 5.1.

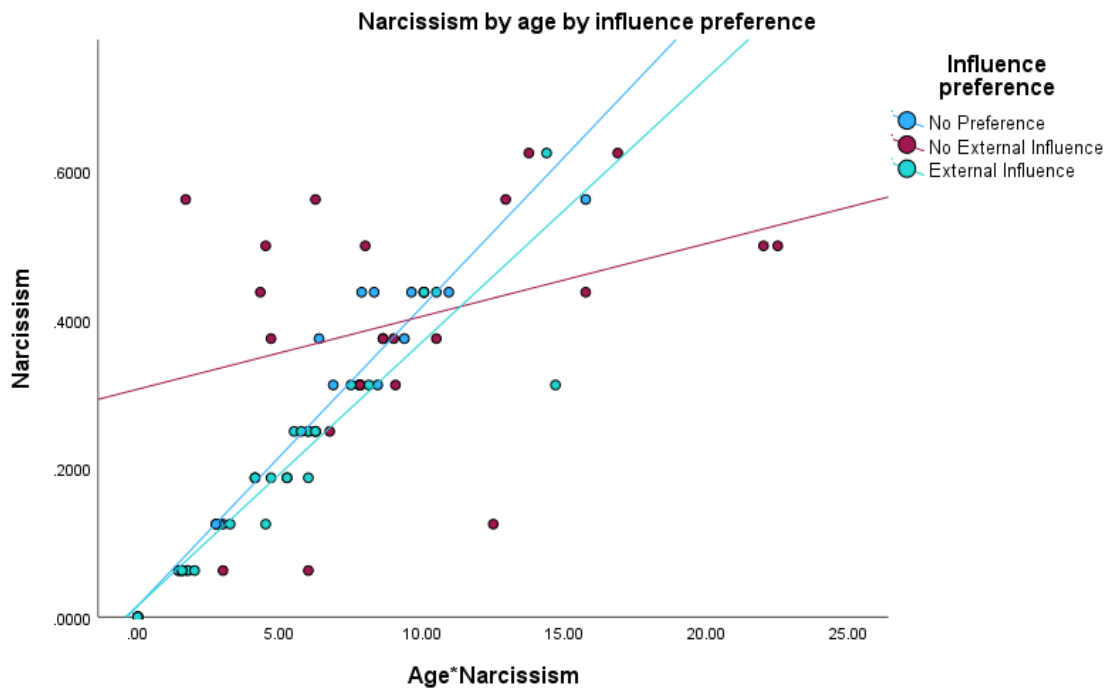


Figure 5.1: Narcissism by age by influence preference

Hypotheses 3a and 3b express a moderating effect of gender on the relationship between narcissism and preference for financial sources without or with external influence, such that male aspiring entrepreneurs are expected to prefer financial sources without external influence and female aspiring entrepreneurs' financial sources with external influence. We found no statistically significant moderating effect of gender on the relationship between narcissism and preference for financial sources without ($B = 2.679$, $p = .529$) or with ($B = 1.484$, $p = .736$) external influence. The results are graphically displayed in figure 5.2 and 5.3 and summarised in table 5.1.

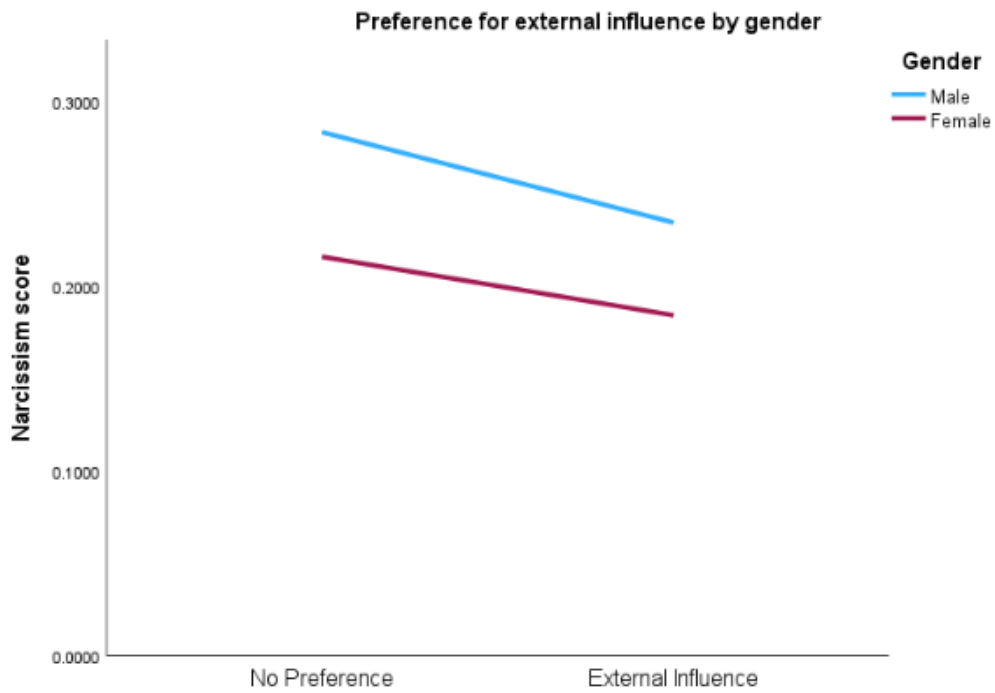


Figure 5.2: Narcissism by preference for no external influence by gender

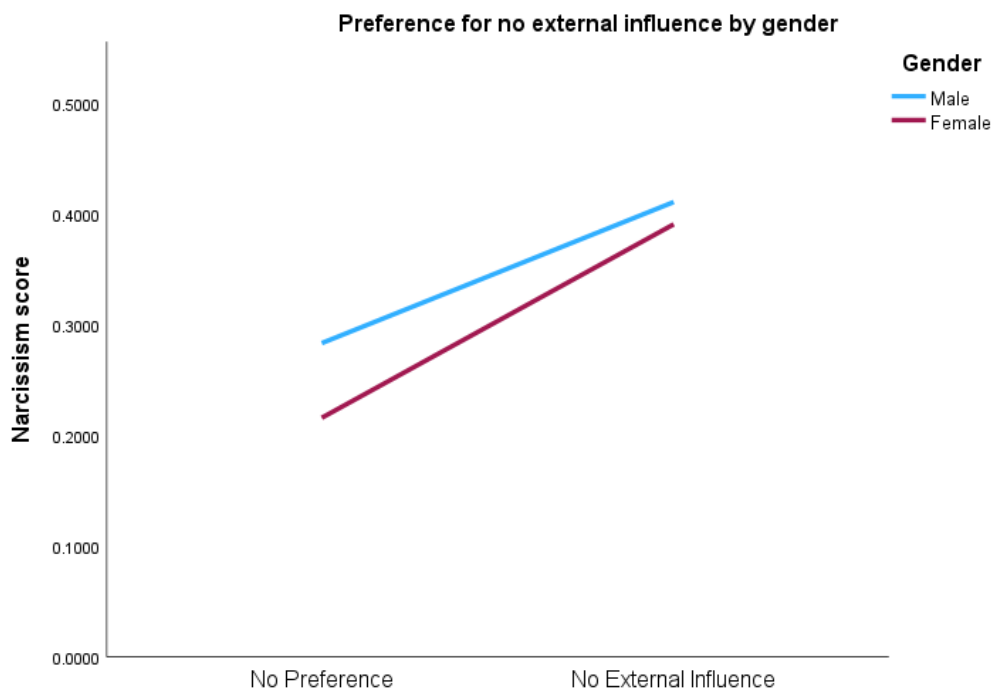


Figure 5.3: Narcissism by preference for external influence by gender

5.3 Summary

In summary, three hypotheses were formulated. One assumes a relationship between narcissism and financial sources that do not bring any external influences into the business, and two hypotheses assuming a moderating effect of age and gender on this relationship. Table 5.1 gives an overview of the data gathered in the logistic regression and a conclusion for each hypothesis.

Table 5.1: Test of Hypotheses

	Model 1 (N=75)		Model 2 (N=75)		Model 3 (N=75)	
	Beta	P	Beta	P	Beta	P
<i>No external influence</i>						
<i>Narcissism</i>			7.401	0.002	8.499	0.041
<i>Risk Tolerance</i>	-0.046	0.932	-0.761	0.254	-0.774	0.263
<i>Age</i>			0.241	0.018	0.317	0.032
<i>Gender</i>			-0.404	0.589	0.403	0.787
<i>Narcissism*Age</i>					-0.214	0.450
<i>Narcissism*Gender</i>					2.679	0.529
<i>External influence</i>						
<i>Narcissism</i>			-0.009	0.996	1.064	0.784
<i>Risk Tolerance</i>	-1.185	0.031	-1.198	0.074	-1.239	0.074
<i>Age</i>			0.237	0.019	0.284	0.034
<i>Gender</i>			0.741	0.266	1.117	0.377
<i>Narcissism*Age</i>					-0.135	0.600
<i>Narcissism*Gender</i>					1.484	0.736
<i>Pseudo r-squared</i>	0.084		0.376		0.381	

Notes: Reference category is: “no preference between with or without external influence”. The pseudo r-squared is by Cox and Snell with an upper bound of 0.75.

For hypothesis 1a, support was found, showing a positive relationship between narcissism and preference for financial sources without external influence (B = 8.936, p = .038). However, for hypothesis 1b, no support was found (B = .484, p = .906).

For hypotheses 2a and 2b, expressing the moderating effect of age on the relationship between narcissism and preferred external influence in financial sources, no support was found (H2a: $B = .074$, $p = .893$; H2b: $B = -.328$, $p = .534$).

For hypotheses 3a and 3b, expressing the moderating effect of gender on the relationship between narcissism and preferred external influence in financial sources, no support was found (H3a: $B = 5.374$, $p = .326$; H3b: $B = .377$, $p = .942$).

6. Discussion

This study sheds light on the nexus between narcissism and the preferred choice of finance among aspiring entrepreneurs. More specifically, it analyses the relationship between narcissism and the introduction of external influence into the start-up that comes along with many financial sources. The study extends the entrepreneurship literature on the effect of narcissism in financial resource acquisition, a literary area previously addressed by, for example, Bollaert, Leboeuf and Schwienbacher (2020) and Butticiè and Rovelli (2020). That being said, where those studies explore the effects of narcissistic traits on a specific type of finance, this study aims to take a first step towards developing a framework of narcissism in entrepreneurial finance by exploring the underlying intricacies of its effects, starting with external influence. We argue that aspiring entrepreneurs with high narcissistic tendencies are more likely to prefer financial sources that do not introduce any external influence into the business. This argument is motivated by the characteristics associated with narcissism, such as a desire for control, a preference for short-term gains, and a desire to protect the ego. Internal funding options that do not introduce any external influence allow the narcissistic entrepreneur to maintain control, mitigate risks associated with external investors, and minimise their dependence on external financing sources.

Furthermore, we argue that this relationship is moderated by age and gender, such that older male aspiring entrepreneurs are more likely to choose internal financing options as opposed to their younger female counterparts. Gender as a moderator is explained by the two sexes' different characteristics, such as attitude towards risk and long-term vision. Similarly, age is defined to have a moderating effect as a result of changes in long-term vision and risk attitude as people grow older. Consequently, we developed three corresponding hypotheses. One regarding the relationship between narcissism and preference for either external or no external influence, and two with regard to the moderating effect of age and gender on this relationship.

Our results show that, as expected, narcissism and preference for financial options which do not introduce external influence into the business are positively related. Interestingly, we found no support that narcissism and preference for financial options that introduce external influence into the business are negatively related, suggesting that the relationship between narcissism and external influence is not simply linear. Nonetheless, our findings support the argument that aspiring entrepreneurs with higher levels of narcissism desire to retain more control of their

business, which aligns with previous literature from (Chittenden, Michaelas & Poutziouris, 1998). Additionally, the study supports recent findings by Bollaert, Leboeuf and Schwienbacher (2020), who found that narcissistic people set lower crowdfunding goals to protect their egos yet are less likely to achieve these goals. Similarly, internal financing would prevent the entrepreneur from being subject to selection criteria or being rejected by investors. People with higher levels of narcissism, who seek to defend their ego, might prefer internal financing to mitigate this problem. Having said that, the results somewhat undermine a proposition by Sundermeier, Gersch and Freiling (2020), who said that narcissistic individuals excel in initial recourse acquisition due to their charisma and ability to convey trust in others. Our findings suggest that narcissistic entrepreneurs prefer not to leverage these qualities and therefore miss out on their initial advantages in the resource acquisition process.

This study finds no support for age and gender as moderators on the relationship between narcissism and the preferred choice of external influence. These findings suggest that attitude towards risk and the long-term vision of the individual, a factor which differs based on age and gender, might not actually have an influence on the relationship between narcissism and the preferred choice of finance. However, regarding age, the lack of evidence could also result from the direct effect of age on the choice of finance, such as older people being more cautious with their own money (Romano, Tanewski & Smyrniotis, 2001). Regarding gender, the reasons for men to prefer no external influence, such as their higher desire to become their own boss (Harms, Patel & Carnevale, 2020), might cancel out with the reasons for women to prefer no external influence, such as their long-term vision and willingness to ask advice from others (Leonelli, 2021; Powell & Ansic, 1997). Having said that, the lack of concrete evidence might also undermine earlier findings by Scherr, Sugrue and Ward (1993), who suggested that gender impacts borrowed capital, as we expected to notice this impact in our regression.

6.1 Implications for Research

Our findings have several implications for entrepreneurial literature, more specifically, entrepreneurial finance literature. The aim of our study was to take a first step towards a framework of narcissism in entrepreneurial finance. Our findings, in line with earlier empirical evidence from Bollaert, Leboeuf and Schwienbacher (2020) and Buttice and Rovelli (2020), show the need for a more comprehensive idea of the impact of narcissism on financial choices

among entrepreneurs. It shows that financial choices are impacted by the characteristics of the entrepreneur and that the level of narcissism might play a role in which financial source the entrepreneur prefers. That being said, current literature linking narcissism to entrepreneurial resource acquisition is extremely limited (Liu et al., 2021). Furthermore, this study also suggests that there is still a lot missing from narcissism literature and how narcissism impacts entrepreneurial decision-making. The lack of evidence for age and gender as moderators suggest further investigation is needed on the effects of these variables on narcissism and the link to concepts such as control, risk tolerance, and long-term vision in the entrepreneurial context.

6.2 Implications for Practice

Additionally, the findings of our study have several practical implications for policymakers, educators, and stakeholders in the entrepreneurial ecosystem. Investors should take note that our study reveals a link between narcissistic traits and a preference for financial sources that do not involve external influence in the business. Entrepreneurs with higher levels of narcissism may prioritise maintaining control, reducing risks associated with external investors, and minimising dependence on external financing sources. Investors can use this information to tailor their approach and consider alternative funding options that fit with the preferences of narcissistic entrepreneurs (Liu et al., 2021). Furthermore, our study indicates that narcissistic entrepreneurs tend to favour internal funding options that do not introduce external influence. Investors should know this preference and consider its implications when evaluating investment opportunities. They may need to adjust their expectations and negotiate terms that align with the entrepreneur's desire for control and ownership. Moreover, our study highlights that when start-ups are primarily funded through internal resources, they are more likely to be led by individuals with narcissistic tendencies. This finding has important implications for the entrepreneurial ecosystem, enabling stakeholders such as investors, incubators, and accelerators to recognise and adapt to narcissistic entrepreneurs' unique characteristics and their preferred funding options. Therefore, the stakeholders can make more informed investment decisions resulting in better cooperation between all parties.

Regarding policymakers, first, they should develop tailored support programs and initiatives that cater to narcissistic aspiring entrepreneurs' unique needs and financial funding preferences

(Mason & Brown, 2014). These tailored programs can offer resources and guidance that align with their desire for control and short-term gains, such as funding options that provide greater control and ownership rights. They can also highlight the strengths associated with narcissism, like self-esteem, willingness, and risk tolerance, while addressing potential limitations. Secondly, addressing the external funding obstacles is crucial, and policymakers should work towards creating an environment that facilitates access to funding and support networks for aspiring entrepreneurs. Finally, incorporating discussions on personality traits, including narcissism, into entrepreneurship education programs can provide aspiring entrepreneurs with a comprehensive understanding of how their traits may influence their financial decision-making. By implementing these recommendations, policymakers can create an environment supporting aspiring entrepreneurs, promoting diversity, and driving economic growth and innovation (Podsakoff et al., 2003).

6.3 Limitations and Research Outlook

In our research, it is crucial to take into account certain limitations. Firstly, we must note that the NPI-16 measurement tool, while applicable when time is limited, does not perfectly represent the NPI-40. Unlike the NPI-40, the NPI-16 is unidimensional and lacks subscales. As such, it would be difficult to argue that there is a single valid measure of narcissism, given that the underlying component structure is still debatable. Another limitation to consider is the sample size of our study. With only 75 participants, it may be difficult to generalise our findings to a larger population of aspiring entrepreneurs. A more extensive and diverse sample could yield more robust results that apply to a broader range of individuals. The small sample size could also have impacted the statistical power of the analysis, making it more challenging to detect significant effects or relationships accurately. This limitation may have influenced the ability to find significant moderating effects of age and gender on the relationship between narcissism and financial preference, as described in the study. Furthermore, it is essential to note that the sample used in our study may have limitations or biases. The participants were only recruited from a specific geographic location; therefore, our results may not be applicable to other aspiring entrepreneurs from different geographic locations. Moreover, our research did not consider other factors, such as educational background and previous entrepreneurial experience, which could also have impacted the financial preferences of the participants. It is

essential to consider these limitations when interpreting our study's findings and recognise the potential need for further research with more extensive and more diverse samples to validate and extend the conclusions.

Despite these limitations, our study still offers robust findings within the chosen framework. The NPI-16 measurement tool, although not comprehensive, is a widely used measurement tool that captures narcissistic traits effectively within its limitations. Additionally, despite a limited sample size, our study contributes valuable insights into the relationship between narcissism, age, gender, and financial preference among aspiring entrepreneurs in Sweden and The Netherlands. The significant result of narcissism and finance choices gives an understanding of the factors influencing entrepreneurial behaviour and decision-making. As mentioned before, our study only provided a glimpse of data, which makes it difficult to establish cause and effect. Therefore, a longitudinal study is necessary to gain a more comprehensive insight into the financial preferences of aspiring entrepreneurs and how they change over time. This type of study would consider the experiences of entrepreneurs and provide insights into the stability of financial preferences and whether they are influenced by external factors or individual experiences over time (Brownell, McMullen & O'Boyle, 2021; Liu et al., 2021). Lastly, future studies could focus on a more diverse sample group, allowing us to account for the influence of cultural diversity on financial decision-making among individuals looking to start a business. By considering cultural factors, we may gain a deeper understanding of financial decision-making in entrepreneurship and how certain cultures value specific financial sources more than others (Burger, Kanbach & Kraus, 2023). These future research endeavours would develop on this paper and contribute to an overall framework of narcissism in entrepreneurial resource acquisition.

7. Conclusion

While narcissism has been the topic of many studies in recent entrepreneurial literature, the current body of academic papers connecting narcissism and entrepreneurial resource acquisition is still very limited. By testing the influence of narcissism on the preference for financial sources that do not introduce an external influence, this study establishes that narcissism does have an impact on the choice of finance among aspiring entrepreneurs, with aspiring entrepreneurs that score higher on the narcissism index being more likely to prefer financial sources that do not introduce an external influence into the business. That being said, no support was found that age and gender play a moderating role in this relationship, suggesting that the effect of narcissism on entrepreneurial finance could be universal. This, however, should be subject to future investigations. Nevertheless, these findings show the importance of narcissism, and overall personality traits, in the financial decision-making process, which can have significant implications for investors and entrepreneurship education.

Future research relating narcissism to entrepreneurial finance should focus on future developing an integrated framework of the two concepts. Such a framework would give a better understanding of how narcissism effects the entrepreneurial venture through its financial structure and could pave the way for potential findings on the impact of experience and nationality on entrepreneurial resource acquisition.

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Appendices

Appendix 1: Survey

1) What is your age? (required)

2) What is your gender? (required)

Female

Male

Diverse

3) What country have you lived in for the majority of your life? (required)

4) Do you (co-)own a company? (required)

Yes

No

5) Have you been involved in any start-up activity before? (required)

Yes

No

Logic: hidden unless: Question "Have you been involved in any start-up activity before?" #5 is the following answer ("no")

6) Are you planning to found your own company in the future? (required)

Yes

No

Logic: hidden unless: Question "Have you been involved in any start-up activity before?" #5 is the following answer ("no")

7) What would be your industry of preference? (required)

Logic: hidden unless: Question "Have you been involved in any start-up activity before?" #5 is the following answer ("no")

8) Which of the following financial sources would you prefer? (check all that apply)

Bank Loan

Crowdfunding

Business Angels

Venture Capital

Friends & Family

Corporate Investors

Founder/ Personal Investment

Any public or government grant

Other, please specify,

Logic: hidden unless: Question "Have you been involved in any start-up activity before?" #5 is the following answer ("yes")

9) In what industry is your company primarily active? (required)

Logic: hidden unless: Question "Have you been involved in any start-up activity before?" #5 is the following answer ("yes")

10) Which of the following financial sources have you pursued? (check all that apply)

- Bank Loan
 - Crowdfunding
 - Business Angels
 - Venture Capital
 - Friends & Family
 - Corporate Investors
 - Founder/ Personal Investment
 - Any public or government grant
 - Other, please specify,
-

11) For each of the following pairs, please choose the option that best describes you. (required)

- I really like to be the centre of attention
- It makes me uncomfortable to be the centre of attention

- I am no better or no worse than most people
- I think I am a special person

- Everybody likes to hear my stories
- Sometimes, I tell good stories

- I usually get the respect that I deserve
- I insist upon getting the respect that is due me

- I don't mind following orders
- I like having authority over people

- I am going to be a great person
- I hope I am going to be successful

- People sometimes believe what I tell them
- I can make anybody believe anything I want them to

- I expect a great deal from other people
- I like to do things for other people

- I like to be the centre of attention
- I prefer to blend in with the crowd

- I am much like everybody else
- I am an extraordinary person

- I always know what I am doing

- Sometimes, I am not sure of what I am doing
- I don't like it when I find myself manipulating people
- I find it easy to manipulate people
- Being an authority doesn't mean that much to me
- People always seem to recognise my authority
- I know that I am good because everybody keeps telling me so
- When people compliment me I sometimes get embarrassed
- I try not to be a show-off
- I am apt to show off if I get the chance
- I am more capable than other people
- There is a lot that I can learn from other people

12) How much do you agree with the following statement: "I like taking chances"? (required)

Strongly disagree	Disagree	Neutral	Agree	Strongly agree
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

13) How much do you agree with the following statement: "I like people who take risks in life without fear of what will happen"? (required)

Strongly disagree	Disagree	Neutral	Agree	Strongly agree
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

14) How much do you agree with the following statement: "If you want big gains, you have to take risks"? (required)

Strongly disagree	Disagree	Neutral	Agree	Strongly agree
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

15) How much do you agree with the following statement: "I Investing in the stock market is too risky for me"? (required)

Strongly disagree	Disagree	Neutral	Agree	Strongly agree
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Appendix 2: Reliability Tests

Cronbach's Alpha

NPI-16

Reliability Statistics		
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.678	.660	16

Risk

Reliability Statistics		
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.591	.631	4

Common Method Bias

Harman's single-factor test

Total Variance Explained						
Factor	Total	Initial Eigenvalues		Extraction Sums of Squared Loadings		
		% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3.654	11.788	11.788	2.888	9.317	9.317
2	2.353	7.590	19.378			
3	2.202	7.103	26.481			
4	2.034	6.562	33.044			
5	1.880	6.066	39.109			
6	1.776	5.729	44.838			
7	1.589	5.124	49.962			
8	1.402	4.522	54.484			
9	1.301	4.196	58.680			
10	1.209	3.900	62.581			
11	1.162	3.748	66.328			
12	1.040	3.354	69.682			
13	.986	3.180	72.862			
14	.894	2.885	75.747			
15	.852	2.750	78.497			
16	.780	2.516	81.013			
17	.749	2.416	83.430			
18	.671	2.165	85.595			
19	.594	1.917	87.511			
20	.539	1.740	89.251			
21	.489	1.578	90.830			
22	.469	1.514	92.343			
23	.412	1.328	93.671			
24	.379	1.222	94.893			
25	.361	1.166	96.059			
26	.285	.920	96.979			
27	.253	.815	97.794			
28	.235	.758	98.552			
29	.172	.554	99.106			
30	.170	.548	99.654			
31	.107	.346	100.000			

Extraction Method: Maximum Likelihood.

Appendix 3: Multinomial Logistic Regression Assumptions

Absence of autocorrelation

Durbin-Watson test

Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.260 ^a	.068	.055	.823	1.926

a. Predictors: (Constant), Risk_Mean_Raw

b. Dependent Variable: Preferred_Finance_Control

Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.392 ^a	.154	.105	.800	1.787

a. Predictors: (Constant), Risk_Mean_Raw, Age, Mean_NPI, Gender

b. Dependent Variable: Preferred_Finance_Control

Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.408 ^a	.167	.093	.806	1.846

a. Predictors: (Constant), Gender_Int, Age, Risk_Mean_Raw, Gender, Mean_NPI, Age_Int

b. Dependent Variable: Preferred_Finance_Control

Absence of multicollinearity

Pearson bivariate correlation matrix

Correlations

		Age	Gender	Mean_NPI	Risk_Mean_Raw
Age	Pearson Correlation	1	-.015	-.052	.061
	Sig. (2-tailed)		.895	.656	.605
	N	75	75	75	75
Gender	Pearson Correlation	-.015	1	.237*	.394**
	Sig. (2-tailed)	.895		.041	<.001
	N	75	75	75	75
Mean_NPI	Pearson Correlation	-.052	.237*	1	.216
	Sig. (2-tailed)	.656	.041		.062
	N	75	75	75	75
Risk_Mean_Raw	Pearson Correlation	.061	.394**	.216	1
	Sig. (2-tailed)	.605	<.001	.062	
	N	75	75	75	75

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

VIF

Coefficients^a

Model		Collinearity Statistics	
		Tolerance	VIF
1	Mean_NPI	.923	1.084
	Age	.991	1.009
	Gender	.820	1.220
	Risk_Mean_Raw	.823	1.215

a. Dependent Variable:
Preferred_Finance_Control

Assumption of linearity of independent variables and log odds

Box-Tidwell test

		Parameter Estimates					95% Confidence Interval for Exp (B)		
Prefered_Finance_Control ^a		B	Std. Error	Wald	df	Sig.	Exp(B)	Lower Bound	Upper Bound
No External Influence	Intercept	-18.752	20.793	.813	1	.367			
	Logit_NPI	-4.901	5.094	.925	1	.336	.007	3.429E-7	161.432
	Logit_Age	-.453	.308	2.170	1	.141	.636	.348	1.162
	Logit_Risk	-.843	4.466	.036	1	.850	.431	6.802E-5	2725.750
	Age	2.007	1.376	2.128	1	.145	7.441	.502	110.362
	Mean_NPI	4.676	1.799	6.754	1	.009	107.381	3.157	3652.904
	Risk_Mean_Raw	1.492	10.506	.020	1	.887	4.447	5.074E-9	3897420701.4
External Influence	Intercept	-11.964	19.012	.396	1	.529			
	Logit_NPI	-.514	3.069	.028	1	.867	.598	.001	244.723
	Logit_Age	-.371	.319	1.352	1	.245	.690	.369	1.290
	Logit_Risk	-1.535	3.931	.153	1	.696	.215	9.718E-5	477.470
	Age	1.628	1.424	1.306	1	.253	5.092	.312	83.002
	Mean_NPI	-2.034	2.267	.805	1	.370	.131	.002	11.132
	Risk_Mean_Raw	2.339	9.052	.067	1	.796	10.371	2.045E-7	525944792.41

a. The reference category is: No Preference.

Visual check

